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## Parenting Through A Pandemic: A Mixed Methods Analysis Of Covid-19'S Impact On Stress, Coping, Resiliency, And Mental Health Among University Student-Parents

Jordin Ann Lane  
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PARENTING THROUGH A PANDEMIC: A MIXED METHODS ANALYSIS OF  
COVID-19'S IMPACT ON STRESS, COPING, RESILIENCY, AND MENTAL  
HEALTH AMONG UNIVERSITY STUDENT-PARENTS

by

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A DISSERTATION

Submitted to the graduate faculty of The University of Alabama at Birmingham,  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy

BIRMINGHAM, ALABAMA

2023

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PARENTING THROUGH A PANDEMIC: A MIXED METHODS ANALYSIS OF  
COVID-19'S IMPACT ON STRESS, COPING, RESILIENCY, AND MENTAL  
HEALTH AMONG STUDENT PARENTS

JORDIN ANN LANE

HEALTH EDUCATION/PROMOTION

ABSTRACT

The COVID-19 pandemic has taken a toll on the mental health of university students and continues to have a profound impact to this day. The transition from in-person traditional courses to online courses and campus closures, coupled with feelings of isolation, fear of contracting COVID-19, and uncertainty of the future has further intensified the mental health of college students. The effects of federal and state regulations, such as stay-at-home orders, influenced the mental health and general well-being of many Americans, specifically those who take on a dual role as a student and a parent. Unfortunately, literature pertaining to the effects of the COVID-19 pandemic on the mental health of student-parents is extremely limited. It is of great importance to address this limitation.

This mixed methods study explored the effects of self-reported stress, resiliency, and coping skills on student-parent mental health at two-time points during the pandemic. To address the specific aims of this study, quantitative and qualitative data from summer 2020 (n=393) and summer 2022 (n=169) were collected and analyzed. Findings from the quantitative data indicated that student-parents had higher rates of stress, moderately good coping scores, and moderately good resiliency scores. Thematic analysis of the qualitative data aligned with the findings of the quantitative data. Academic stress, COVID-19 transmission/exposure, financial stress, and changing life/family dynamics

are some of the themes that emerged from the qualitative analysis and were cited as having a negative impact on student-parent mental health. A PROCESS regression analysis showed stress had a direct effect ( $p < .05$ ) on the mental health of student-parents. Additionally, coping skills significantly mediated the effect ( $p < .05$ ) of stress on student-parent mental health. Resilience was shown to be an insignificant mediator of stress ( $p = .8261$ ).

This study suggests the intersectionality of student and parental roles during the COVID-19 pandemic presented a complex landscape for mental health. The regression findings indicate a need to address student-parent stress rates to make a positive impact on mental health. Stressors faced by student-parents (academic stress, financial stress, changes in life/family dynamics, etc.) can be identified and managed before significant mental health impacts can occur. This paper recommends future research be two-fold: (1) research driven and (2) practice driven. Further research into the student-parent population must occur to understand stressors beyond those described in this study. Moreover, research comparing student-parents to their non-parent counterparts is needed to establish the generalizability of our study. This study also recommends university administration take a prominent role in the care of student-parents. University-sanctioned sectors should be developed to establish resources and programming specific to student-parents. As the aftermath of the pandemic is still felt today, the findings of this mixed methods study should serve as a catalyst for further research and administrative change to foster a more inclusive and supportive environment for student-parents, ultimately enhancing their mental health and well-being.

## DEDICATION

All thanks and praise go to Jesus Christ, in whom I would be nothing without. Thank you for the strength and the everlasting peace you have given me to make it to this point.

To my children: Tripp, Pennie, and Jude. I hope this dissertation serves as a reminder that you can do ANYTHING! If I can (start and) finish this while raising the 3 of you, then you can achieve literally anything you set your mind to. “Decide what to be and go be it!”

To my other half, Steven: I can never describe how much you mean to me. Sometimes I think you deserve this PhD more than I do. I hope this dissertation makes you proud of all We have achieved. I hope to spend the rest of my days making you my trophy husband. “To the end of the world...”

To my mom and dad: It takes a village and there is absolutely no way I could have done this without you.

Mom, first thank you for giving me life. I know there are times we didn’t know if I would make it to this point but here we are. I will never be able to thank you for everything you have done and continue to do for me. Thank you for giving me your resiliency and never back down attitude, and for teaching me to kick butt with grace and poise. You have given so much of yourself to watch me succeed and I hope this makes you proud.

Dad, thanks for the little touch of anxiety to keep me moving forward. Thank you for always being there to talk to me when I didn't think I could make it. Thank you for being crazier than me, so I can feel better about myself.

I know I make you both proud every day, but I hope this makes me your favorite.

To my brothers: I love you but please reference the above.

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To my best friends, Cortez and Amanda: I truly believe God knew what he was doing when he put all 4 of us together at Firehouse Subs all those years ago.

Cortez, I am so blessed to have a best friend I can come to with all wins and my losses, even though I know you will probably end up roasting me anyway. I love our late night kitchen talks and planning board game nights so I can fall asleep at 7:00. We've spent 2 ½ decades in friendly competition and I couldn't be happier to say I believe I officially win the AR prize. I will be expecting my pizza hut coupon.

Amanda, what can I say to someone who knows you better than you know yourself. I thank God for you every day. He knew what He was doing when you asked me to go to Coldstone with you and your sisters. That day you became my soul sister. Thank you for the free therapy, our car ride karaoke, for introducing me to jam bands, and for never judging my Taco Casa order. "In the end yes I must confess, you have yet to ever witness our best yet..."

To my committee, thank you for putting up with all of my questions and for being there to calm my nerves. Dr. Allison Litton, thank you for taking a chance on someone you just met. Dr. Angela Stowe, thank you for allowing me to use your data and for



always having a positive attitude, even when I didn't know what I was doing. Dr. Ann Elizabeth Montgomery, you have a way of calming my anxiety and making me feel seen and heard. Thank you for absorbing all that anxiety and turning it into empowerment. Dr. Kevin Fontaine, you are the smartest person I know and I hope some of that rubs off on me. Thank you for always allowing me the opportunity to better myself and pushing me to think outside the box. And thank you for always reminding me of the bigger picture of life. Dr. Yusen Zhai, I cannot thank you enough for your patience and guidance during this process. Any time I had an issue with data, you were there and always made time to walk me through the analysis and make sure I understood the why. I am forever grateful for your guidance through the hardest part of this dissertation. And last but not least, Dr. Robin Lanzi. We have been through so much together in these past 5 years. You have seen me raise 3 kids and continue to grow as a student and a parent. You are the original student-parent and you inspire me to continue to better myself and always make time for family. Thank you for being there to guide me through the intricacies of being a student-parent and for always being my advocate.

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## CHAPTER 1: INTRODUCTION

This dissertation examined the perceived stress, coping strategies, resiliency, and mental health of students (graduate and undergraduate) who are also parents, in relation to the COVID-19 pandemic, as constructed through the quantitative and qualitative responses to the *COVID-19, Race, and Student Mental Health Study* questionnaire. The Social Ecological Model (SEM) provides a theoretical framework for the complex interplay of factors that influence the mental health of student-parents. Using SEM along with phenomenological theory framework, this study elucidates the complexities of being a student and a parent, while living through a pandemic (Reiners, 2012). When used together, these theoretical frameworks emphasize the intersectionality of this population and highlight the intricacies experienced only by student-parents. Additionally, using both quantitative and qualitative measures provide key insights into the mental health of student-parents by allowing the respondent to elaborate and articulate their responses. The study population of “university students who are also parents” is referred to as “student-parents” throughout the dissertation.

This dissertation applied secondary analysis of a sub-sample of university students (undergraduate and graduate) who are parents from the *COVID-19, Race, and Student Mental Health Study* (MPI: R. Lanzi, A. Stowe, L. Schwiebert) and their self-

reported stress, mental health, coping strategies, and resiliency vis-à-vis anonymous all-campus surveys administered cross-sectionally during the summers of 2020 and 2022. Undergraduate and Graduate students took part in the *COVID-19, Race, and Student Mental Health Study* surveys in two time periods, July - August 2020 (n=1511) and July - August 2022(n=1883). To our knowledge, this is the first study of its kind to review both quantitative data and qualitative responses from student-parents about their stress, mental health, coping strategies, and resiliency during the early stages of the pandemic and then two years out.

#### Significance of Study

Very few studies have explored this unique population, much less investigated the distinctive needs faced by student-parents during the COVID-19 pandemic. ***To our knowledge, there is not yet a study that explores student-parent stress, coping strategies, resiliency, and ultimately their mental health during the COVID-19 pandemic early on (Summer 2020) and two years later (Summer 2022).*** Lin et al. (2020) offers recommendations for colleges and university administrations to help alleviate burdens and build strength and resiliency among the student-parent population. However, no other study has been found that evaluates any programming for student-parents established since the COVID-19 pandemic began. Although many studies have been published evaluating programming for university and college student mental health since the beginning of the COVID-19 pandemic, there is a paucity of published literature for student-parents (LaBrague, 2021; Lin et al., 2020; Sullivan et al. (n.d.)). While much can be inferred from the barriers experienced by students who are not parents, the struggles of



student-parents include those and additional, unique ones that are ever-evolving and may trump schoolwork (Scharp & Hall, 2019). While the sociodemographic of college students have been studied intensely, the disproportionate demographics of student-parents have often gone unnoticed. Student-parents are more likely to be low-income, females, and people of color, thereby widening the socioeconomic gaps in health and education. Moreover, 71% of student-parents are women with approximately 61% of those women being single mothers (Manze et al., 2021; Askelson et al. 2020). As explained by Scharp and Hall (2019), student-parents experience heightened stress due to family obligations and financial strain which can affect the well-being of the parent and child. Studies suggest the pandemic has placed some families' well-being at increased risk of child abuse and neglect (Lin et al., 2020). Some research has suggested the arrival of a new baby causes the identity of men and women to change. Women tend to struggle with incorporating the increased workload of parenting with their academic needs, while men tend to negotiate their identity with work outside the home, meaning they tend to put more value into work outside the home. Not only do these added stressors sometimes negatively impact their academic performance, but also negatively impact their degree completion, physical health, and mental health (Scharp & Hall, 2019).

Colleges and universities must advocate for and promote resources for student-parents (Nelson, 2013; Sullivan, n.d.). The Federal Pregnancy Assistance Fund (PAF) was established to assist student-teens and student-young adults with pregnancy and family resources through their enrolled community college. During the implementation evaluation, many students reported a major barrier to the program was the lack of online services or services that fit the class schedules and demands of the student's personal

lives. Another setback was the recruitment of students, which was primarily done by word of mouth. The lack of available services and promotion to reach off-campus students mitigated the potential success of the PAF program (Askelson, 2020). As previously mentioned, Lin et al (2020) have recommended strategies to help college campuses provide services to assist student-parents. The researchers suggest assessing the needs of student-parents, establishing on-campus and online support networks, and appointing student-parents to student government and student representative positions.

Similarly, the University of Michigan Center for the Education of Women also provides resources for colleges and universities to become more inclusive of student-parents (Sullivan et al., n.d.). The researchers propose the first step to assisting student-parents is to first understand the unique challenges faced by this population and to set aside any preconceived notions. It is easy for the university to forget there are key differences between student-parents and hold them to the same standards as traditional students. Understanding that student-parents are in fact, very different than students who are not parents, is the first step to establishing inclusive programs and assistance to student-parents. The recommendations made by Lin et al. (2021) are mirrored in the University of Michigan's guide and suggest childcare, financial assistance, housing assistance, and subsidies to assist in the mental and physical well-being of student-parents. One very important strategy missing in the literature is the use of a data surveillance system for student-parents. There has not been an accurate mechanism for researchers to determine who is a student-parent and who is not (Lin et al. 2021; Sullivan et al., n.d.; Askelson, 2020). For instance, Askelson (2020) used the Free Application for Federal Student Aid (FASFA) form to determine if a student was a parent by determining

if dependents were listed, however, he acknowledges this could lead to insufficient data due to user error or mistakes in filling out the FASFA form. Universities need a data system to keep track of students who have a child(ren) or who are having a child(ren) to better direct programs and services. As an added support for this dissertation, the *COVID-19 Race and Student Mental Health Study* was able to specify which respondents were student-parents.

Examining the data using quantitative survey questions and qualitative open-ended responses gave this dissertation the advantage of studying the unique needs of the student-parent population. The open-ended questions permitted the students to express themselves without being confined to a Likert scale or multiple-choice option. Unadulterated student voices from this underserved population are critical to understanding the needs of the population and the steps necessary to ensure their mental health needs are met. The personal experiences shared, and quantitative data collected in this dissertation help elucidate the impacts of the COVID-19 pandemic on student-parent stress, mental health, the use of coping strategies, and their self-reported resiliency, ultimately leading to a better understanding of how to best support their unique and challenging circumstances that often go unnoticed and underserved.

### Purpose of the Study

The overarching purpose of this dissertation was to explore the mental health of student-parents during the COVID-19 pandemic by examining the unique relationships among stress (aim 1), coping strategies (aim 2), and self-reported resiliency (aim 3). The secondary data analyzed in this dissertation was based on the COVID-19, Race, and

Student and Postdoctoral Fellow Mental Health Study (PIs: Drs. Robin Lanzi, Angela Stowe, and Lisa Schwiebert). This broader, mixed-methods longitudinal study (UAB IRB Protocol #: IRB-300005302) examined the varying impacts that the pandemic and racial injustices have had on UAB student's mental health and how UAB can best support their students. In its totality, the parent study included a 79-question baseline survey (July-August 2020) followed by a revised survey administered in July-August 2022. Quantitative data was collected from the surveys at both time points and analyzed using a regression model. Qualitative data collected from open-ended questions posed at both time points provided themes and patterns that elucidated the hypothesis of our regression model.

The specific aims of the study are as follows:

**Aim 1:** Explore how student-parents rate and describe their self-reported stress levels and mental health during the COVID-19 pandemic.

**Aim 1 approach:** Quantitative analysis conducted using four questions posed in the *COVID-19, Race, and Student Mental Health Study* Summer 2020 ( $n=393$ ) and Summer 2022 ( $n=169$ ) helped determine the student-parents self-reported stress levels and mental health. The quantitative question, "Rate your stress level," was used to quantify the self-reported stress of student-parents while questions, "*Over the last 2 weeks, how often have you been bothered by the following? - Little interest or pleasure in doing things?*" and "*Over the last 2 weeks, how often have you been bothered by the following? - Feeling down, depressed, or hopeless?*" were used to assess the mental health of student-parents.

Qualitative analysis of the question, “*Describe your stress level over the course of COVID-19,*” helped elucidate the relationship between self-reported stress and student-parents.

**Aim 2:** Explore how student-parents rate their coping strategies during the COVID-19 pandemic.

**Aim 2 approach:** quantitative scores reported from the question “*Rate how you are coping currently (extremely poor-extremely well)*” were used in a Likert scale rating to assess the level of coping as reported by student-parents.

**Aim 3:** Explore how student-parents view their resiliency two years into the COVID-19 pandemic.

**Aim 3 approach:** Two quantitative questions posed in the *COVID-19, Race, and Student Mental Health Study* conducted at the Summer 2022 time point that addressed this aim were: “*Rate your resiliency (ability to bounce back from difficulties/challenges) right now [extremely low-extremely high], and “What is your outlook on the future [very positive-very negative]?”*”

A qualitative analysis of an open-ended question was performed to provide a more extensive picture of the resiliency of student-parents.

These questions included, “*Describe how you think or feel about*

*resiliency as a way to bounce back from life's difficulties, challenges, or stressors."*

**Aim 4:** To explore the relationship between the self-reported stress of student-parents, coping strategies, resiliency, and mental health during the COVID-19 pandemic.

**Aim 4 approach:** We hypothesize that stress influences student-parent mental health when mediated by coping strategies and resiliency. This aim was addressed by using a model regression analysis with stress affecting the outcome of mental health, mediated by coping strategies and resiliency. As reported in Chapter Two, recent studies have also successfully used model regression analysis to identify relationships between mental health variables similar to ours.

### Overarching Research Question

The overarching research question for this study was: What is the effect of stress on the mental health of student parents during the COVID-19 pandemic when mediated by coping skills and resiliency? Specifically, how did student-parents interpret their stress, coping skills, resiliency, and mental health?

### Organization of the Dissertation

This dissertation is arranged into five chapters. Chapter One introduces the topic, emphasizes the significance and purpose of the study, and establishes the research questions and specific aims. Chapter Two is an extensive review of the emerging literature pertaining to COVID-19 and its effects on mental health. The literature also reviews important aspects of the study topics including mental health of student-parents, stressors and coping skills of college students, and theoretical frameworks. Chapter Three describes the methodology used to address the overarching research question and subsequent aims of this dissertation including, participant samples, data collection, setting, and analyses. Chapter Four presents quantitative and qualitative findings for both time points of the study. Lastly, Chapter Five discusses the findings as it is related to the Social Ecological Model, as well as its strengths and limitations, implications for future research, and recommendations for the university.

### Chapter 1 Summary

This chapter provides rationale for the importance of this dissertation, observing the current literature pertaining to the mental health needs and services benefitting student-parents is lacking and further research on the effects of COVID-19 for student-parents is needed. Moreover, hardly any data has been collected and published on the student-parent population since the start of the pandemic. This study intends to fill the gap in the literature by examining the previously stated aims using a mixed methods approach.

## **CHAPTER 2: LITERATURE REVIEW**

### **Impact of College Student Mental Health During COVID-19 Pandemic**

In January 2020, the SARS-CoV-2 (COVID-19) outbreak was declared an international concern. After almost three months of global surveillance, on March 11, 2020, the CDC declared COVID-19 a pandemic. As of October 2023, more than 771,407,825 cases and 6,972,152 deaths had been attributed to COVID-19 worldwide (WHO, 2023). The effects of the COVID-19 pandemic have rippled into subsequent years. As of October 2023, there was a total of 103,436,829 confirmed cases of COVID-19 and 1,136,920 deaths due to COVID-19 in the United States (US) (WHO, 2023). As a result of the rapid spread of the pandemic, preventative measures were enacted to help mitigate the spread of the disease. Mask-wearing, social distancing, and quarantining inside the home were mandatory in many states for several weeks. In order to properly quarantine, university students were forced to remain home and continue with classes in a remote, online setting. The quick shift in the type of classes and school setting left many students emotionally reeling and unable to process the change, which in turn led to changes in student mental health. (Tull et al., 2020, Wang et al., 2020).

Mental health has been a topic of concern for some time (CDC, 2023). The pandemic has only exacerbated the need for mental health services in America (Scorsolini-Comin, 2021; Stowe, 2021). Research suggests the COVID-19 pandemic has had detrimental effects on mental health which has contributed to increased depression,



anxiety, and loneliness (Akeman et al., 2022; Marroquin et al., 2020; Tull et al., 2020). Nearly 57 million people experienced a mental illness in 2021 and 1 in 20 adults experience serious mental illness each year (NAMI, 2023). The number of people looking for online mental health services increased drastically from 2019-2021. In 2021, 5.4 million people took a mental health screening representing a 500% increase from 2019 and a 103% increase from the start of the pandemic in 2020 (MHA, 2022).

Youth and college students were not immune to the unfortunate repercussions of COVID-19. Trying to adapt to virtual learning, isolation from peers, and the loss of extracurricular activities weighed heavily on the mental health of youth and young adults. In 2020, 1 in 3 young adults aged 18-24 experienced a mental illness, and 1 in 10 experienced a severe mental illness. 23% reported the pandemic harmed their mental health and 3.8 million had serious thoughts of suicide (NAMI,2022). In 2021, 71% of US students experienced an increase in stress and anxiety during the pandemic (Dlugosz & Liszka, 2021).

Historically, being able to attend college has been viewed as a privilege. Yet the act of going to college does not necessarily protect one from the stresses and consequences of mental illness (Lin et al., 2021). Previous research has shown that college is a significant stressor and college students are at greater risk for developing mental disorders than the general population (Akeman et al., 2022; Hunt & Eisenberg, 2010). Mental health disorders account for almost half of the disease burden of young adults. It comes as no surprise that college students may experience or be at higher risk of a mental illness than other people in their age group, considering the life stage transition happening during that time (Arnett, 2016). College years represent a transition into

adulthood and into personal responsibility and autonomy. Undiagnosed and untreated mental illness can have significant impacts on academic success, substance abuse, productivity, and social relationships, among other more personal impacts (Hunt & Eisenberg, 2010).

While research into the mental health of students during the COVID-19 pandemic is ongoing, published research results have been clear on the negative impacts of student mental health during the pandemic. Camilleri et al. (2022) employed a cross-sectional study that surveyed undergraduate and graduate students (n=676) from a small, private, Catholic college in Ohio. The survey incorporated validated measurement tools such as the Depression, Anxiety, and Stress Scale (DASS-21), which measures various symptoms of depression, anxiety, and stress, a revised Impact of Event Scale (IES-R), which was used to assess participants' responses to an event, and the Brief COPE, an abbreviated version of the COPE, which assesses coping mechanisms used to cope with stress and stress-inducing situations. Along with these validated measures, researchers also asked questions pertaining to pandemic-related sources of stress and the perceived effect of COVID-19 on mental health, personal experiences surrounding COVID-19, COVID-19 testing, changes in work resulting from COVID-19, and politics and sources of news/information. Camilleri (2022) found that 40% of students scored in the severe or extremely severe levels of the DASS-21. Similarly, a substantial proportion of students recorded scores within the parameters previously established for diagnosed post-traumatic stress disorder (PTSD).

Gender differences were evident in the data collected as well. In the DASS-21 scale, females scored remarkably higher than males in stress and anxiety with a tendency

towards significance in depression as well. This is also evident as ~15% of females fell within the highest category for PTSD. These findings correlate to previous findings suggesting COVID-19 is a traumatic stressor resulting in PTSD-like responses (Camilleri, 2022; Klonoff-Cohen, 2022).

A similar study was conducted at Texas A&M University in which researchers aimed to explore the mental health status and severity of depression and anxiety of college students during the COVID-19 pandemic (Wang et al., 2020). COVID-19 stress, coping mechanisms, and barriers were also asked to gain a better understanding of student stress and coping mechanisms. A total of 2031 students responded with demographics including 30% graduate student respondents and 62% female respondents. Of the 2031 total respondents, 48% confirmed a moderate to severe level of depression and 38% confirmed a mild to severe level of anxiety. Student respondents (18%) also reported suicidal thoughts in the two weeks preceding the survey (Wang et al., 2020). In accordance with the findings from Camilleri, Wang et al. also found females were more likely to report higher scores on both the PHQ-9 and the GAD-7. Wang et al. also found nearly 1 in 5 students reported thoughts of suicide which is concurrent with previous findings (Wang et al. 2020; Dlugosz and Liszka, 2021; Klonoff-Cohen,2022).

Not surprisingly, these findings have been parallel to the findings in studies conducted globally. Koelen et al. (2021) measured changes in the mental health of college students before and during the pandemic. A variety of measurement tools were used before (January 2019-January 2020) and during (April 16, 2020-May 13, 2020) the pandemic. Depression was assessed using the CES-D (Radloff, 1977), Generalized Anxiety Disorder with the GAD-7 (Spitzer et al., 2006) social anxiety with the SIAS-6

(Peters et al., 2012) and alcohol use with the AUDIT-C (Bush et al., 1998), among many other valid measurement tools. During the second testing point, a self-constructed questionnaire concerning the impact of the COVID-19 pandemic was administered along with the previous questionnaire. Demographics were similar to those in previous studies with 70% of respondents being female, 70% undergraduate students, and 30% international students. Findings were also similar in data reported during the pandemic as students scored higher at the second time point in depression, anxiety, and social anxiety. Unfortunately, researchers did not analyze gender differences in scores (Koelen et al., 2021).

The findings of these studies and others have made it abundantly clear that college students are at risk for developing a mental illness and now even more so given the circumstances of the COVID-19 pandemic. If they haven't already, most students will experience an adverse mental health event during their academic years. The implications of COVID-19 are still reverberating today, as many students are still experiencing adverse mental health complications stemming from the COVID-19 pandemic. As previously stated, college students are already at a disadvantage as they are a vulnerable population. The COVID-19 pandemic has only exacerbated the complications and barriers to receiving mental health assistance for college students (Theurel & Witt, 2022). However, university campuses and programs aimed at fostering healthy coping mechanisms and growing resiliency can be the first line of defense for college students experiencing adverse mental health issues.

## Student-Parents

Even before the pandemic waged war against the mental health of the college student population, student-parents have been an understudied and underserved population. Student-parents have unique experiences that blend from different roles and life stages: student, parent, and most times employee. Because of this unique set of challenges, serving the student-parent population should take a multifaceted approach. The first step is to truly understand the student-parent population.

The image of the typical college freshman, right out of high school, is changing. In fact, more than one-fifth of the college student population is comprised of student-parents, totaling about 4.6 million college student-parents in the US (Williams, 2022; Institute for Women's Policy Research, 2014). The largest portion of student-parents (42%) attend a two-year community college. Similar quantities of the student-parent population attend private for-profit and public four-year institutions at 18% and 17%, respectively (Cruse et al., 2020). While most student-parents tend to enroll in two-year community colleges, the proportion of the overall student body depends on the institution type. For instance, 45% of all students enrolled in a public four-year institution are student-parents, followed by 26% in community colleges (Cruse et al., 2020).

Between the 2011-12 and 2015-16 academic years, student-parent enrollment declined by 15% (Cruse et al., 2020). While overall enrollment dropped in that period, the enrollment of the student-parent population sharply decreased. Many outside economic factors may have contributed to the decline in student-parent enrollment. For example, declining unemployment in the period after the Great Recession, an increase in the cost of college, and a steady increase in non-tuition expenses such as childcare,

housing, and transportation (Cruse et al., 2020). Similarly, the aftermath of the COVID-19 pandemic has caused the US to experience inflation in terms of prices of goods and services. The benefits of enrolling in college and working without attending school could have been disproportionate during this time, causing student-parents to shift their focus to the immediate benefits of working and caring for their children (Cruse et al., 2020).

### Gender and Racial Disparities Among Student-Parents

In addition to raising a child(ren), many of these student-parents experience disproportionate equity in parenting. Typically, the student population is comprised largely of mothers compared to fathers (Cruse et al., 2020; IWPR, 2014). Further exacerbating the disparities, is that 43% of the total student-parents, or 1.7 million, are single mothers (Cruse et al., 2020). Racial implications for student-parents are disparate as well. Of the student-parent population, 51%, are student-parents of color (Cruse et al., 2020; Williams, 2022). IWPR (2014) reported the following percentages for student-parents of color who are mothers:

- 47% of black women have dependent children.
- 41% of American Native or Alaska Native women have dependent children.
- 39% of Native Hawaiian or Pacific Islander women have dependent children.
- 32% of Hispanic or Latino women have dependent children.

It is important to note the limitations of this data, as 2 or more races or mixed race was not an option for self-reporting. In the 2015-16 data provided by Cruse et al. (2020),

more than one race was an option for self-reporting. 25% of student mothers identified in this category. Percentages of other races remained similar to those reported in 2014. It is also worth mentioning the importance of the ages of children of student-parents. 2015-16 survey data reported many parents have children under the age of 6. Asian student-parents have the highest percentage of children under 6 with 64% of children being in the preschool (0-5) age group, followed closely by 'more than one race' (56%), Hispanic and Latino (56%), White (53%) and 48% Black. It is also worth mentioning that Black, American Indian or Alaskan Native, Native Hawaiian and Pacific Islander student-parents have more children in the school-aged (6+) group than other student-parents (Cruse et al., 2020). The plights of gender and racial disparities are just as real, if not more so, to student-parents as they are to traditional college students. With the social and racial injustices in conjunction with pandemic implications, it is clear this population is struggling with processing that stress. Not only are student-parents of color experiencing the racial tension exacerbated by the pandemic, but they are also navigating those waters with children, most of those being school-aged (6+) children (Cruse et al., 2020). The gender and racial inequalities add another layer of care and support to be given to student-parents, especially mothers and parents of color. The effects of structural racism on student-parents are evident. Economic setbacks like job loss, pay cuts, or reduced work hours resulting from the pandemic affect parenting students of color more often than white students, which contributes to their economic insecurity.

### Financial Disparities of Student-Parents

For parents, especially women who are single mothers and student-parents, the stress of their combined roles of parent, caregiver, and student can be heavy. Not only do most of the single student-parents experience the stresses of the mother/student role, but also assume the financial responsibility for the family as well. It is estimated that 88% of single student-parents have income levels at or below 200% of federal poverty guidelines (IWPR,2014). Additionally, 61% of student-parents have reported to have no money to contribute to college expenses (IWPR,2014). Student-parents manage themselves and their activities often under crushing time constraints, while working full time and spending over 30 hours on caregiving activities (IWPR, 2013). It is no surprise that student-parents have substantially more debt than their childless cohorts. It is suggested student mothers can borrow up to \$29,500 one year after graduation than student fathers (\$26,181) and total students (\$28,350) (IWPR, 2014). We can expect these numbers to have grown significantly in the almost decade since this data was collected. The 2015-16 data suggested similar numbers in terms of college debt. Median debt for student parents enrolled in the 2015-16 academic year was two-and-a-half times higher than the debt of students without children. Not surprisingly, single mothers borrow more money in student loan debt than any other student-parent or student without children (Cruse et al., 2020). It is also important to mention that student-parents enrolling in costlier four-year colleges could see an even steeper increase in student loan debt. As mentioned before, student-parents make up almost half of the student population of a four-year institution. The average debt one year after graduation is 34,975 for students attending a for-profit institution, which is almost \$7600 more than debt accrued at a not-for-profit and \$12,500 more than a public four-year institution (Nelson et al., 2013). The needs of student-



parents intersect with those of being a student, parent, caregiver, etc., and are often lumped into one category or another. For example, the Economic Impact Payments program determined eligibility based on the status of dependency and income ceilings, not considering the burdens of childcare, student loan debt, and educational-related expenses experienced by student-parents. Some forms of economic relief provided by the Coronavirus Aid, Relief and Economic Security Act specifically exclude students from eligibility criteria. Thus, no current relief effort has aimed to face the intersecting challenges of student-parents (Lin et al.,2020).

As expected from previously mentioned data, the racial disparities of student-parents extend to the financial burdens. 2015-16 data depicts Black students, including student-parents borrow far more in student loan debt than any other race enrolled. Black students borrow on average \$18,113, followed not-so-closely-behind ‘more than one race’ \$14,857, all students \$13,504, and white students, 13,101 (Cruse et al., 2020; Nelson et al., 2013).

Student-parents are an exceptional population that has been understudied and underserved. In recent years, some effort has been made to understand the burdens affecting this population and the barriers to accessing their needs. In 2006, Quimby and O’Brien studied undergraduate, nontraditional student-mothers and the factors affecting their psychological distress. This study examined the influences of internal (secure attachment, self-efficacy) and external (social support) variables on psychological well-being for student-parents, as measured by three components: psychological distress, self-esteem, and life satisfaction. The study recruited 209 undergraduate female students, living off campus, enrolled either full or part-time, and ages between 26 and 53. Racial

demographics included 67% white students, 18% Black students, 4% Hispanic, and 8% indicated “other,” as listed in the survey. Nearly 30% of students were employed at least part-time, with 21% employed full-time. Lastly, 30% did not have a partner either by separation, divorce, or widowed (Quimby & O’Brien, 2006).

Researchers sought to study the influences of internal and external factors on three components making up psychological well-being- attachment style, social support, and self-efficacy. Attachment style was measured using the Confidence subscale of the Attachment Style Questionnaire (ASQ), The Social Provisions Scale to measure social support, and two subscales from the Self-Efficacy Expectations for Role Management: the revised Student Self-Efficacy subscale and the Parent Self-Efficacy Subscale. The three dimensions of well-being were measured using the Brief Symptom Inventory (BSI), Rosenberg’s Self-Esteem Scale (RSE), and the Satisfaction with Life Scale.

Results from the survey were concurrent with previous findings suggesting female student-parents who were securely attached, confident in managing student and parent roles, and perceived that social support was available, indicated low levels of psychological distress. Similarly, those with perceived higher levels of social support, confidence in student and parent roles, and securely attached mothers had high self-esteem. Researchers found life satisfaction to be predicted by secure attachments, self-efficacy, and perceived social support with a unique predictor being self-efficacy regarding being a parent. Interestingly, although confidence in managing the student role was a predominant predictor of psychological distress and self-esteem, confidence as a parent was an even more salient predictor of life satisfaction. The researchers conclude

that counseling centers take the approach of minimizing psychological distress rather than focusing on acclimation and academic performance (Quimby & O'Brien, 2006).

Askelson et al. (2020) outlined the implementation evaluation of a program designed to support expecting and parenting students in a midwestern community college. Through the Pregnancy Assistance Fund (PAF) grant awarded to the public health department, community colleges in the state would implement the one-year program. The PAF was designed to assist pregnant and parenting teens, young adults, and families in the community college setting by providing services such as health, educational, social, and economic services. The program had two main goals: to increase the quantity of services presented to this population and to increase awareness of these services to expecting and parenting students. Students were asked to participate in a student feedback survey about their satisfaction with the PAF program. To gain a further qualitative understanding of the program, thirteen students and nine administrators were asked to participate in in-depth interviews. While the scope of this paper was to evaluate the implementation of the PAF program, researchers made several conclusions that may prove to be beneficial to those working with expecting and/or parenting students. First, researchers noted colleges could not identify student-parents. In reviewing the literature, rarely have colleges been able to definitively identify those identifying as student-parents (Lin et al., 2020). While there are other ways to assume the identity of student-parents (i.e., FASFA forms) these forms can have limitations and provide incorrect information to researchers. Each college or university must have a database or surveillance system put into place to track student-parents to be able to serve them and match them with services

(Askelson et al., 2020; Lin et al., 2020). The University of Michigan Center for the Education of Women suggests it may not be legal to ask for parental status on college admissions or employment forms (Sullivan et al., n.d.). Therefore, colleges and universities must get creative to capture the student-parent population. Administrations and program leaders will need to collaborate and refer student-parents to services while building a list of student-parents to send targeted information. Making sure staff is aware of the needs of student-parents and the willingness to help student-parents outside of the boundaries of the college to assist in resources is a must. Additionally, wide promotion and common knowledge of student-parent services are crucial. Ideally, these services would be as common knowledge as other more widely known campus student groups, like student ambassadors (Sullivan et al., n.d.).

### Institutional Considerations

As of the time of this dissertation, there are not many publications specific to the COVID-19 pandemic and student-parents. These studies provide data to support the college or university in creating and sustaining programs to fit the needs of the student-parent population. Lin et al. (2020) described the unrecognized needs of student-parents during the pandemic. Researchers then identify five ways the institution can support the student-parent population: (1) Identify and track the parenting status of student-parents, (2) Assess the needs of student-parents, (3) Prioritize student-parents in support services, (4) Take a holistic approach, and (5) Establish networks of connection and advocacy. (1) As mentioned before, most of the student-parent population is “invisible” on campus because most universities do not have information on the parenting status of their

students. In fact, according to a survey administered to 147 institutions across the United States, many student-parents reported feeling unwelcomed, isolated, and disconnected from the college experience (Lin et al., 2020; Generation Hope, 2020). Additionally, students may feel apprehensive to disclose their parental status for fear of retribution or stigma surrounding late teen/ early adult pregnancy. Earnest initiatives of the institution offering support to student-parents during and after the pandemic can help student-parents feel more comfortable disclosing their parental status and seeking help. This is one of the first steps to identifying student-parents, along with the aforementioned database system. (2) Next, a needs assessment of this population can help to direct needs and resources to the appropriate place. Because of the special needs of this vulnerable population, these needs assessments may require sensitive measures that will singularly unveil the needs of this population. (3) The immediate prioritization of students should first be to ensure students have sufficient educational, financial, health, and social resources that will ensure they can continue their studies. Then, the institution can switch gears to more long-term support for student-parents, starting with creating an environment of respect and inclusion for student-parents. Other long-term support from the institutions involves providing childcare grants and matching student-parents with targeted advisors familiar with the challenges of this population. Additionally creating peer support to reduce isolation and build relationships within the campus community, among other strategies to create an inclusive environment for student-parents. By prioritizing the needs of student-parents, universities are taking one step closer to providing a diverse, equitable, and inclusive campus. (4) Taking a holistic approach means to streamline services to students and their children. For example, students may

not know how to access resources available to them, such as the Higher Education Emergency Relief Fund. In fact, more than ¾ of students were unaware their financial aid could be increased to account for childcare costs (Lin et al., 2020). Assisting students with finding adequate childcare and applying for state and federal funding to expand campus childcare is one way to present holistic care to student-parents. (5) Lastly, establishing peer-to-peer support networks is vital to providing student-parents with an outlet for isolation and loneliness. Student-parent platforms can be a place to share resources, field questions, obtain information, and connect with other student-parents at the institution. Student-parent forums can also advocate for more student-parent representation in student body governments or other student associations. Student-parent representation gives this population a feeling of inclusion and allows them an opportunity to be given a voice. Lin et al. (2020) advocate for the advancement of policies and programs created at the institutional level following these 5 tenets of a well-rounded student-parent program. Not only can these guidelines help to establish help for student-parents in the short term, but they can also prove beneficial to the students and the institution by supporting and creating resilient student-parents and increasing the retention/graduation rates (Lin et al., 2020).

Another beneficial guide to helping college administrators create student-parent programs is the University of Michigan Center for the Education of Women resource titled, *Helping Students with Children Graduate: Taking Your College Services to the Next Level*. This resource guide was created in conjunction with the Michigan Partners Project, a grant designed to increase organizations working to improve economic security for low-income women in Michigan, and the Institute for Women's Policy Research

(IWPR) (Sullivan, n.d.). The resource guide presents five chapters for the institution to consider when creating student-parent programs including, '*Why Improving Support Structures for Student Parents Matter*', '*Unique Challenges Student Parents Face*', '*Key Components of a Successful Program*', '*Strategies to Build and Improve Existing Student Parent Program*,' and '*Resources, Both National and Regional.*' It is interesting to note, that each of the suggestions made by Lin et al. (2020) are manifested in this resource guide as well, corroborating the use of existing evidence in making these guidelines. The subtopics listed in the resource make this guide unique. '*Key Components of a Successful Program*' also includes topics on affordable housing, financial assistance, health services, and childcare subsidies. '*Strategies to Build and Improve Existing Student Parent Program*' included topics on collaboration & referral, making resource information easily accessible, and there is no one-size-fits-all strategy for designing these programs. These topics are crucial to creating a successful student-parent program and maintaining or revamping an existing program. The resources set out by Sullivan et al. (n.d.) and the IWPR (2014), as well as the strategies identified by Lin et al. (2020), established evidence-based guidelines for administrators at the institutional level to provide successful services to the student-parent population.

As discussed in this section, understanding the makeup of the student-parent population can give researchers a starting point to direct services and programs. It is essential to understand the enormity of the student-parent population. As mentioned, almost half of college students are student-parents with the majority of those being single mothers (IWPR, 2014; Williams, 2022). In addition to the intersectionality of the stresses faced by student-parents, gender, racial, and financial disparities plague this population.

Unfortunately, studies into this population are limited. The few studies that have been found have suggested that psychological well-being can be affected by internal and external factors. Another study found a grant-based public health program in Michigan can be beneficial if the population of student-parents is fully understood. Failure to fully understand the needs of the population can lead to ineffectiveness of the program. In order to serve this population, guidelines for the institution should be considered when planning or revamping a student-parent program.

Without systemic support provided directly by the university, student-parents have traditionally been left to their own devices when searching for a coping strategy for the compounded stresses of being a student in addition to a parent and breadwinner.

### Stress

Despite 1.3 million student-parent non-graduates, the student-parent population is overlooked and understudied (Scharp & Hall, 2019). Because of the heightened stresses of intersecting life roles faced by the population, student-parents are particularly susceptible to attrition and financial stress. In addition to the stresses of classes and financial responsibilities, studies suggest the birth of a new baby changes the identities of men and women. Research has suggested women tend to incorporate the increased responsibilities of being a caregiver with their roles in the workforce and in academics. Fathers tend to prioritize their work and identity outside the home (Duckworth & Buzzanell, 2009). Understanding the impacts, the pandemic and how it has affected the lives and struggles of student-parents are critical. During the pandemic, stresses faced by student-parents can spill over from one area to another. For example, student-parents are



faced with adjusting to online courses for themselves while also helping navigate their children through online schooling and finding childcare during mass school closures. Compound those struggles with the economic implications and workforce layoffs, which add another level of stressors (Lin,2020). While a minimal level of stress is needed to increase a person's motivation, learning, productivity, focus, and concentration, excessive and prolonged exposure to stress can cause negative consequences to a person's psyche (LaBrague,2021). The heightened stressors faced by parents during the pandemic can significantly alter the parents' ability to deliver quality parenting and lessen their ability to cope with their own stress. Not accurately coping with their own stress can lead parents to behave out of emotion instead of logic and can cause additional family tension, and therefore more stress.

Studies have sought to understand the stressors facing student-parents. For example, LaBrague (2021) sought to understand the specific coping skills that can contribute to relieving anxiety and stress while supporting student mental health. They found the majority of students reported moderate to severe stress levels and 58% of students experienced dysfunctional anxiety. These results align with those reported both pre- and post-pandemic (LaBrague, 2019; Li & Hasson, 2007). Scharp & Hall (2019) found similar results when testing their model examining the relationship between social-support factors, stress, and somatic symptoms. By using a two-model approach, researchers sought to understand how parenting stress and academic factors influence support-seeking factors (cost of seeking support, communicated support) and somatic factors (headache, lack of sleep, and exercise). The first model poses academic and parenting stress as mediators of support-seeking behaviors and somatic symptoms. Model

two posits the support-seeking factors will mediate the relationship between stress (academic and parenting) and somatic symptoms. Each of these models was tested to determine which model explained the relationship between support-seeking factors, stress, and physical health. Researchers found model one accounted for more variance and statistically significant paths. Model one found that stress, both academic and parenting, had a significant effect on reported somatic symptoms. Model two indicated social presence (a factor of support-seeking behavior) was not a meaningful moderator in model two but was in model one. This indicates that perceptions of cost were significant in explaining the relationship between stress (academic and parental) and somatic symptoms, but social support was not (Sharp & Hall, 2019).

Camilleri et al. (2022) also studied the COVID-19 impacts of mental health in university students. Using the Depression, Anxiety, and Stress Scale (DASS-21), Brief COPE scale, and the Impact of Event Scale-Revised (IES-R), researchers tested three models. The IES-R includes 3 variables: hyperarousal, intrusion, and avoidance. These three variables are used as inputs for each of the three models. The three variables of the Brief COPE include emotion-focused coping, problem-focused coping, and dysfunctional coping with each variable serving as a mediating factor. Lastly, each model used a variable of the DASS-21 (anxiety, depression, stress) as the outcome factor. The study found a minimal impact of the positive coping mechanisms, emotion, and problem-focused, but did find greater significance in the dysfunctional coping variable on each outcome. Interestingly, while dysfunctional coping mediated the relationship between event impact and mental health, it was the coping mechanism least reported by students. This study suggests the stress resulting from the mitigation efforts has overwhelmed the

capacity of the coping variables mediation. Researchers call for efforts to reduce the impact of these variables that promote despondency and increase those supporting positive mental health traits (Camilleri et al., 2022).

It is understandable that college students are under more pressure than others not enrolled in classes. Along with the typical stresses of college students, student-parents face additional stresses putting them at a higher risk for mental health issues. Understanding the stressors faced by student-parents can help researchers understand what coping mechanisms can be most useful to student-parents and factors that can affect their resiliency.

### Coping Strategies

American Psychological Association (APA) Dictionary of Psychology, a coping strategy is defined as, an action, a series of actions, or a thought process used in meeting a stressful or unpleasant situation or in modifying one's reaction to such a situation (APA, n.d.). Coping strategies typically involve a conscious and direct approach to problems, in contrast to defense mechanisms (APA, n.d.).

Prior studies have identified coping strategies college students have found helpful in managing stress during the COVID-19 pandemic. Studies suggest approach-based coping strategies, positive reframing, access to social support, finding ways to stay connected to friends and family, healthy lifestyle activities, engagement in faith-based activities, and use of green space may be beneficial (Akeman et al., 2022). However, it has also been shown negative coping strategies like alcohol and substance abuse, isolation, and denial have been associated with worsening mental health and quality of

life during the pandemic (Akeman et al., 2022; Dlugosz & Liszka, 2021). In a study conducted by Akeman et al. (2022), researchers found active coping, the process of taking actionable steps to mitigate a stressor, was an important coping technique and indicator of resilience. They theorized students participating in active coping techniques have more perceived control in taking action to address the stressors they can control. On the other hand, maladaptive coping strategies such as excessive alcohol use and behavioral disengagement are important risk factors for students (Akeman et al., 2022). Although this research is on college students, due to the limited research on student-parents, it is still important to acknowledge the results are applicable to the student-parent population.

Labrague (2022) found similar sentiments when researching coping styles and their relationship with psychological well-being. Using a modified Coping Behavior Questionnaire (COPE), Labrague evaluated nursing student coping skills during the second wave of the pandemic. Coping styles were divided into five categories: Resilience, seeking information and consultation, mental disengagement, spiritual and non-scientific sources of support, and humor. Labrague found the “seeking information and consultation” category was the coping strategy most associated with higher levels of health and wellbeing. This finding is concurrent with the findings by Akeman (2022) in which students will find a way to control the stressors they can control (i.e., knowledge about this novel virus). Labrague also found a higher score in mental disengagement (excessive eating, alcohol and/or substance use) was associated with lower levels of stress and anxiety, as was social networking as a coping mechanism. These findings are alarming as the consequences of mental disengagement and social networking can be

detrimental to one's physical and emotional health. Labrague (2022) advocates for resources to be put into more problem-centered (i.e., support seeking, consultation, resilience) coping behaviors and drive students away from emotionally centered (excessive eating, alcohol, and substance abuse) coping strategies. These attitudes were mirrored by Dlugosz and Liszka (2021). Students in their study who took the passive, emotion-focused coping strategy had worsening psychosomatic health. Additionally, those students were more likely to use psychoactive substances, and sedatives and have a passive view of the events unfolding around them (Dlugosz and Liszka, 2021).

### Resiliency

As defined by the American Psychiatric Association, "resilience is the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional and behavioral flexibility and adjustment to external and internal demands" (APA.org, 2022). In essence, resilience is the ability to change and adapt to stressful life situations. There are many factors that can contribute to a person's resilience, including the availability of resources and the practice of specific coping strategies. While some people may have an innate sense of resilience, resiliency can be built through the practice of certain skills. A lack of resources for certain populations, in this case, student-parents, can lead to lower resilience in this population. Resources should emphasize the importance of resiliency and build coping skills necessary to process stress and build resiliency.

In a study conducted by Labrague et al. (2020) researchers set out to determine the influence of coping behaviors, resiliency, and social support on student's emotional

and social loneliness during COVID-19. Researchers sampled and surveyed 303 students enrolled in a nursing program during the second month of mandatory lockdown. Instruments used included a 6-item Loneliness Scale, a 4-item Brief Resilience Scale, a 6-item Perceived Social Support Scale, and a modified version of the COPE questionnaire. Surveys were administered via email during the second month of mandatory lockdown. Survey results showed most students reported a moderate level of coping behaviors and social support, however, younger students were less likely to use positive coping strategies. Alarming, students reported low levels of personal resilience. This study found a higher level of emotional loneliness attributed to lower personal resilience, suggesting the importance of enhancing social support and building coping skills and personal resilience (LaBrague et al., 2020).

In a similar study conducted by Hand et al. (2021) researchers explored factors that were associated with nursing student resilience levels, as well as physical and mental health. This descriptive cross-sectional study aimed to answer two questions: (1) What are the sociodemographic characteristics associated with perceived physical and mental health and resiliency? And (2) what is the relationship between resiliency level and perceived physical health and mental health status?

Nursing students were sampled across four different nursing programs and resulted in 199 students completing eligibility screenings. Instruments used to measure resiliency included the Connor-Davidson Resilience Scale (CD-RISC) and the Patient Reported Outcomes Measurement Information System (PROMIS). The CD-RISC degree of resilience is calculated by totaling the scores of questions with the higher scores corresponding to a higher degree of resilience. The PROMIS scale works similarly with

higher scores representing a better perceived health status. Researchers found nursing students had a lower degree of resilience and lower perceived mental and physical health when compared to the general population. This finding correlates to those found by LaBrague (2020) in nursing students. This study also found that perceived mental and physical health scores are positively correlated with resiliency scores. In other words, higher resiliency scores or higher degrees of resiliency affect nursing students' perception of their mental and physical health.

The findings of these studies indicate a need for deliberate methodology to promote coping skills that will in turn boost the degree of resiliency in students. One obvious limitation of these studies is the lack of specification of the needs of student-parents. Unfortunately, not much research has been published relating to student-parent resilience. Student-parents are often overlooked as a campus population because of the “invisible” nature of being a parent, meaning one cannot simply look at a student and see they are a parent. While the steps taken to boost resiliency and coping strategies within a college campus can also help student-parents, it does not target the intersectionality that is the role of student-parents. Understanding how students can build resilience is the first step to creating resources for student-parents to receive the specific care needed.

## Chapter 2 Summary

The preceding chapter examines the unique needs of the student-parent population in accordance with the aims of this dissertation. Understanding the role of COVID-19 in the mental deterioration of the student-parent population, the socioeconomic status of student-parents, and institutional considerations helps administrators create campus resources promoting the enhancement of coping skills and degree of resiliency. The

purpose of this chapter is to introduce the barriers and needs faced by student-parents and provide background to the importance of the proposed study within this dissertation.



## CHAPTER 3: METHODOLOGY

### Description of Study

This mixed methods dissertation explored the relationship between stress, the use of coping strategies, and the resiliency of student-parents during the COVID-19 pandemic vis-à-vis a descriptive, cross-sectional research design. The data are based on the *COVID-19, Race, and Student Mental Health Study* (MPIs: Drs. Robin Lanzi, Angela Stowe, and Lisa Schwiebert). This broader longitudinal study was created and employed to examine the impacts of COVID-19 and racial injustices on the mental health of UAB students. Additionally, the broader study sought to determine how to best serve and support UAB students, undergraduate, graduate, and post-doctoral fellows. The baseline (July-August 2020; n=1511) survey titled *COVID-19, Race and Mental Health of Students* was administered via email and consisted of 62 closed and open-ended questions. Two years later, the survey titled, *COVID-19, Race, and Student and Postdoctoral Mental Health 2022 Survey*, (July-August 2022; n=1883) was dispersed via email and consisted of 49 open and closed ended questions, including questions concerning student resiliency.

For this study, the target population of student-parent data was collected at two points: July 2020 (n=393) and July 2022 (n=169). Demographic data (i.e., race, ethnicity, class, etc.) was gathered during the initial 2020 launch of the *COVID-19, Race, and Student Mental Health Study* and again during the second data collection point in 2022. Surveys

were distributed via an online secure portal after inclusion criteria were confirmed.

Inclusion criteria for this study consisted of being an enrolled UAB student and at least 18 years of age.

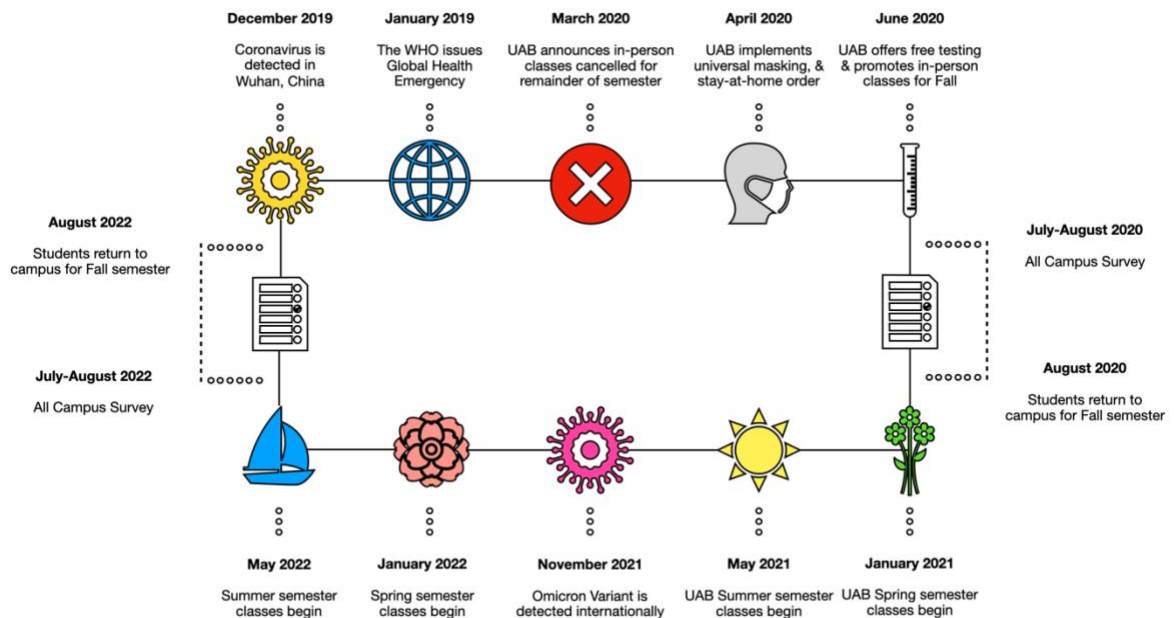
Exploring the relationship and self-reported descriptions of stress, coping skills, resiliency, and student-parent mental health at two-time points during the COVID-19 pandemic is the primary goal of this study. The overarching research question for this study was: What is the effect of stress on the mental health of student parents during the COVID-19 pandemic when mediated by coping skills and resiliency? Specifically, how did student-parents interpret their own stress, coping skills, resiliency, and mental health? A mixed methods approach of survey data from 2020 and 2022 was utilized to answer these questions.

### Study Setting

This study was conducted at The University of Alabama at Birmingham (UAB) in Birmingham, Alabama, a research-focused institution located in the deep South during the COVID-19 pandemic. UAB offers a variety of undergraduate, graduate, and doctoral degrees across a variety of disciplines and boasts a 22,500+ total student enrollment. The *COVID-19, Race, and Student Mental Health Study* was created and implemented in collaboration with the UAB Graduate School, Student Counselling Services, and School of Public Health.

It is important to provide a timeline to understand the chain of events occurring on UAB's campus during the pandemic. Stay-at-home orders were issued in March 2020 following the first case of the COVID-19 virus was discovered in the US in December of

2019. A complete shift to online learning was implemented in April of 2020 and continued through the Spring and Summer semesters. The 2020 Covid-19, Race and Student Mental Health Study was distributed during the summer (July-August) of 2020. COVID-19 procedures were put into place to allow limited campus reopening to students in the Fall of 2020. Classes and campus events remained either online or hybrid formats for the rest of 2020 and 2021. With the decline in reported COVID-19 cases both nationally and state-wide, UAB’s campus returned to “normal function” by the start of 2022. The second survey, COVID-19, Race, and Student and Post-Doctoral Mental Health was distributed before the fall semester (July-August) of 2022. This study has been reviewed and approved by the UAB Institutional Review Board.



**Figure 1.** Timeline of UAB Events and Data Collection

## Justification of Design

### *Mixed Methods Design*

Mixed methods serve as a third alternative to the qualitative-quantitative dichotomy (Tashakkori & Newman, 2010). Mixed methods research encompasses integrating quantitative and qualitative data collection and analysis in a study. Not only does it mean both quantitative and qualitative data are collected and reported but means the data and analysis will be integrated during the research process and findings will reflect the integrated data (Cresswell et al., 2003; Stange & Zyzanski, 1989). Typically, quantitative researchers, primarily interested in numerical data, work within a positivist or postpositivist world view (Tashakkori & Newman, 2010). The positivist paradigm suggests a single reality that can be discovered by experimental methods. Post positivist researchers agree with the positivist paradigm, but also believe environmental and individual differences are influential and important to this reality. Constructivist paradigm researchers believe the research elicits the participants views of reality, and there is no single reality (Teherani et al., 2015). Qualitative researchers operate under a constructivist worldview and are interested in collecting data using holistic procedures. Although qualitative design can be viewed as only exploratory, both qualitative and quantitative methods can be exploratory, descriptive and/or confirmatory (Tashakkori & Newman, 2010). Because of the versatility of both quantitative and qualitative methods, this dissertation employed the use of descriptive mixed method design.

As defined by Tashakki and Newman (2010), “Mixed methods researchers identify themselves as integrative and eclectic, work primarily within a pragmatic worldview, collect both narrative and numerical data, employ both structured and emergent designs,

analyze their data both via statistical and content analysis, and make meta-inferences as answers to their research questions by integrating the inferences gleaned from their qualitative and quantitative findings.” In order to adequately align this dissertation with proper mixed methods design, seven intentions were considered: Complementarity (using mixed methods to two different but reliable answers to the research question), Completeness (integrative efficacy), Development (study is designed with the purpose of using qualitative data from the quantitative data), Expansion (to expand answers gleaned from quantitative data), Corroboration/Collaboration (using qualitative data to evaluate the credibility of quantitative findings), Compensation (using qualitative data to strengthen weakness of quantitative methods), Diversity (using mixed methods to compare/contrast contradictory pictures of the same phenomenon) (Green, 2007) . These considerations were addressed, and this dissertation was designed with them in mind.

### *Cross-Sectional Design*

The study used a descriptive, cross-sectional design to better understand the relationships between stress, coping skills, mental health, and resiliency of student-parents. Cross-sectional studies are used to describe or estimate the prevalence of an outcome of interest on a population or sample of a population. In this case, the cross-sectional design is used to describe the student-parent population in two reported time periods and observe the effects on an outcome with respect to the mediating variables (Levin, 2006). Previous research studying these same variables have used a cross-sectional design successfully (Camilleri et al., 2022; Hand et al., 2021; Labrague, 2022; Scorsolini-Comin et al., 2021) and provided guidance for this dissertation. Similar to

studies successfully using the cross-sectional research design, the present dissertation was designed to explore the correlation between student-parent stress, coping strategies, mental health, and resiliency, therefore the descriptive, cross-sectional design was most appropriate.

### Data Collection

The *COVID-19, Race, and Student Mental Health Study* was designed with the purpose of exploring the impacts of COVID-19 and racial injustice on the mental health of students (undergraduate, graduate, and post-doctoral fellows). Data was collected via an anonymous online Qualtrics survey at two time periods, Summer 2020 and Summer 2022. For this dissertation, closed-ended questions were used to indicate initial findings in terms of coping skills, stress, and resiliency and mental health, while open-ended questions were used to elaborate and corroborate those findings.

### Eligibility

Eligibility criteria for the longitudinal *COVID-19, Race, and Student Mental Health Study* included: current enrollment as a UAB student or postdoctoral fellow, at least 18 years of age, and consent to participate in this study. No explicit exclusion criteria were defined.

### Recruitment

This dissertation analyzed secondary data from the *COVID-19, Race, and Student Mental Health Study* longitudinal study. Recruitment efforts for the longitudinal study aimed to obtain a sample of 120 participants, which was exceeded. The primary means of

recruitment included the distribution of promotional flyers with a QR code that was distributed across campus. Digital promotional materials and flyers with the QR code were also distributed through social media channels (Facebook, Twitter, Instagram, Snapchat and LinkedIn), and announced through UAB student associations. Links to the survey were also posted in online forums such as Blazernet, Canvas, and UAB's learning management system.

### Summer 2020 Survey

#### *Summer 2020 Survey Overview*

UAB students were permitted access to the 62-question *COVID-19, Race, and Student Mental Health Study* survey between July and August 2020. Students were able to access the questionnaire via a secure Qualtrics link provided in the promotional materials. 49 questions of the survey were multiple choice while 13 questions were open-ended and asked students to elaborate on their thoughts and feelings. Student-parents answered the following multiple-choice questions to assess their stress, coping, and mental health; question 53, "*Little interest or pleasure in doing things?*" Question 54, "*Feeling down, depressed or hopeless?*" Question 55, "*Rate your stress level.*" Question 57, "*Rate how you are currently coping.*" The following open-ended questions were posed to elucidate the multiple-choice questions; Question 56, "*Describe your stress level over the course of COVID-19.*"

#### *Summer 2020 Participants*

The *COVID-19, Race, and Student Mental Health Study* survey collected a total of 1511 participants, 393 of whom identified as student-parents. Demographically, the sample of participants in the survey was similar to the demographics of the university.

**Table 1.** *Summer 2020 Sociodemographic Characteristics of Participants and UAB Population*

<b>Summer 2020 Participants</b>				
<b>Participants</b>	<b>1511</b>			
<b>Student-Parents</b>	<b>393</b>			
	<b>Student-Parent Participants</b>		<b>UAB Total Student Demographics</b>	
	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>
<b>Total</b>	393	100%	22,563	100%
<b>GRADE CLASSIFICATION</b>				
<b>Graduate</b>	165	42%	5,477	24.3%
<b>Undergraduate</b>	180	46%	13,878	61.5%
<b>Post/Doctoral</b>	48	12%	3,208	14.2%
<b>GENDER</b>				
<b>Female</b>	210	73%	14,320	63.5%
<b>Male</b>	103	26%	8,242	36.5%
<b>Other</b>	4	<1%		
<b>RACE/ETHNICITY</b>				
<b>White</b>	210	54%	12,966	57.5%
<b>Black/African American</b>	74	19%	4,746	21%
<b>Asian American</b>	80	20.0%	1,466	6.5%
<b>Indian/Alaskan Native</b>	3	<1%	59	<1%
<b>Hawaiian/Pacific Islander</b>	3	<1%	8	<1%
<b>Hispanic/Latino</b>	22	<1%	1050	4.7%
<b>AGE GROUP</b>				
<b>&lt;19</b>	30	7%	2,119	9.4%
<b>19-35</b>	290	74%	17,861	79.1%
<b>&gt;35</b>	73	19%	2,583	11.4%



Demographics gathered as part of the *COVID-19, Race, and Student Mental Health Study* survey showed 393 student-parents accessed the survey (See Table 1). Of the total 393 student-parents who accessed the survey, 210 participants were white, females, aged between 21 and 35 years old.

The distribution of student-parent respondents was fairly even between undergraduate (n=180; 46%) and graduate (n=165; 42%) with a very small percentage, 12% (n=48), identifying as a professional or post-doctoral student.

A total of 74 (19%) student-parent respondents identified as black/African American and 80 (20%) identified as Asian. 13 (.03%) respondents identified as 2 or more races. Due to the extremely low responses in the American Indian or Alaskan Native (n=3), and Hawaiian or Pacific Islander (n=1), these race categories were combined with the “other” (n=12) category. Ethnicity was determined by selecting one of two options, “Hispanic or Latino” or “Non-Hispanic or Non-Latino.” 22 (.06%) student-parent respondents identified as “Hispanic or Latino.”

Gender identity also varied among student-parent respondents, with the majority being female (73%) and 103 participants (26%) identifying as male. Due to the low reporting of additional gender identities the categories of transman (n=1), transwoman (0), nonconforming (n=3), nonbinary (0) and Agender (0) were combined and labeled as “other.”

Ages of student-parent respondents varied from less than 19 to over 35. 30 of 393 student-parents were less than 19 years old at the time of the survey. Most respondents,

(74%; n=290) ages ranged from 19-35 and 19% of student-parent respondents (n=73) were over age 35.

### *Student-Parent Participants*

Question 9 stated, “*If applicable, describe the impact particular identities have had on your mental health during COVID-19- Parent of infant to school-age children*” and was used to discern which participants identified as a student-parent. The Likert scale type answer choices ranged from “very negative impact”, “some negative impact”, “no impact”, “some positive impact”, “very positive feedback” and “N/A.” It is worth noting of the 1343 total respondents to question 9 of the survey, 251 reported “no impact” and 950 “N/A” responses. Because of the ambiguity of the question and subsequent answer choices, it is difficult to discern whether respondents who answered “no impact” meant there was no impact made on their reported identity by COVID-19, or that the question did not apply to them. In effort to assess the participants understanding of question 9, an analysis of the following question 10, “Describe how your identity has impacted you during COVID-19” was analyzed to elucidate the participants interpretation. The mixed methods design of this dissertation provides additional support to any questions that may be perceived as vague or unclear.

### *Survey Informed Consent*

The informed consent for the *COVID-19, Race, and Student Mental Health Study* survey was that completion of the survey denoted consent to participate. Additionally, the first question of the survey asks, “*Do you wish to continue with this survey?*”

Anonymous data collection does not usually require consent, however, the UAB IRB required that we provide a consent document explicitly outlining the anonymity of the study, study protocol and use of data.

### *Survey Data Management*

Qualtrics survey responses are recorded and saved in the secure UAB Campus Labs platform. Campus Labs is an online-based collaborative tool for faculty and staff to make valuable connections with the data collected. The platform offers higher education institutions specified feedback tools to encourage reflection and elicit higher performance (Campus Labs, 2021). The Campus Labs platform is integrated into the larger institutional data infrastructure; therefore, individuals must be granted both administrative and IRB approval before being permitted to access study data.

## Summer 2022 Survey

### *Summer2022 Survey Overview*

Two years after the initial survey of the *COVID-19, Race, and Student Mental Health Study*, a second survey was distributed. This survey consisted of similar questions posed in the Summer 2020 survey, with the addition of some specific questions, i.e., resiliency. The 49-question survey was completed via online link during July - August of 2022. 10 of the 49 questions were open-ended questions aimed to elicit student feedback, thought and experiences. Student-parents answered the following multiple-choice questions to assess their stress, coping, resiliency, and mental health; Question 31, “Rate

*your stress level.*” Question 32, “*Rate your resiliency (ability to bounce back from difficulties/challenges) right now.*” Question 35, “*What is your outlook on the future?*” Question 36, “*In the last 2 weeks how often have you been bothered by the following- little interest in doing things?*” Question 37, “*In the last 2 weeks how often have you been bothered by the following- feeling down, depressed or hopeless?*” and Question 45, “*Rate how you are currently coping.*” The following open-ended questions were posed to elucidate the multiple-choice questions: Question 17, “*Describe how COVID-19 has impacted your mental health.*” Question 34, “*Describe how you think and feel about resiliency as a way to bounce back from life’s difficulties, challenges and stressors.*”

#### *Summer 2022 Participants*

The 2022 *COVID-19, Race, and Student Mental Health Study* survey garnered a total of 1883 participants, with 169 of those identified as student-parents.

Demographically, the sample of participants in the second survey was aligned with the demographics of the university at the time.

Unlike the 2020 survey, the 2022 survey had more graduate student-parent completion, 60% (n=102), than 36% (n=60) of undergraduate student-parents. A much smaller percentage (<1%) of professional and postdoctoral students completed the 2022 survey.

However, gender identity was similar between the two surveys. Females consisted of 72% (n=121), and males made up only 15% (n=26) of student-parent respondents in 2022. Additionally, the low number of respondents for other gender identity categories,

transman (0), transwoman (n=1), nonconforming (0), nonbinary (n=3), and Agender (n=1) were combined to another category labeled “other.”

The distribution of respondents across race was comparable to the 2020 survey. 61% (n=103) of student-parent respondents identified as white and 22% (n=38) identified as black/African American. Those identifying as two or more races (n=14), Asian (n=8), American Indian or Alaskan Native (n=2), and Hawaiian or Pacific Islander (0), each made up <1% of responses. 10% (n=17) of student-parents answering the 2022 are Hispanic or Latino.

There were no student-parent respondents younger than 20 who participated in the 2022 survey. Remarkably, the number of respondents aged 21-35 (n=82; 49%) was almost equal to those aged 35 and up (n=87; 51%). However, when considering the population of the 2022 sample consisted of more graduate students, it stands to reason the age group may be higher than the 2020 survey’s sample.

**Table 2.** *Summer 2022 Sociodemographic Characteristics of Participants and UAB population*

<b>Summer 2022 Participants</b>					
<b>Participants</b>	<b>1883</b>				
<b>Student-Parents</b>	<b>169</b>				
		<b>Student-Parent Participants</b>		<b>UAB Total Student Demographics</b>	
		<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>
<b>Total</b>		169	100%	21,639	100%
<b>GRADE CLASSIFICATION</b>					
	<b>Graduate</b>	102	60.0%	5,088	23.5%
	<b>Undergraduate</b>	60	36%	3,139	61.3%
	<b>Post-Doctoral</b>	7	<1%	3,519	16.2%
<b>GENDER</b>					
	<b>Female</b>	121	72%	13,736	63.5%
	<b>Male</b>	26	15%	7902	36.5%
	<b>Other</b>	5	13%		
<b>RACE/ETHNICITY</b>					
	<b>White</b>	103	61%	11,055	51.1%
	<b>Black/African American</b>	38	22%	4,590	21.2%
	<b>Two or More Races</b>	14	<1%	825	3.8%
	<b>Asian</b>	8	<1%	1,551	7.2%
	<b>American Indian/Alaskan Native</b>	2	<1%	36	<1%
	<b>Hawaiian/Pacific Islander</b>	0	<1%	10	<1%
	<b>Hispanic/Latino</b>	17	10.0%	1,111	5.1%
<b>AGE GROUP</b>					
	<b>21-35</b>	82	49%	17,138	79.2%
	<b>35 &amp; Up</b>	87	51%	2,303	10.6%

## *Resiliency*

Between 2020 and 2022, the world went through greater changes than any that have been seen in this generation's lifetime, primarily due to the COVID-19 pandemic. Because of the vast transformations both on and off campus, alterations were made to the 2022 survey and aimed to reflect those changes. The addition of resiliency questions was one key change made to understand the impact of COVID-19 on student (parent) mental health. Resilience is the process and eventual outcome of successfully adapting to life's changes and difficulties using emotional and behavioral flexibility and adjustment to demands (APA, 2023). Resiliency questions were not asked within the 2020 survey as there had not been enough time to build resiliency to the stressor, i.e., the pandemic. In order to understand student opinions about their own resiliency and resiliency as a concept, question 32, "*Rate your resiliency (ability to bounce back from difficulties/challenges) right now,*" question 35, "*What is your outlook on the future?*" and question 34, "*Describe how you think and feel about resiliency as a way to bounce back from life's difficulties, challenges and stressors,*" were created and published in the 2022 survey.

## *Resiliency Data Preparation*

To assess student resiliency in this dissertation, two quantitative questions were examined. The first quantitative question 32: "*Rate your resiliency (ability to bounce back from difficulties/challenges) right now*" and question 35, "*What is your outlook on the future?*" each uses a Likert scale question format. Each question was recoded to create a resiliency score and then combined to create the complete **resiliency** variable.

### *Survey Informed Consent*

The informed consent for the *COVID-19, Race, and Student Mental Health Study* survey remained the same across survey time points. The consent document from the 2020 survey was attached to the 2022 survey, as well as the first question of the survey, “*Do you wish to continue with this survey?*”

### Survey Data Management

Qualtrics survey responses, open and closed-ended questions, are recorded and saved in the secure UAB Campus Labs platform. Because the 2022 survey was a part of the larger longitudinal study and falls under the same IRB, individuals granted access to the 2020 campus labs data also had access to the 2022 data.

### Summer 2020 & 2022 Data Analysis

#### *Student-Parent Data*

Management, organization, and analysis of the quantitative data were conducted using the Statistical Package for the Social Sciences, commonly known as SPSS software (IBM, 2023). SPSS software was used to perform all statistical analysis, frequencies, descriptive statistics, ANOVAs, and PROCESS regression models of the quantitative data. In order for SPSS to compute the statistical analysis needed, the data were cleaned and recoded to fit the needs of this study. First, the 2020 data was imported into SPSS and the target population, student-parents was filtered out to give us our 2020 sample (n=393). Student-parents were selected based on the answer to question 19, “*If*



*applicable, please describe the impact particular identities have had on your mental health during COVID-19- Parent of infant to school age children.”* Respondents answering N/A to this question were excluded, thus leaving a sample of 393 student-parent respondents.

### *Mental Health Data*

To assess the outcome measurement of mental health, two quantitative questions were analyzed, question 53, “*Over the last two weeks how often have you been bothered by the following- little interest or pleasure in doing things?*” and question 54, “*Over the last two weeks how often have you been bothered by the following- feeling down, depressed, or hopeless?*” Both questions use a Likert scale with answer choices consisting of *not at all, several days, more than half of the days, nearly every day*. These questions were analyzed and combined to create a mental health variable that was used to create a mental health score compatible with the statistical analysis. This master mental health variable, labeled ‘**Mental Health**’, was used in the final PROCESS Regression analysis.

### *Coping Data*

As previously mentioned, the quantitative question 57 ‘*Rate how you are currently coping*’ was assessed using a Likert scale with answer choices consisting of ‘*extremely poor*’, ‘*somewhat poor*’, ‘*OK fine*’, ‘*somewhat well*’, and ‘*extremely well*’. To explore how student-parents rated and viewed their coping strategies during COVID-19, questions were again selected from the Summer 2020 and Summer 2022 survey. The

2020 coping variable was then combined with the 2022 coping variable to create an average score that is representative of both survey time points. This master coping variable, labeled '**Coping**', was used in the final PROCESS Regression analysis.

### *Stress Data*

To assess the level of stress faced by student-parents during the COVID-19 pandemic, only one quantitative question was used for analysis (2020 and 2022 time points). The question 55, "*Rate your stress level,*" used a 5-point Likert scale with answer choices consisting of '*no stress,*' '*low stress,*' '*some stress but manageable,*' '*moderate stress,*' and '*high stress.*'

The variable selected to represent stress was named '**Stress**' (See Table 3 and 4 for corresponding questions). The 2020 and 2022 stress variables were then averaged to create the Stress score used in the regression analysis.

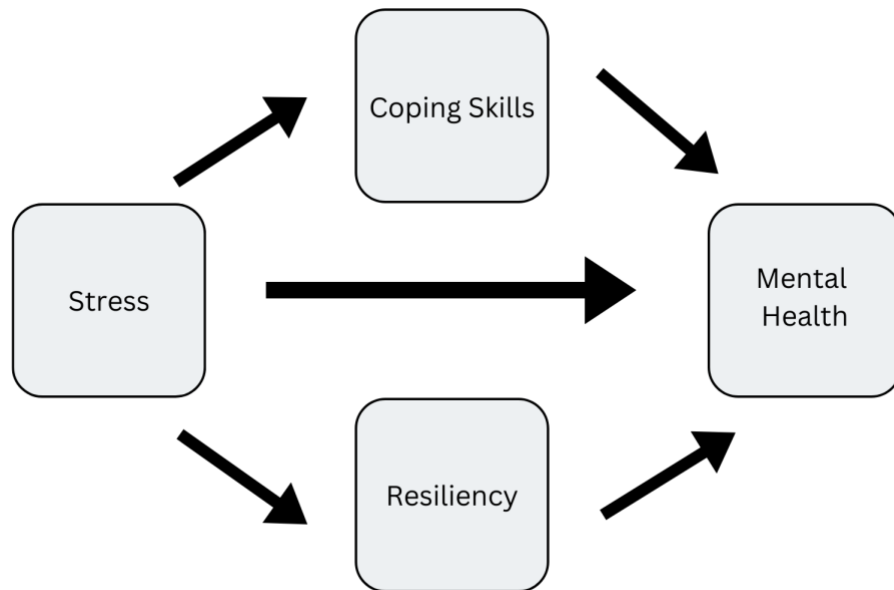
## DATA ANALYSIS PLAN

### *Quantitative Analysis Plan*

Data was stored using the Campus Labs platform, which was only accessible by UAB password. After the data were recoded and cleaned, it was transferred to a format compatible with data analysis software, SPSS V.26. and descriptive statistics (frequencies, mean, mode, range) were analyzed. Descriptive statistics was used to ensure statistical power was sufficient for the regression. Due to the nature of the questions asked in the survey, some answer choices were nominal. Therefore, all nominal responses

were recoded into ordinal data to be uniform across all variables. Because the data was transformed from nominal to ordinal data, a regression model was deemed most appropriate (Levin & Fox, 2010). A regression analysis (using SPSS) of the proposed model was used to assess the correlation among stress, coping strategies, resiliency, and mental health of student-parents within two-time points of the COVID-19 pandemic (see Figure 1). The resulting significant value was considered at the .05 significance level. Resulting regression scores lower than .05 were considered statistically significant.

**Figure 2.** *PROCESS Regression Model*



### *Qualitative Analysis Plan*

Data collected in the qualitative open-ended questions of the survey was used to expound on the findings of the quantitative data. Each response was recorded in the Campus Labs data base and extracted into an excel document. The excel file was then cleaned to ensure data was complete, and the primary qualitative researcher, J.L. created

an initial codebook using an inductive coding approach. An inductive coding approach is a “group up” coding approach where the researcher derives codes directly from the data. The codes emerge from the raw data and are not derived under preconceived notions (Essential Guide to Coding Qualitative Data, n.d.; Cresswell & Poth, 2016). Deductive coding is the opposite of inductive coding in that researchers possess a framework or pre-determined structure to the codebook. Deductive coding is a “top-down” approach in which codes and themes are predetermined prior to analyzing the data. Researchers have suggested both methods, inductive and deductive approaches, are used simultaneously in qualitative content analysis (Armet et al., 2018). The inductive approach is typically used when little or no research is available on the proposed research topic. In this sense, the researcher's mind is not entirely blank as they have an idea or have discovered a gap in the literature and have made some sort of assumptions in developing the research question. This is an instance of deduction. On the other hand, when using a deductive approach, where the researcher has structured codes and themes, instances can occur where responses do not fit those preconceived themes. In that case, a new theme may emerge from the data, indicating an inductive approach (Armet et al., 2018). Researchers recommend the use of both methods to warrant a more complete and comprehensive understanding of the data (Armet et al., 2018; Soiferman, 2010).

The qualitative analysis began with the analysis of the Summer 2020 open-ended questions. Initial inductive analysis was completed by the primary researcher, J.L., and a primary codebook was developed. Once the initial codebook was developed, the data were then sent to the secondary qualitative researcher, C.W. Themes and codes were extracted by hand, using an Excel spreadsheet. Once the analysis was completed by the

secondary qualitative researcher, the primary researcher reviewed the codebook and confirmed themes, ensuring inter-rater reliability.

The codebook gleaned from the Summer 2020 qualitative data was then used to deductively inform the Summer 2022 survey. Meaning, researchers started with the sets of codes found in the 2020 data (deductive approach) and created new codes (inductive approach) as other patterns and themes emerged. Both primary and secondary qualitative data researchers, J.L. and C.W., respectively, continued to code together, each peer-reviewing each other's work. While both approaches were used in the qualitative coding analysis of both data sets (2020 & 2022) the inductive approach was the primary approach used. As suggested by Armat et. Al (2018), this type of blended approach is labeled an "inductive-dominant" approach. The inductive-dominant approach best captured the impacts of stress, resiliency, and coping styles on the mental health of student-parents during the COVID-19 pandemic.

### *Validity and Reliability*

The reliability in the qualitative research was conducted using intercoder agreement, meaning multiple coders analyze a data set independently and meet to discuss and seek agreement on code names, patterns, and themes (Armstrong et al., 1997; Silverman, 2013). Responses to open ended questions were downloaded from the Campus Labs platform and exported to an Excel sheet. The qualitative researchers then coded each response independently and then met to confirm each code name, pattern and theme before finalizing the final code book. Additionally, to ensure validity, the second qualitative researcher, (C.W.) was not a part of the student-parent population. Because I

am a student-parent and identify with this community, a researcher that did not identify with the population was asked to participate in the analysis. This was done intentionally so as not to introduce any bias when reviewing the qualitative data.

Quantitative data was created with the help of Dr. Angela Stowe, Director of UAB's Student Counselling Center. Since there has not been a pandemic in the past 100+ years to use as evidence, the questions on the *COVID-19, Race, and Student Mental Health Study* were created based on her observations in the student counseling center. In this case, the creation of the survey was done under an intense time constraint. The P.I.'s and the research team understood the importance of getting the survey out as soon as possible after the onset of the pandemic to collect the most accurate data. Unfortunately, the nature of the research demanded the research team act now and did not give them the ability to wait years for a reliable and validated instrument. Even under the time constraints of the pandemic, the research team was able to take some questions from previous validated research, such as the PHQ-2, and integrate it with the observations from the research team.

### Chapter 3 Summary

Through a descriptive, cross-sectional, mixed methods approach, this study sought to examine the effects of stress, resiliency, and coping skills on the mental health of student-parents at two time points during the COVID-19 pandemic. This chapter presented the study participants' demographics, study setting, and methodological steps of data collection and variable construction taken for the Summer 2020 and Summer 2022 data points. This chapter also posited the legitimization of a cross-sectional,

descriptive, mixed methods design, and methodological approaches, as well as the rationale for the use of regression analysis. The following chapter presents the findings from these analyses.

## **CHAPTER 4: RESULTS**

This chapter discusses the findings and analysis associated with the overarching goal of this dissertation, understanding the impacts of student-parent stress, resiliency, coping skills and mental health during the COVID-19 pandemic. This chapter outlines the demographics of the 562 total student-parents surveyed at the Summer 2020 and Summer 2022 time points. After describing the sample population, this chapter will discuss the specific findings from the quantitative regression and qualitative thematic analyses. In an effort to remain concise in the dissemination of our findings, results will be reported according to each aim. Each aim will include a summary of qualitative and quantitative findings. This is done with the intention of keeping the results clear and organized.

### **Summer 2020 Participants**

Baseline sociodemographic of student-parent participants of the Summer 2020 survey are presented in Table 1. The majority of student-parents (57%, n=393) were 21-25 years old and were mostly self-identified females (n=286; 73%). Although closely followed by respondents aging from 26-35+ (43%), the undergraduate and graduate demographic was almost even for this sample (46% and 42% respectively. Professional and postdoctoral fellows made up ~12% of the sample. 53% of the student-parents surveyed in 2020 self-reported their race as white. The Asian population made up 23.4% and the black and African American population made up 19%. The other 5% of



respondents were made up of participants identifying as American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander, Two or More Races, or Other. In comparison to the student population demographics of UAB at the time, the present sample was representative (see Table 1).

Four quantitative and two qualitative questions from the 2020 survey were analyzed to explore the mental health, stress and coping of student-parents at this point in the COVID-19 pandemic:

- Question 53, “*Little interest or pleasure in doing things?*” (n=326).
- Question 54, “*Feeling down, depressed or hopeless?*” (n=326).
- Question 55, “*Rate your stress level.*” (n=326).
- Question 57, “*Rate how you are currently coping.*” (n=326).
- “*Describe how your identity [parent of an infant to school age child] has impacted you during COVID-19.*” (n=95)
- “*Describe your stress level over the course of COVID-19.*” (n=205).

<i>Variable</i>	<i>Variable Type</i>	<i>Question</i>	<i>Parent Frequency n(%)</i>
<i>Coping</i>	Quantitative	Rate how you are currently coping.	326(83%)
<i>Stress</i>	Quantitative	Rate your stress level.	326(83%)
<i>Mental Health</i>	Quantitative	Over the last 2 weeks, how often have you been bothered by the following? Little interest or pleasure in doing things?	326(83%)

<i>Mental Health</i>	Quantitative	Over the last 2 weeks, how often have you been bothered by the following? Feeling down, depressed, or hopeless?	326(83%)
<i>Stress</i>	Qualitative	Describe your stress level over the course of COVID-19.	205 (52%)
<i>Stress</i>	Qualitative	Describe how your identity [parent of an infant to school age child] has impacted you during COVID-19.	95(24%)

**Table 3.** 2020 Variable Questions and Frequencies

#### Summer 2022 Participants

In contrast to the 2020 survey sample, 77.5% (n=131) of respondents for the 2022 survey were aged between 31-35+, while only 8.3% (n=14) were aged 21-26 and 14.2% (n=24) were aged 26-30. Considering the ages of the respondents, it is not surprising the majority of the sample was made up of graduate students (60%, n=102). Only 35.5% (n=60) reported being an undergraduate student and 4% was comprised of professional students or postdoctoral fellows. Gender was comparable with the 2020 sample, with most respondents self-identifying as women (78%, n=132) and only 18% (n=30) self-identifying as male. Race was also comparable with many respondents identifying as white, followed by Black or African American, Two or More Races, and Asian (61%,

22.5%, 8.3%, 4.7%, respectively). These findings also correlate with the UAB student demographics at the time (see Table 2).

To gather the information needed to explore the aims of this dissertation, five quantitative and three qualitative questions were analyzed. The responses varied for each question of the 2022 survey.

- Question 31, “*Rate your stress level.*” (n=139).
- Question 32, “*Rate your resiliency (ability to bounce back from difficulties/challenges) right now.*” (n=139).
- Question 35, “*What is your outlook on the future?*” (n=139).
- Question 36, “*In the last 2 weeks how often have you been bothered by the following- little interest in doing things?*” (n=135).
- Question 37, “*In the last 2 weeks how often have you been bothered by the following- feeling down, depressed or hopeless?*” (n=134).
- Question 45, “*Rate how you are currently coping*” (n=139).

As for the qualitative questions:

- Question 17, “*Describe how COVID-19 has impacted your mental health*” (n=142).
- Question 34, “*Describe how you think and feel about resiliency as a way to bounce back from life’s difficulties, challenges and stressors.*” (n=72).

A descriptive breakdown of the questions analyzed in the 2022 survey can be found in Table 4.

**Table 4.** 2022 Variable Questions and Frequencies

<i>Variable</i>	<i>Variable type</i>	<i>Question</i>	<i>Parent Frequency n(%)</i>
<i>Stress</i>	Quantitative	Rate your stress level.	139 (82%)
<i>Resiliency</i>	Quantitative	Rate your resiliency.	139 (82%)
<i>Resiliency</i>	Quantitative	What is your outlook on the future?	139 (82%)
<i>Mental Health</i>	Quantitative	Over the last 2 weeks, how often have you been bothered by the following? Little interest or pleasure in doing things?	135 (80%)
<i>Mental Health</i>	Quantitative	Over the last 2 weeks, how often have you been bothered by the following? Feeling down, depressed, or hopeless?	134 (80%)
<i>Coping</i>	Quantitative	Rate how you are currently coping.	139(82%)
<i>Mental Health</i>	Qualitative	Describe how COVID-19 has impacted your mental health.	142 (84%)
<i>Resiliency</i>	Qualitative	Describe how you feel about resiliency as a way to bounce back from life's difficulties/challenges.	72 (43%)

### Aim 1 Findings

The first aim sought to explore how student-parents rated and described their self-reported stress levels and mental health at both time points (2020 & 2022) during the COVID-19 pandemic. To answer the quantitative part of this aim, the questions were analyzed using SPSS statistical software. Data from both the Summer 2020 (n=393) and Summer 2022 (n=169) were coded, cleaned and analyzed.

## *Stress*

The question, “*Rate your stress level*” was asked in both surveys. Answer choices were assessed on a 5-point Likert scale (1= High stress, 5= no stress). To remain consistent throughout each analysis, this variable was reverse coded, meaning the lower the score, the worse the stress level was. The higher the score, the better the stress level was.

Complete survey results were used to calculate the average scores between 2020 and 2022 variables. An average stress score was calculated from the 562 total student-parent responses garnered from the 2020 and 2022 survey time points. Of the 562 total student-parents, 346 (61.5%) responses were complete and used to calculate the stress score and descriptive statistics. The mean student-parent stress score was 2.29 (SD=.974). 55% (n=189) of student-parents scored a 1 or 2, indicating high or moderately high stress. 37% (n=129) of student-parents reported a score of 2.5-3.5, indicating some stress, but manageable. Only a handful of student-parents (n=28, 8%) reported having low or no stress.

These findings are contextualized in the qualitative responses to the question, “*Describe your stress level over the course of COVID-19.*” Posed in the 2020 survey. Student-parents reported high stress during the months following the start of the pandemic. When asked to describe their stress, student-parents with reported higher levels of stress said:

*“Fight or flight to the max – alternating between literally struggling to keep my head above the water vs floating wherever the waves take me without having any power of where I’m going.” (Student-parent 1, 2020)*

*“[I] Feel there is ominous cloud that is inescapable. I Check news daily with no sense of safety.” (Student-parent 2, 2020)*

*“I am having more panic attacks, and more chest pains due to my stress impacting my heart. I am also starting to have gray/white hairs at age 21.” (Student-parent 3, 2020)*

*“I was stressed about getting sick, then stressed because it seemed I worked all the time and had lost work/life balance. I was stressed trying to make sure my child did her schoolwork and now am stressed about how she will go to school in the upcoming school year. I am stressed that there will be less jobs for people and that I may not be able to get another job. I am overall very stressed.” (Student-parent 4, 2020)*

Others reported their stress as being moderate or low:

*“Much higher than normal. I generally do an adequate job of managing my own stress level by managing my responsibilities and inputs, e.g., no social media, into my life. COVID-19 has devastated my ability to control many responsibilities and inputs.” (Student-parent 5, 2020)*

*“I generally do not feel stressed because I always know that ‘the situation I’m in could be worse and other people are in more difficult situations than I am’, so I try to be future oriented and not get stuck in the past. There is no reason worrying about something that already happened.” (Student-parent 6, 2020)*

*“It seems that almost every other morning I have to make adjustments to my attitude and then push myself to get through the day doing the tasks that need done and fight the despair that today is just like yesterday and will be like tomorrow. [...] Frustrated over the in-limbo daily living situation. Stress is manageable but ever-present and in-your-face, at least on a minor level.” (Student-parent 7, 2020)*

*“Moderate to high. Depends on what's going on in the world.” (Student-parent 8, 2020)*

### *Mental Health*

To calculate an overall mental health score, variables from the 2020 and 2022 surveys were combined, cleaned and recoded. The questions, “*Little interest or pleasure in doing things?*” and “*Feeling down, depressed or hopeless?*” were assessed

on a Likert scale rating 1-4, 1 being “*Nearly every day*” and 4 being “*Not at all.*” These questions are part of a larger validated survey known as the Patient Health Questionnaire-2 (PHQ-2). The PHQ-2 is used as a tool to validate the degree of depression in an individual in the last two weeks. If an individual scores high on the PHQ-2, they are then referred to the full version of the questionnaire (PHQ-9) to determine if they meet criteria for a depressive disorder (Gilbody et al., 2007). For this study, these questions in the PHQ-2 were used to create a general mental health variable. Because the PHQ-2 has been proven to be a valid and reliable measurement (Each variable was cleaned and coded to only include complete responses. Variables from the 2020 survey were then combined and averaged with the 2022 survey to create a complete mental health variable score. Due to the calculations of combining the variables, the mental health average scores were reported on a 2-8 scale, with 2 = “*Nearly every day*” and 8= “*Not at all.*” Table 6 provides descriptive statistics for the stress and mental health variables. Refer to Appendix A for full qualitative themes and definitions.

As a whole, student-parent mental health was moderately good (M=6.07, SD=1.65). Of the 344 student-parent responses analyzed, 9% (n=31) scored a 2 or 3, indicating they felt down, depressed, or hopeless and had little interest or pleasure in doing things nearly every day in the past two weeks. 18% (n=63) scored a 4 or 5, indicating they had those feelings more than half the days. Almost half of the student-parents surveyed, 47% (n=163), scored a 6 or 7, indicating they had those feelings several days in the past two weeks, while 25% (n=87), reported not having any feelings of being down, depressed, hopeless, or experienced little pleasure in doing thing within two weeks of answering the survey.

Student-parents had mixed feelings when asked to describe their mental health in the 2022 survey (see Table 7 for full theme descriptions). Many students cited a change in life/family dynamics. Positive changes in life/family dynamics were described as:

*“The COVID-19 global pandemic impacted my mental health in a positive way when the schools and work shut down. The government funded higher income to temporary relief to those who had lost their jobs due to covid, which occurred to me. However, I was able to stay at home with my daughter and enjoy our lives together for a few months without the pressures of leaving her in school for hours long while I was losing energy at work.” (Student-parent 1, 2022)*

*“Because of COVID-19, my job transitioned to a work from home position. This has allowed me to reclaim my personal time. My long commute limited time available to manage my household, spend time with my children, and study. I have gained more than 3 hours a day when considering commute and time needed to get ready for work. [ . . . ]” (Student-parent 2, 2022)*

*“It was nice to be able to work remote in 2020 to be able to spend the first year of my child's life together.” (Student-parent 3, 2022)*

*“My 2nd child was born 1 week into “2 weeks to flatten the curve” so I got to work from home for 2 years and be a bigger part of her early formative years.” (Student-parent 4, 2022)*

Others found changes in life/family dynamics negatively affected their mental health:

*“I have adopted 3 school age children due to their mother passing away from a drug overdose. COVID-19 has been very hard and stressful due to school for my children, the fear of getting sick again with COVID-19 and what to do with my children if something happened to me or my husband. I also have an older adult son who is autistic that I have had been fearful for regarding COVID-19.” (Student-parent 5, 2022)*

*“My oldest child has had a very difficult time during the pandemic. She had mild anxiety prior to COVID, however the quarantine triggered severe anxiety and depression, which then became suicidal ideation with a plan. We have gone thru multiple therapists, short term hospitalization and now a residential treatment center. The entire family is recovering.” (Student-parent 6, 2022)*

*“Since March 13, 2002, I have been trapped in a 900 sqft apartment with a tween and my spouse. I've been expected to homeschool my middle-schooler, maintain the household, while also teaching undergraduates, completing a dissertation, and engaging in social justice work. I've had to start supplementing with 3mg of melatonin and 25mg of CBD because I can't fall asleep and wake up in a panic.*



*It's unnatural to spend this much time with one's spouse.” (Student-parent 9, 2020)*

Another commonly cited reason for a negative impact on mental health was due to the effects of COVID-19 transmission or exposure. Many student-parents felt the severity of the virus and precautions taken to prevent COVID-19 negatively affected their mental health:

*“At the beginning of COVID-19, I worked remote in my home, while also teaching and guiding my children (at the time, in kindergarten and 6<sup>th</sup> grade) through the final few months of their school. My husband still had to work outside the home, so he was exposed daily to COVID-19 and we had to take precautions when he returned home each day to keep us safe. The issues around COVID-19 have heightened my anxiety and made it to where I am more comfortable staying at home, then going out to places.” (Student-parent 7, 2022)*

*“[...] Working in labor and delivery, we felt overlooked by the majority of the healthcare community. We desperately needed development of new protocols for implementation of care of our population of patients. My coworkers and I spent hours walking back and forth from our unit to the Critical Care Tower to provide monitoring of these mothers that required an ICU admission. Throughout that time, I experienced grief and sadness of watching mothers deteriorate but holding on because that's what mother's do. We watched them FaceTime their husbands and other children at home during their extended stay isolated in the hospital. We watched two of our mothers in their early 20s lose their battle with COVID 19. We saw the devastation in the eyes of their partners as they were handed their first-born child and told they would be doing this without their child's mother. The negative impact of my experience with COVID-19 has changed me. I had to leave UMMC when the reprieve we so desperately needed never happened. I am now in weekly counseling that is extremely expensive. I am now working PRN at a much lower acuity hospital to give my brain and body a change of scenery. With the change came many sacrifices. Every day is a worry for the future. [...]” (Student-parent 8, 2022)*

## Aim 2 Findings

Another aim of this dissertation was to examine how student-parents rated their coping skills during the pandemic and two years after. To explore this aim, the responses from the question, “*rate how you are currently coping*” was analyzed from both time points using SPSS software. Again, data from the 2020 and 2022 surveys were cleaned and recoded for consistency. Only those with complete responses were included. Table 6 provides descriptive statistics for the coping variable.

### *Coping*

344 total student-parents responded to the 2020 and 2022 survey question, “Rate how you are currently coping.” Answers for this question utilized a 5-point Likert scale and were reverse coded to remain consistent with other variables, (1= “*extremely poorly*” and 5= “*extremely well*”). Similar to the stress variable, an average score was calculated from the 344 (61% of total student-parents surveyed) complete student-parent responses. The mean coping score for student-parents were 3.11 (SD=.890) with a median score of 3. 25% (n=87) of student-parent respondents scored a 1 or 2, indicating extremely or very poor coping skills, while only 4% (n=15) scored a 5, indicating extremely or good coping skills. Almost three-fourths, or 242 student-parent respondents (70%) scored a 3 or 4, indicating a moderately good level of coping skills.

### Aim 3 Findings

The third aim was to explore the views on resiliency of student-parents in 2022, two years after the onset of the COVID-19 pandemic. As explained above, this question was only offered in the 2022 survey as resiliency, by definition, cannot be surveyed at the onset of a traumatic or stressful event but is measured by the response, or the ability to return to a normal state, after the event. Due to the question only being asked in the 2022 survey (n=169), only 139 complete responses were recorded, recoded, and analyzed. Responses of two questions from the 2022 survey were analyzed and combined to create the resiliency score, “Rate your resiliency (ability to bounce back from difficulties/challenges)” and “What is your outlook on the future?” Each question posed had 5-point Likert scale answer choices (extremely low-extremely high and extremely negative to extremely positive, respectively). These variables were recoded in accordance with the other variables, in which extremely low/negative = 1 and extremely high/positive =5. Table 6 provides descriptive statistics for the resiliency variable. Refer to Appendix A for full qualitative themes and definitions.

The mean resiliency score of student-parents two years after the pandemic was 3.69 (SD=.813) and median 3.5. Only 4 % (n=7) of student-parents scored a resiliency score of extremely low/negative (score of 1-2). An almost even split of students scored either a 2.5-3.5 (47%, n=65), indicating a moderately good level of resiliency, or a 4-5 (48%, n=67), indicating an extremely high/positive level of resiliency. Student-parents scored the highest in self-reported resiliency than in any other variable presented in this study.

These findings were consistent with data extrapolated from the qualitative question, *“Describe how you feel about resiliency as a way to bounce back from life’s difficulties/challenges.”* An important theme gleaned from this question centered around what it meant to be resilient. Participants shared what they thought it meant to be resilient and bounce back from stressors. While resilience is defined as the ability to withstand, adapt to, and recover from stress and adversity and return to a positive state of mental health through coping skills (U.S. Department of Health & Human services, 2015), each individual has their own idea of what resilience means, especially in terms of COVID-19. Participants described resiliency as:

*“Resiliency is created through mindfulness and self-care.” (Student-parent 9, 2022)*

*“Resiliency is knowing that things will not always go as planned and preparing for the unexpected.” (Student-parent 10, 2022)*

*“Resiliency is necessary for growth.” “Resiliency is the only way to keep going.” (Student-parent 11, 2022)*

*“Resiliency to me is the ability of one to accept difficult realities and continue to perform at an optimal level.” (Student-parent 12, 2022)*

The COVID-19 pandemic has introduced the global population to concepts they may not have been familiar with before, like resiliency. Having a concept or understanding of what resiliency is has also helped student-parents form an opinion on its importance in their lives. Another common theme found was centered around the idea of how resiliency applies to the lives of student-parents.

*“I think resiliency is important because resiliency is what allows you to get up from setbacks and keep moving forward. Bad things happen in life but you have to try to find a way to move forward every day, even if it’s just a little bit. I can’t let myself get too hung up on feeling down. I don’t have the luxury of hanging out in a bad headspace. My kids are looking at me to lead our family and they need an*

*example of positivity and resiliency so that they can learn to push through when stuff is hard.” (Student-parent 13, 2022)*

*“I think resilient people win in the end and don't let their difficulties overcome them. I hope to be that kind of person but most days it is hard to feel like I am making any real progress.” (Student-parent 14, 2022)*

*“It can be difficult. There are days I rather just do nothing. I am fighting every day to move forward and not be overwhelmed by the stresses of the day.” (Student-parent 15, 2022)*

*“It is a useful and necessary life skill. Without it, overcoming challenges is doable, but difficult. The good news is, it can be taught, but it requires willingness on the part of the individual.” (Student-parent 16, 2022)*

*“I think resiliency is what has made communities stronger and stand up against difficulties and challenges. There is a need to have problems so humans improve their way of living. Sometimes it takes time to rebound and have the courage to confront adversities, but at some point, it always will bring a positive outcome.” (Student-parent 17, 2022)*

Other student-parents shared ways they can help build resilience, or overcome challenges:

*“Educate yourself about the situation, get some trustworthy counseling about the situation, don't let the situation linger, and attack the situation with positive intent.”*

*“Realize what you can control (and do something about it) and what you can't control (keep it perspective) and don't be afraid to speak out about the truth and what is right/wrong.” (Student-parent 18, 2022)*

*“Take a step back, formulate a plan and execute.” (Student-parent 19, 2022)*

*“You have to have supportive people around you to give you strength, if you surround yourself with people who are down and depressed you will never get out of your own funk.” (Student-parent 20, 2022)*

*“You only have two choices; you can move on or not move.” (Student-parent 21, 2022)*

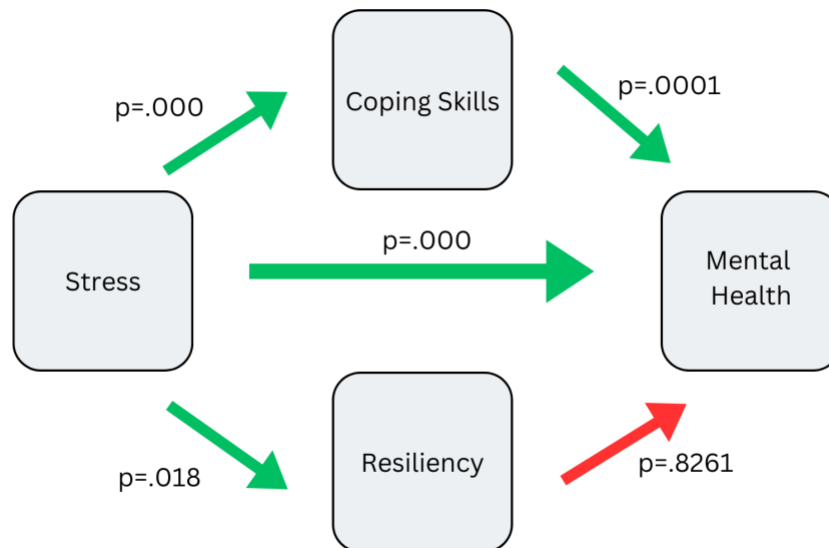
**Table 5. Qualitative Themes**

Theme	Theme Description	Example Quote
Chronic Stress	Students described feeling pressure over an extended period of time.	<i>“I am having more panic attacks, and more chest pains due to my stress impacting my heart. I am also starting to have gray/white hairs at age 21.” (Student-parent 3, 2020)</i>
Positive Changes in Family/Life Dynamics	Students describe how the pandemic had positive impacts in their mental health.	<i>“My 2nd child was born 1 week into “2 weeks to flatten the curve” so I got to work from home for 2 years and be a bigger part of her early formative years.”</i>
Negative Changes in Family/Life Dynamics	Students describe how the pandemic had negative impacts on their mental health.	<i>“I have adopted 3 school age children due to their mother passing away from a drug overdose. COVID-19 has been very hard and stressful due to school for my children, the fear of getting sick again with COVID-19 and what to do with my children if something happened to me or my husband. I also have an older adult son who is autistic that I have had been fearful for regarding COVID-19.</i>
Perseverance	Students describe how they pushed through adversity towards a greater goal and showed perseverance.	<i>“It seems that almost every other morning I have to make adjustments to my attitude and then push myself to get through the day doing the tasks that need done and fight the despair that today is just like yesterday and will be like tomorrow.”</i>
Applying Resiliency	Students describe how they can apply resiliency.	<i>““It is a useful and necessary life skill. Without it, overcoming challenges is doable, but difficult. The good news is, it can be taught, but it requires willingness on the part of the individual.”</i>
Building Resiliency	Students describe how they can build resiliency.	<i>“You have to have supportive people around you to give you strength, if you surround yourself with people who are down and depressed you will never get out of your own funk.”</i>

### Aim 4 Findings

The final aim of this dissertation was to explore the relationship between stress, resiliency, coping skills, and mental health 2 years into the COVID-19 pandemic. I posited that coping skills and resiliency would mediate the effect of stress on mental health. In order to attain findings for this aim, a process regression was performed.

**Figure 3.** PROCESS Regression Model with Results



*Note.* Green arrows indicate a significant effect. Red arrows indicate a non-significant effect.

The study assessed the mediating role of resiliency and coping skills on the relationship between stress and mental health of student-parents. The results revealed a significant standardized indirect effect of stress on mental health through coping skills ( $b = .2133$ , 95% C.I. [.1022-.32.41]). There was a significant effect of stress on resilience ( $b = .2094$ ,  $p = .018$ ), however, the standardized indirect effect of stress on mental health through resilience was **not** significant ( $b = .0033$ , 95% C.I. [-.0280-.0399]). Furthermore,

there was a significant direct effect of stress on mental health ( $b=.7010, p<.05$ ). Hence, coping skills mediated the relationship between stress and mental health of student-parents, while resiliency did not mediate the relationship between stress and mental health. Descriptive statistics for the variables analyzed in the model are shown in Table 6. The mediation analysis summary is shown in Table 7.

**Table 6. Descriptive Statistics for Model Variables**

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Coping	344	3.11	.891	1	5
Mental Health	344	6.07	1.65	2	8
Resiliency	139	3.69	.813	1	5
Stress	346	2.29	.974	1	5

**Table 7. Mediation Summary and Analysis**

<i>R</i>	<i>R-sq</i>	<i>Df1</i>	<i>Df2</i>	<i>p</i>			
.6176	38.14	1.000	135.0	.0000			
95% Confidence Interval							
<i>Type</i>	<i>Effect</i>	<i>Estimate</i>	<i>SE</i>	<i>Lower</i>	<i>Upper</i>	<i>p</i>	<i>t</i>
Indirect	Stress>Coping>Mental Health	.3730	.1043	.1728	.5888		3.80
	Stress>Resiliency>Mental Health	.0058	.0288	-.0491	.0705		.20
Direct	Stress>Mental Health	.7010	.1389	.4263	.9757	.0000	5.048
Total	Stress>Mental Health	1.0798	.1184	.8457	1.3139	.0000	9.122

#### CHAPTER 4 SUMMARY

The qualitative and quantitative findings from this dissertation illustrate the impacts of COVID-19 on the mental health of student-parents, specifically in the areas of



stress, coping skills and resiliency. Specific questions from both survey time points, Summer 2020 and Summer 2022, were analyzed and combined to create overall variables and mediators, that were used in the regression model; Independent variable: stress, mediators: resiliency, coping skills, and dependent variable: mental health.

The stress of student-parents described in chapter two was illustrated in UAB student-parents surveyed during summer 2020 and Summer 2022. Over half of student-parents scored high on the stress scale, with a score of 1 or 2. This is comparable with previous research regarding student-parent stress. Qualitative data provided a deeper explanation into the stressors that cause stress endured by student-parents. Common themes found during the thematic analysis of these questions found chronic stress and instability and as the two most cited issues faced by student-parents.

The analysis of the mental health of student-parents was described as moderately good, with 47% of student-parents scoring a mean of 6 on the mental health scale. This variable was created from the 2020 and 2022 data, in which each variable was combined and averaged to create a mental health scale. Student-parents had a range of qualitative answers that help explain their mental health, as shown in the commonly cited themes, family dynamics and parental stress, and positive effect. Many student-parents experienced both positive and negative experiences effecting their mental health during the pandemic, which is evident in a moderately good overall stress score.

Coping scores were also created in the same way as the Stress and Mental Health variables. Each variable from the 2020 and 2022 surveys were combined and averaged to create a coping score. Similar to the mental health variable, 70% of student-parents

recorded moderately high coping scores. Student-parents also scored moderately high to high (47% and 48%, respectively) on the resiliency scale created by analyzing the 2022 data.

Given that student-parents have reported high levels of stress, moderately high coping, moderately high to high resiliency and moderate mental health, it was the aim of this dissertation to understand the relationship between each of these components. We found that coping scores do mediate the relationship between stress and mental health, while resiliency scores do not. A mediator, by definition, explains the how or why behind the relationship between two variables. In this case, the mediation analysis showed that the stress of student-parents does affect their mental health, and that effect is explained by their use of coping skills. Ironically, the coping skills explain the relationship between stress and mental health, but resiliency scores do not. Further suggestions to attempt to explain this finding is discussed in Chapter 5.

## CHAPTER 5: DISCUSSION

### Introduction

This chapter covers the summary and key findings as it pertains to each aim. This chapter also states the implications of the study for further research in the field and presents recommendations for colleges and universities to address the specific mental health needs of the student-parent population. It also covers the strengths and limitations of this dissertation and makes suggestions for further research focused on targeting the identification and needs of student-parents.

### Discussion of Findings

The impact of the quantitative and qualitative findings together indicate that the level of student-parent stress and coping skills have a direct effect on their mental health. Stress was found to be significant in its association with resiliency, however, resiliency had no association with mental health. Subsequently, stress had no association with mental health when mediated through resiliency, meaning resiliency is not a significant contributor towards mental health. Based on these findings, the best way to impact student-parent mental health is to target their stress level and coping skills.

*Explore how student-parents rate and describe their self-reported stress levels and mental health during COVID-19?*

Student-parents consistently had high and unique stress levels. Analysis of the individual variables revealed that student-parent stress remained high through the COVID-19 pandemic. Student-parents stress scores were considered high in both 2020 and 2022 survey time points, with 55% of scores classified as high/moderately high. Student-parents face a particular set of stressors unique to their population. Student-parents not only worry about academic stressors but also deal with financial stressors, and stress over a lack of a support system. These struggles were illustrated in the qualitative data collected from UAB student-parents in 2020 and 2022. Student-parents cited academic stressors as one of the factors negatively impacting their stress levels. Transitioning to online courses and navigating coursework were major academic stressors. Many student-parents felt some of their professors tried to make up for the lack of in person courses by assigning extra work online. They felt that their coursework was substantially heavier online than when classes met in person. Financial stressors included worries about job security and worries about earning enough money to make ends meet. Many respondents described having constant stress over the possibility of losing their jobs and worries about being able to provide for their children. Some students reported themselves or their significant other losing their jobs and struggling with paying bills. Other student-parents cited a struggle with the lack of social support brought on by the pandemic. Stay-at-home orders prevented gathering and made it impossible to provide social support needed for student-parents. This was an intense stressor for those with infants and small children who were not able to seek help from friends and family.

Student-parents also described feelings of uncertainty. The theme, “uncertainty,” is described as the fear of the unknown or fear of the future. Because student-parents had no basis on the implications of a pandemic to rely on, many experienced stress over what was to come next. Many worried about what the long-term effects of the pandemic may be and what that would mean for themselves and their families. Student-parents also described uncertainty as varying levels of stress, meaning that they felt their stress would rise and fall and was not stable.

COVID-19 caused anxiety due to the uncertainty of what was to come next. Student-parents described feeling high stress over the uncertainty, not only within their personal lives (job security, finances, academic stress) but constant worry and parental guilt concerning the best decisions for their children (childcare, schooling, fear of COVID transmission). The high stress scores and rendering of those stressors in detail, provide further evidence of the need for stress management resources for student-parents.

Overall, student-parents rated their mental health as moderately good regarding stress, coping, and resiliency. By answering the PHQ-2 questions used to assess mental health, the average of the 2020 and 2022 surveys showed 47% of student-parents felt their mental health was moderately high, while 25% indicated having no adverse feelings concerning their mental health. Student-parents further emphasized their mental health through the qualitative descriptions of how COVID-19 has impacted their mental health and how their identity (parent of a school aged child) affected their mental health. Themes emerging from the qualitative data included: positive changes in life/family dynamics, negative changes in life/family dynamics, and effects of COVID-19 transmission and exposure. Some student-parents described positive changes in

life/family dynamics which included the birth of a child or getting to spend more time with their children. Student-parents felt they had more time to focus on things important to them like spending quality time with family or practicing self-care. On the other hand, the pandemic brought on stressors that affected the family dynamic negatively. Some student-parents reported having issues within the family due to the stay-at-home orders. Because families were stuck together with no outlet, some experienced “cabin fever” or irritability from being confined to one space. This feeling of isolation caused friction within the family. Others described stressors within the extended family unit as they pertain to taking care of loved ones. Some families experienced great stress during the pandemic as they were unable to visit or care for sick and/or elderly family members. COVID-19 transmission and exposure stress were among the commonly cited stressors of student-parents. Several respondents described fear of contracting the disease and the implications it would have on them and their families. Some student-parents disclosed having underlying health conditions that could be detrimental if they contracted the disease. Others described the implications of COVID-19 and caring for their children with underlying health conditions.

Overall, there was an overlap in themes emerging from student-parents when describing areas of stress that also affected their mental health. Themes such as COVID-19 transmission and exposure, uncertainty, and isolation/lack of support were commonly referred to as stressors affecting both stress levels and mental health. The direct affiliation between stress and mental health, coupled with the descriptions of stressors and perceived mental health obtained in this study reiterates the fact that further research into these correlations is needed.

*Explore how student-parents rate their coping skills during the COVID-19 pandemic.*

Given that the student-parent stress levels were high, it is refreshing to find their coping skills to be moderately good. Some could infer with high stress levels; one may have low coping skills. However, 70% of student-parents surveyed for this dissertation had moderately good coping scores, indicating they are aware of their stress and are moving towards management. These findings imply that high stress is not always indicative of a lack of coping skills. It could also be indicative of situational stressors (in this case the COVID-19 pandemic) and not the ability to cope. It is important to remember coping skills do not remove stress but gives one the tools to manage them. These findings suggest while coping skills and stress can be positively correlated, it is not a cause-effect relationship. The sample surveyed seems to have more self-awareness of their stress than their non-parental counterparts and is actively working towards management of their stress through the use of coping skills.

*Explore how student-parents view their resiliency 2-years into the pandemic.*

The sample of student-parents surveyed exhibited a moderately high and high resiliency score, 47% and 48%, respectively. These findings indicate student-parents felt they had moderately high or high resiliency 2-years after the COVID-19 pandemic. Student-parents were able to expand on their feelings towards resiliency. Common themes found included perseverance, application of resiliency and ways to build resiliency. Perseverance was described as the acts reported by student-parents that showed perseverance in the face of the pandemic. Many described how they pushed

through adversity towards a greater goal. Others described ways they felt their resilience has benefited them and gave examples of ways to build resiliency.

Overall, student-parents' qualitative findings were concurrent with the quantitative findings. Resiliency scores was the highest scoring variable collected in this study. This sample of student-parents found resiliency to be an important piece of their overall mental health, which is described in both types of data collected.

*Explore the relationship between stress, resiliency, coping skills and mental health of student-parents during and 2-years into the COVID-19 pandemic.*

According to the model tested, stress and coping skills had a positive association with mental health while resiliency was not significantly associated.

One theory explaining why resiliency was not positively associated with mental health could be the fact that 47% and 48% of student-parents scored moderately high or high (respectively) in resiliency. Because student-parents showed such positive results in their resiliency scores, one could speculate their baseline resiliency is already higher than their non-parental counterparts. Furthermore, the high baseline of resiliency could be a reason mental health was not impacted by resiliency. This theory could also explain why the relationship between stress and resilience was significant but not the mediated relationship between resiliency and mental health. Stress can play a role in the impact of resiliency, but as that resiliency is built and heightened, it does not act as a mediator in the relationship between resiliency and mental health.



## Limitations

Although this study provides pertinent information on the mental health of student-parents, it is not without its limitations.

- There could have been a misrepresentation of student-parents. To determine if a student identified as a parent the question asked, “*If applicable, describe the impact particular identities have had on your mental health during COVID-19- Parent of infant to school-age children*” The ambiguity of answer choices, “NA” and “*no impact*” could have been misunderstood by the participant, therefore potential student-parents may have been lost. Thankfully, the sample size was sufficient to produce enough power to conduct a statistical analysis.
- The intention of the parent study was not to study student-parents, specifically. As students may have not understood the identity question, there could have been more student-parents sampled. Additionally, questions could have been tailored directly to student-parents and presented in a way to elicit better, more specific responses.
- It is important to note the researcher on this study (myself) identifies as a student-parent. I am aware of the implicit bias this could introduce in the qualitative data. To mitigate any bias, the secondary qualitative researcher, C.W., was chosen because she is not a student-parent and could give non-biased insight into creating themes and codes for the qualitative data.
- Survey questions were created to assess the mental health of students, specific to the COVID-19 pandemic, in the onset of the pandemic. Because there were no validated measures to assess mental health during a pandemic, (being as it has

been over 100 years since the last pandemic) questions were formed with the help of P.I. Dr. Angela Stowe, Director of Student Counseling Services for UAB.

Using her knowledge of issues reported by students in her care, the questionnaire was created.

- Questions posed in the *COVID-19, Race, and Student Mental Health Study* were not validated for the constructs of the Social Ecological Model.
- The scope of this dissertation was limited to student-parents. Between group analysis of the comparison of student-parents and non-student-parents was determined to be beyond the scope of this paper. Future directions include performing between group analysis comparing student-parents and non-student-parents.

### Strengths

Strengths of this study are as follows:

- This is the first study of its kind to explore the mental health of student-parents as it relates to the COVID-19 pandemic. Moreover, it is one of very few pieces of literature that specifically studied student-parents in any capacity. As mentioned previously, there has been little to no literature pertaining to the mental health of student-parents. This study opens the doors for future research on the needs of student-parents.
- The ability of our team of researchers to get the *The COVID-19, Race, and Student Mental Health Study* completed and disseminated in a timely manner is a great strength of this study. Due to the nature of the study, the ability to get student responses shortly after the closure of campus due to the COVID-19 pandemic was crucial in recording accurate feelings toward the effects of the

pandemic. The research team continued to monitor the spread of COVID-19 and realized further research would be needed to assess how the pandemic has continued to impact student mental health. The research team was able to offer the 2022 survey as a follow up to the 2020 survey and established itself as a longitudinal study. As of October 2023, the United States is moving towards the end of the pandemic and the beginning of analyzing the aftermath of the pandemic. The mental health aftermath of the pandemic is not over and will be studied for years to come. The findings of this research will be beneficial to moving forward with resources and care for student-parents.

- While my role as the researcher and as a student-parent could be conceived and listed as a limitation, I also pose that the intersection between the two roles is a strength of the study. My passion for better mental health services and resources for student-parents was and is the driving force behind this dissertation. The opportunity I have had to learn about the needs of other student-parents of different backgrounds and cultures is invaluable. It is my hope that this study is used to empower student-parents to advocate for themselves and their needs.

#### Recommendations Based on Social Ecological Model

Based on the findings of this study, recommendations can be made to three of the Social Ecological Model levels: Individual, Interpersonal, and community levels (“Core Principals of the Ecological Model,” 2020). The individual level concentrates on the student-parent and is reflective of the stress, coping skills, resilience and mental health of the individual. This idea proposes that if student-parents have lower rates of stress, higher

resiliency and coping skills, then their mental health will be substantially healthier. In turn, the interpersonal level of SEM deals with the community or social networks of the individual (“Core Principals of the Ecological Model,” 2020). In order to create change within the individual, the interpersonal constructs (i.e., social networks) but be established to create support for student-parents. Finally, the internal attitudes of the individual, and social networks can help to inform and advocate for change at the university level (“Core Principals of the Ecological Model,” 2020). This community level of SEM can allow student-parents to come together to create solutions or interventions.

#### *Individual*

- Student-parent counseling services with counselors educated in the different types of family therapy techniques.
- Resources that work within the time constraints of student-parents, ideally after work hours and weekends.
- Engagement in positive mental health activities at the individual level. (i.e., counselling, alcohol or substance use therapy, coping skills workshops).
- One-on-one skills building (budgeting, changing life dynamics, work-life balance).

#### *Interpersonal*

- Peer support and outreach activities sanctioned by the university.
- Group seminars with topics often cited by student-parents (financial stability, healthy meals for the family, special parenting topics).
- Student-parent led organizations.
- Student-parent community networking university-wide.

### *Community*

- University department with the sole purpose of aiding student-parents to be housed within the student center.
- Database created to adequately track and identify student-parents enrolled at the university, part or full time.
- Continuous research into student-parent mental health.

The recommendations described in this section are for university administration to start or make program changes to engage student-parents enrolled in higher education. These suggestions are described in terms of the SEM framework. The application of these recommendations is described in detail in the “Recommendations for Practice” section:

**Figure 4.** *Social Ecological Model*



*The Social Ecological Model: A Framework for Prevention, CDC, 2022*

### Recommendations for Practice

The COVID-19 pandemic and its effect on student-parent mental health has highlighted the ongoing need to develop better strategies and resources to aide this

population in their very specific mental health struggles (Nelson, 2013; Wang, 2020). With the silver lining to this deadly pandemic being added attention to mental health, it is imperative that we take advantage of the spotlight and shine a light to the plight of student-parents. Often student-parents are looked at through an either/or lens, either a student or a parent, but rarely both. Changing the frame of thought to include both student and parent can educate administration on the intersectionality of the two identities and assist in creating and promoting programs and resources specific to student-parents (Cruse, 2020). My recommendation for future research is twofold: (1) further research is needed to identify student-parents' needs and resources, (2) action items for university level implementation.

While the results and findings of this study gives future researchers clear insights into the effects of resiliency, stress and coping skills of student-parents, there is a literature gap that needs to be filled. The first step to filling this gap is for researchers to develop a reliable and validated instrument specific to student-parents (Ahorsu, 2022). Although the survey used in the *COVID-19, Race, and Student Mental Health Study* was able to give us the insight we need to answer our aims, a survey developed jointly with student-parents would be ideal to delve further into the needs of student-parents by asking the right questions. Additionally, researchers must look beyond stress, resiliency, and coping, and explore other components of mental health. The creation of a student-parent formed instrument can aide in identifying other constructs of mental health that are important to student-parents.

This study found resiliency to be statistically insignificant on the effects of mental health. I speculated this to be due to a heightened sense of resiliency among student-

parents when compared to their non-student counterparts. Further research is needed to confirm this theory and research student-parent resiliency in depth. Moreover, an exploration of the relationship between coping and resiliency should be conducted as well (Rice & Liu, 2016). The scope of this dissertation studied resiliency and coping skills as mediators of stress and mental health, meaning the direct relationship between resiliency and coping skills was not explored. Exploring the direct relationship between coping skills and resiliency, and/or exploring the relationship of resiliency and coping skills as moderators of stress and mental health could provide additional insight and added depth to this research.

Additionally, the scope of this dissertation pertained only to the student-parents surveyed during 2020 and 2022. Future research should include non-student-parents surveyed at the same time periods and analyzed to explore their self-reported stress, coping skills, resiliency, and mental health. Understanding how our student-parent population relates to the overall population of UAB students can give researchers an insight into the generalizability of our findings.

The first step to making a change in student-parent mental health is to have an effective and succinct way to keep track of which students identify as a student parent (Askelson, 2020). As mentioned in chapter 2, there are certain regulations that does not allow universities to specifically ask about student-parent status. It may, however, be feasible for the university to ask through other means. Possibly through the application for admission or application for scholarships. If a university-wide census of student-parents is not doable due to legal means, a department dedicated to tracking down and housing resources for student-parents should be created.

Along with the creation of a department in charge of identifying student-parents, the department should also take charge in creating appropriate student-parent resources. Student-parents want and need community. Offering peer support and outreach activities is a way to start engaging the student-parent population. Seminars aimed to combat stressors faced by student-parents is another way to create engagement. Seminars such as financial help: budgeting for a family, creating a savings account, resources that can help with rent/utilities; childcare assistance: resources to help find and secure child care, partnerships with WIC and SNAP, child health care, child and family counseling; and seminars aimed to create a healthy student-parent: managing the household, student-life balance, work-life balance, managing and dealing with changing family dynamics, counseling with counselors who are equipped to deal with parents and the family unit. This research shows that we can impact student-parent mental health by lowering stress levels and boosting coping skills. Additional workshops to give student-parents the opportunity to learn about and try different coping techniques is recommended. Coping skills such as art therapy, mindfulness practice, creative writing, journaling, exercise, are just a few techniques student-parents can experience to help combat stress levels. Additionally, providing student-parents with community networking is crucial. Having a “parents’ night out” or “drop and go” day where parents can sign up to have a 4-hour break on a Friday night or time to run errands, grocery shop, or get some much needed rest for a few hours during the day is one way to establish the sense of community in this population. Moreover, the department committed to student-parents should also consider family friendly events for student-parents to meet each other and create a support system with each other. Forming meaningful relationships with peers that share the same core



values, in this case family and academia, is a solid way to lessen the negative impacts of stress and by creating a sense of community and support.

This dissertation recommends future research be held in two lenses: research and practical application. Further research into the mental health of student-parents is imperative. This population has been vastly under researched for far too long. The time to begin research into understanding other mental health components of this population is now. Practical application can begin concurrently with research. Establishing a university sanctioned office or department dedicated to student-parents is crucial to applying the research recommendations. Research should be conducted through this office and all findings be applied to creating outreach and engagement, such as the above-mentioned activities. Through the intersection of research and pragmatic application, positive movements in student-parent mental health can be achieved.

### Conclusion

There is limited data concerning student-parent mental health as it relates to the COVID-19 pandemic. In fact, this study is the only known study that explored the relationship between stress, resiliency and coping skills as it relates to student-parent mental health during the COVID-19 pandemic. However, as of October 2023, we are still learning more and more about the effects of the COVID-19 pandemic. Historically, college students have experienced higher rates of stress than their non-student counterparts. College students are more likely to experience a mental health episode than others in their age group (Arnett, 2016). Previous studies have presented findings that suggest COVID-19 is a traumatic stressor resulting in PTSD-like responses in college students (Camilleri,

2022; Klonoff-Cohen, 2022). Student-parents make up about 4.6 million students, or one-fifth of the student population nationwide (Williams, 2022; Institute for Women's Policy Research, 2014). Of the 4.6 million student parents, almost half (43%) are single mothers and 51% are likely to be women of color. Understanding the burdens and needs of this population is critical to understanding how to make a positive impact on mental health.

The purpose of this dissertation was to explore the relationship among stress, resiliency, coping skills and mental health of student-parents during the COVID-19 pandemic, through the discoveries of 4 specific aims. The first aim sought to address the stress and mental health of student-parents. While self-reported mental health was considered moderately high by student-parents, more than half of student-parents surveyed experienced high levels of stress. This was elucidated in the themes emerged from the qualitative findings. The second aim addressed the use of coping strategies. Student-parents also found their self-reported coping as moderately high and reportedly felt they were coping well, considering the high stress caused by the COVID-19 pandemic. The third aim focused on the perceived resiliency of student-parents, which was found to be high. Student parents reported resiliency as a useful and important skill needed to have good mental health, which was also recounted in the emerging themes of the qualitative data. Lastly, the study sought to understand the relationship among stress, resiliency, coping skills, and mental health as it related to the COVID-19 pandemic. A positive association between stress, coping skills, and mental health was found, meaning stress and coping skills had a positive effect on the mental health of student-parents. Resiliency, however, had no significant mediated association with mental health. The positive association between stress and resiliency could imply an effect of stress levels on

level of resiliency, however that resiliency level had no effect on the subsequent mental health of student-parents.

The student-parent population must be given a voice in which to advocate for themselves and establish their needs and wants as a unique subset of college students. The student-parent population is diverse and complex, so are the mental health needs of this population. Work must be done to increase the visibility of this population, starting with addressing the needs as suggested by the SEM framework. Additional advocacy must exist to ensure that student-parents are being provided the resources need at the individual, interpersonal and community levels. Student-parents need their own organization sanctioned through the university and positioned as the champion for student-parent resources. This organization can assist in individual, interpersonal and organizational changes made through the university. Giving a voice to student-parents gives them a hand in raising the next generation of scholars.

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APPENDIX A  
THEMES, DEFINITIONS, AND EXAMPLE QUOTES

Theme	Description	Example Quote
Academic stress	Students describe stress stemming from academic coursework, courses, online courses	
		<p>During the spring semester, I was very, very stressed. This summer, I am only taking one course, so it is significantly less stressful. However, I feel as though there has been a lack of communication between faculty and second-year graduate students regarding thesis requirements, which is extremely stressful in addition to COVID-19.</p>
		<p>During the spring semester, it was very stressful having to manage coursework remotely and adjust to learning online. Now, I am no longer stressed from academic stressors, but have stress/anxiety about the fall semester.</p>
		<p>I am takin summer classes so I have a lot of work to do</p>
		<p>I was not stressed until we moved to online learning.</p>
		<p>I would say that COVID-19 did impacted me on my board, part 1.</p>
		<p>Increased when classes were online, increase greater when I began online classes and then decreased when I withdrew, increasing again now that UAB expects to make students come back on campus despite Jefferson County having the greatest positive coronavirus cases in Alabama!!!!</p>

		<p>My four summer courses have caused my stress levels to fluctuate, but I am able to effectively manage my stress levels.</p>
		<p>My stress has had an overall increase due to the uncertainty from Covid-19 which affects my mental health and ability to perform my best in classes. With less inability to focus, my stress rises even more because I stress about getting assignments done, but cannot focus long enough to complete the assignments/studying effeiciently and with quality.</p>
		<p>My stress level has increased some due to the excessive and unnecessary busy work professors keep assigning.</p>
		<p>Online schooling and personal relationships affected by COVID-19 have stressed me out more than usual.</p>
		<p>Some weeks are less stressful than others, but most are fairly stressful. I am tasked with an online class, running two studies for my dissertation that need to be completed by October, writing my dissertation, and caring for my baby full-time. I often feel overwhelmed and overcome with stress.</p>
Acute Stress	Students describe very specific instances that caused stress for a short time	
		<p>Low stress throughout.</p>
		<p>I experienced some stress when adjusting to working remotely, trying to keep myself and my family healthy and safe, and completing my classwork.</p>
		<p>I have had minimal stress since the beginning of quarantine.</p>



		<p>I have not experienced any high-levels of stress during COVID-19. I am able to still operate with minimal problems.</p>
		<p>I have not felt this stressed since my mother passed away. That's the best measurement I have for my stress right now.</p>
Chronic Stress	Students described feeling pressure over an extended period of time	
		<p>about a 10. I have a newborn and its stressful because no one can visit like we want and we can't go out like we want.</p>
		<p>Between meeting deadlines, meetings, and work life balance, I am mentally drained.</p>
		<p>Constant with no periods to decompress, unwind or recharge.</p>
		<p>Moderate to high. Depends on what's going on in the world.</p>
		<p>Feel there is ominous cloud that is inescapable. I Check news daily with no sense of safety.</p>
		<p>Fight or flight to the max -- alternating between literally struggling to keep my head above the water vs floating wherever the waves take me without having any power of where I'm going.</p>
		<p>High stress. Four children all transitioned to home learning. Work transitioned to fully-remote from home. Additionally, I am also going to school full-time. We had sickness in the home. We were unable to go to regular doctors visits and get usual care because of changes in doctor practices because of COVID.</p>
		<p>I am having more panic attacks, and more chest pains due to my stress impacting my heart. I am also starting to have gray/white hairs at age 21.</p>

It seems that almost every other morning I have to make adjustments to my attitude and then push myself to get through the day doing the tasks that need done and fight the despair that today is just like yesterday and will be like tomorrow. Tired and frustrated of people's insistence, and the mandates, that masks will really help anything, and tired of waiting to see if kids will be able to go back to school. Frustrated over the in-limbo daily living situation. Stress is manageable but ever-present and in-your-face, at least on a minor level.

I was stressed about getting sick, then stressed because it seemed I worked all the time and had lost work/life balance. I was stressed trying to make sure my child did her schoolwork and now am stressed about how she will go to school in the upcoming school year. I am stressed that there will be less jobs for people and that I may not be able to get another job. I am overall very stressed.

I generally do not feel stressed because I always know that "the situation I'm in could be worse and other people are in more difficult situations than I am", so I try to be future oriented and not get stuck in the past. There is no reason worrying about something that already happened.

Much higher than normal. I generally do an adequate job of managing my own stress level by managing my responsibilities and inputs, e.g., no social media, into my life. COVID-19 has devastated my ability to control many responsibilities and inputs.

	<p>It was indescribable. Please take couragerous steps and aware the UAB faculties and mentors about their role in allveiating the stress, and pressure on the students. This is a very hard time for me and I would appreciate if the graduate or shool of public health send out an email to all the mentors advising the about negative impact of COVID-19 on their students, and how they should interact promptly with their students!</p>
	<p>My stress has definitely increased since the initiation of quarantine practices. Multiple contributing factors have caused it to ebb and flow, but at a significantly higher level than pre-COVID-19.</p>
	<p>My stress has somewhat gone up when thinking about how everything is going to go this fall.</p>
	<p>My stress levels have been extremely high since the start of COVID.</p>
<p>Coping Skills</p>	<p>Students describe positive or lack of coping skills</p>
	<p>I feel as though it peaked when we first were sent home, and has been a bumpy ride ever since. Sometimes I can calm myself, but whenever I think about everything going on I just get stressed again.</p>
	<p>I feel like my resiliency meter isn't super steady and could deplete at any time. I feel like resiliency is a huge factor in bouncing back. As little difficulties, challenges, and stressors occur, my capacity for resiliency is slowly depleted. That means sometimes when big things happen before I can build that store of resiliency back up, I run out and crash.</p>
	<p>It can be difficult. There are days I rather just do nothing. I am fighting every day to move forward and not</p>

		<p>be overwhelmed by the stresses of the day</p> <p>There does not seem to be any way to bounce back at this time due to the rise in COVID-19, gas prices on the rise, as well as food shortage and food prices.</p> <p>I believe resiliency is key to overcoming challenges. Resiliency is also developed through challenges.</p>
Emotional response to COVID-19	Students describe personal emotional thoughts and feelings pertaining to the pandemic	
		<p>I believe that it is necessary to feel how you need to feel in the moment and allow yourself to heal, and even reach out seeking resources if needed. However striving to do the best you can for you is important to achieve personal success.</p> <p>I feel like being able to bounce back is strength and shows you can persevere.</p> <p>I have a fear of contracting covid and being unable to care for myself, do my job, and care for my children. I have concern that government overreach has tainted medical information related to the covid virus and vaccinations for covid. It concerns me that political parties and shallow non-fact finding media have escalated fears and pitted neighbors and family members against one another with half-true stories and skewed information. My mental health has suffered with the impact of what the pandemic has done to my children and how it will affect them and their generation as they age.</p>

	<p>I feel like I was meant to be successful and with my father backing me that I will be. I feel that without him I'd be homeless with how much it costs to live. I am disappointed in society for not having my back and I would like to be in a position to invest back into kids and change how some things work so kids do not have to feel like the people around them would let them die or that everyone was just looking to get money out of them at their expense.</p>
	<p>I feel like my resiliency meter isn't super steady and could deplete at any time. I feel like resiliency is a huge factor in bouncing back. As little difficulties, challenges, and stressors occur, my capacity for resiliency is slowly depleted. That means sometimes when big things happen before I can build that store of resiliency back up, I run out and crash.</p>
	<p>I have not been stressed over the course of Covid-19 because I do not believe in it. Too many times, CDC officials have said one thing to an extreme to simply contradict themselves a couple of days later. I have also spoken to friends in the medical community and they have made me suspicious of exactly how covid-19 numbers are procured, and potentially inflated.</p>
<p>COVID-19 Transmission and Exposure</p>	<p>Students describe fears of transmission, exposure and transmission of COVID-19.</p>

At the beginning of COVID-19, I worked remote in my home, while also teaching and guiding my children (at the time, in Kindergarten and 6th grade) through the final few months of their school. My husband still had to work outside the home, so he was exposed daily to COVID-19 and we had to take precautions when he returned home each day to keep us safe. The issues around COVID-19 have heightened my anxiety and made it to where I am more comfortable staying at home, then going out to places.

I was employed at the University of MS Medical Center as an RN in Labor and Delivery for 7 years. The first year of my graduate program, I was able to continue working full time at the bedside. As COVID-19 began to worsen, majority of high risk pregnancies with a COVID diagnosis were transferred to our facility for a higher level of care. Working in labor and delivery, we felt overlooked by the majority of the healthcare community. We desperately needed development of new protocols for implementation of care of our population of patients. My coworkers and I spent hours walking back and forth from our unit to the Critical Care Tower to provide monitoring of these mothers that required an ICU admission. Throughout that time, I experienced grief and sadness of watching mothers deteriorate but holding on because that's what mother's do. We watched them FaceTime their husbands and other children at home during their extended stay isolated in the hospital. We watched two of our mothers in their early 20s lose their

battle with COVID 19. We saw the devastation in the eyes of their partners as they were handed their first born child and told they would be doing this without their child's mother. The negative impact of my experience with COVID-19 has changed me. I had to leave UMMC when the reprieve we so desperately needed never happened. I am now in weekly counseling that is extremely expensive. I am now working PRN at a much lower acuity hospital to give my brain and body a change of scenery. With the change came many sacrifices. Every day is a worry for the future. How will all the bills be paid, and how will I keep myself strong for my 8 year old daughter.

I have become more stressed recently as cases increase. I am not concerned for myself. I am worried about getting it and giving it to my family.

I'm pretty stressed about it. I work in the food industry and we get customers not taking the correct precautions all the time.

Moderate, I'm scared of covid especially since nothing can actually be normal again until a working vaccine is on the market.

My stress has slowly become more and more intense as the number of cases rise in my hometown as well as the US. My stress has began to take physical forms as I now get headaches and lower back pains from being tense all the time. Being in public makes me feel exposed and vulnerable to COVID-19, and I have been hyperaware of how my body feels. So much so that anything I feel I immediately think I'm getting sick.

	<p>I'm afraid my stress and anxiety may turn into a phobia, and I'm unsure how to manage my stress properly. I just let it consume me.</p>
<p>Changes in Life/Family Dynamics</p> <p>Students describe how changes in thier life or in the family dynamic imacted thier mental health.</p>	<p>Now that i have recently moved in with my parents &amp; started clinical rotations in a somewhat high risk environment for contracting COVID, I have stress that i will get it &amp; give it to my parents &amp; there will be some negative outcome. I have stress about the violence going on in the US right now. I have stress about being new to clinical &amp; not knowing what is going on because I am so new.</p>
	<p>My oldest child has had a very difficult time during the pandemic. She had mild anxiety prior to COVID, however the quarantine triggered severe anxiety and depression, which then became suicidal ideation with a plan. We have gone thru multiple therapists, short term hospitalization and now a residential treatment center. The entire family is recovering. As a physician, my COVID experience at work has also been impactful as the pandemic has impacted HOW we are able to care for patients and families, much of it leaving a negative taste in everyone's mouth.</p> <p>Gradually stress increase since quarantine started, with a sharp increase in April when my brother was evicted and I took in his children while taking online classes.</p> <p>I have adopted 3 school age children due to their mother passing away from a drug overdose. COVID-19 has been very hard and stressful due to school for my children, the fear of</p>



getting sick again with COVID-19 and what to do with my children if something happened to me or my husband. I also have an older adult son who is autistic that I have had been fearful for regarding COVID-19.

Covid-19 impacted my mental health in that for a long period I had very little social interaction outside of my child and husband. This caused me to feel depressed. I also lost my job which contributed to poor mental health. Then my new job was related to the covid-19 vaccines and was very high stress. There were some positive aspects including learning more coping mechanisms and learning to have better sleep habits.

As a parent with ADHD, who has a child with ADHD, the monotony and constant togetherness during this time have been incredibly depressing and stressful. Very little time for self care and guilt over every decision and how it will effect my kid in the long run is overwhelming. At least some of that would be alleviated if I was not a parent so that identity is increasing the stress and associated guilt

I am a graduate student with a 5-year-old daughter and a 4-year-old son. Due to daycare and summer camps being cancelled and/or closed, I do not have a child care provider; thus, I am unable to work a full-time job.

I gave birth just before the shelter in place orders came out. I have had no help with baby, meaning that my husband and I are more exhausted than most parents of newborns.

I suffer from an anxiety disorder and am autistic. It is already difficult for me to manage my personal interactions with others and understand if I'm being appropriate, understood, etc. I rely a lot of tone of voice and non-verbal queues to help my gauge my behavior and others' responses. Working primarily online with limited personal interactions during COVID-19 has made this significantly more stressful. I am a mother of 3 young children. I am dealing with specific issues related to parenthood that I don't feel like everyone experiences. For example, my middle child has significant behavioral issues including but not limited to ADHD, which require accommodations. Because his elementary school has moved to online learning, I'm not sure if I will be able to get him the services he needs to succeed. I am worried he will fall through the cracks and be forgotten/left behind his classmates because his needs cannot be appropriately accommodated. This, in turn, elevates my own stressors, anxiety and has led to bouts of depression that I am unable to adequately provide for my family. I have also had issues with inconsistent childcare. With businesses and schools reopening, it feels like families are expected to have at least 1 parent that stays home all day to care for children and ensure schoolwork is done. For families that rely on 2 incomes, we cannot do this, but it does not stop society from moving forward. This has caused me great worry about my long term job security. With all these worries piling up, there are times that it feels paralyzing. The extra responsibility

has also meant that normal self-care routines have been reduced or abandoned to make sure everything gets done. I feel like years of work on my self-esteem and learning to prioritize my needs have been challenged, and it feels like there is no help in sight for people like me.

Managing a hybrid WFH/onsite full time job, my own coursework, ADD, caring for my children as a single parent, administering a remote school curriculum for a elementary schooler and middle schooler simultaneously, supporting my son with ASD through massive changes in routine and uncertainty, navigating the technological challenges of remote school/work/social interaction, and the pressure to complete my degree despite the global pandemic combine to create an extraordinarily stressful situation that I am struggling to navigate.

	<p>The first condition was being pregnant, quarantined with a 4 years old toddler . It has been very difficult to rest , making me very irritable .</p> <p>Then with the protest going for all those colored people wrongful death , I started feeling threatened because of my skin color , and I am still feeling unaccepted due to my color. After the baby came , being here without my family to help got hard : plans to travel here got cancel due to the pandemic. I cannot rely on daycare as my children have more exposure to the virus at daycares ; even with privates daycare that I cannot afford .</p> <p>As an international I have work restrictions too , not helping my financial situation . And of course UAB will not help me regarding my tuition because I am not a citizen , quite discriminating as I have been at UAB for 6 years , full BS degree paid of .</p>
	<p>Graduate student, mother, and employed full time. Family illness and recently euthanized my beloved dog.</p>
	<p>It's been very stressful dealing with the uncertainty of everything. Not knowing whether or not I need housing, parking, etc. Not knowing how much to request from FAFSA. Not knowing if my on-campus job will be available to aid in my financial burdens. Not knowing what my second semester will look like. Too many unknowns to not be anxious.</p>
<p>Perserverance</p>	<p>Students describe how they pushed through adversity towards a greater goal and showed perserverance</p> <p>Since March 13, 2002, I have been trapped in a 900 sqft apartment with a tween and my spouse. I've been expected to homeschool my middle-schooler, maintain the household, while also teaching undergraduates, completing a dissertation, and</p>

	<p>engaging in social justice work. I've had to start supplementing with 3mg of melatonin and 25mg of CBD because I can't fall asleep and wake up in a panic. It's unnatural to spend this much time with one's spouse.</p>
	<p>Covid-19 threw off so many things and continues to do so. I have remained at a high stress level from the beginning. I have managed this only because I already had mental health services in place. If I did not have my therapist, this would have been extremely worse. But yeah, it's been high the whole time. Really high - to the point that I have requested some higher anxiety meds from my psychiatrist. Luckily, again, I already had one before the pandemic.</p>
	<p>Earlier in our move to remote work I was working on a fellowship training grant. This increased my stress level significantly because of the sheer amount of work as well as orchestrating reviews of documents and connection with mentors in ID during such an uncertain and chaotic time. Since then, my general stress has decreased to a manageable amount but spikes at times.</p>
	<p>It seems that almost every other morning I have to make adjustments to my attitude and then push myself to get through the day doing the tasks that need done and fight the despair that today is just like yesterday and will be like tomorrow. Tired and frustrated of people's insistence, and the mandates, that masks will really help anything, and tired of waiting to see if kids will be able to go back to school. Frustrated over the in-limbo daily living situation. Stress is</p>

	<p>manageable but ever-present and in-your-face, at least on a minor level.</p>
<p>Resiliency</p> <p>Students describe resiliency and how they have bounced back from challenges</p>	<p>It's my volitional choice to not get overwhelmed by the COVID19. I do get worried but my faith in the one true God is stronger. I try to pray for other people. I empathize with my fellow human beings who are directly and indirectly affected by this pandemic. All I can do is follow the recommendations of health experts and scientists to protect others. I try not to be selfish and do my best to prevent adding in to the divisions in this country. These are the things I teach my children as well.</p>
	<p>At the beginning of quarantine my stress level was very high because so many changes in our lives were happening all at once (social distancing, online classes, etc) Now that several months have passed, I have developed a routine at home and adapted to this constant feeling of uncertainty;</p> <p>You have to have supportive people around you to give you strength, if you surround yourself with people who are down and depressed you will never get out of your own funk.</p> <p>I firmly believe that 20% of life is what happens to you, and 80% is how you decide to respond to it.</p> <p>It is a useful and necessary life skill. Without it, overcoming challenges is doable, but difficult. The good news is, it can be taught, but it requires willingness on the part of the individual.</p>

I think resiliency is what has made communities stronger and stand up against difficulties and challenges. There is a need to have problems so humans improve their way of living. Sometimes it takes time to rebound and have the courage to confront adversities, but at some point, it always will bring a positive outcome.

It can be difficult. There are days I rather just do nothing. I am fighting every day to move forward and not be overwhelmed by the stresses of the day

I think resiliency is important because resiliency is what allows you to get up from setbacks and keep moving forward. Bad things happen in life but you have to try to find a way to move forward every day, even if it's just a little bit. I can't let myself get too hung up on feeling down. I don't have the luxury of hanging out in a bad headspace. My kids are looking at me to lead our family and they need an example of positivity and resiliency so that they can learn to push through when stuff is hard.

Resiliency is created through mindfulness and self-care

Resiliency is knowing that things will not always go as planned and preparing for for the unexpected.

resiliency is necessary for growth

Resiliency is the only way to keep going.

Resiliency is what has given me hope, and continues to give hope. That and my child is what I hang on to the most.

You only have two choices, you can move on or not move.

Resiliency to me is the ability of one to accept difficult realities and continue to perform at an optimal level. I think it is also about

		recovering from various kinds of insults.
		Sounds great, but hard to actually do.
		Take a step back, formulate an plan and execute.
		At my age (55), I have experienced many challenges personally and I have seen tragedies local and world-wide. I still see that there are people all over the world that rise to meet a challenge and want the best for their fellow human-beings. That gives me resiliency and hope. My faith in God sustains that hope and provides inner resiliency.
Racial Stress	Stress brought on by racial tensions in 2020-2022	I believe that it is necessary to feel how you need to feel in the moment and allow yourself to heal, and even reach out seeking resources if needed. However striving to do the best you can for you is important to achieve personal success.
		Some stress due to close closures and re-openings. In addition, there is a little stress related to how I will answer the many questions about race and racism that my 4th grade students will ask me when school reopens.
		Racism, no justice, police brutality, unemployed, no childcare, internship cancelled, single parent, college student
Financial stress	Students describe job insecurity, financial insecurity, worries over financial implicationd of COVID-19	The stress of the racial problems, the other races who think all Black people hate cops or are bad people. Fear for my husbands safety, my children’s safety, my own safety from police violence. Then the virus and fear to just go get groceries for my family. My kids get sick with ear infections or sinus issues and fear to take them to their pediatrician. Worry about Income changes. The news concerning the economy. Feeling like



	<p>we will never get ahead as a black community. Black on black crime. Everything</p>
	<p>Job insecurity; my old role was gotten rid of, I report to a new supervisor in a position that has more job security than previously, but there are no clear expectations, I help do things as needed.</p> <p>lack of job</p> <p>The constant fear and anxiety over possibly losing my job has been terrible</p> <p>1. It was very difficult (at the beginning of the lockdown) to find masks; as someone with a history of lung cancer, that meant I could not leave my house to buy groceries or other necessities. 2. During the lockdown, my income was twice withheld, meaning my bills could not be covered, and necessities could not be purchased. Currently, I am having to wait for money before I can buy my insulin - I have 1 vial left.</p>
<p>Parental stress</p> <p>Students describe specific stressors related to parenting</p>	<p>Lost my job and had to withdraw from school as well to be able to babysit children due to them not being in school as well. Bills started to pile up and still trying to catch up and make ends meet. Sometimes don't know where my next meal going to be. Covid 19 has been very hard to deal with !</p>
	<p>COVID has caused extreme anxiety associated with the uncertainty of maintaining good health for me and my family. I have had limited access</p>

	<p>to resources for my son due to the declining working population.</p>
<p>Positive changes in life/family dynamics</p> <p>students describe how the pandemic had positive impacts in thier mental health</p>	<p>I was stuck at home with several young children (school age and younger). It was extremely difficult to cope with the isolation and conflicting feelings of jealousy and anger towards those who were throwing caution to the wind while we were basically hibernating for the good of the community.</p> <p>My oldest child has had a very difficult time during the pandemic. She had mild anxiety prior to COVID, however the quarantine triggered severe anxiety and depression, which then became suicidal ideation with a plan. We have gone thru multiple therapists, short term hospitalization and now a residential treatment center. The entire family is recovering. As a physician, my COVID experience at work has also been impactful as the pandemic has impacted HOW we are able to care for patients and families, much of it leaving a negative taste in everyone's mouth.</p>
	<p>The COVID-19 global pandemic impacted my mental health in a positive way when the schools and work shut down. The government funded higher income to temporary relief to those who ha lost their jobs due to covid, which occurred to me. However, I was able to stay at home with my daughter and enjoy our lives together for a few months without the pressures of leaving her in school for hours long while I was losing energy at work.</p>

	<p>Because of COVID-19, my job transitioned to a work from home position. This has allowed me to reclaim my personal time. My long commute limited time available to manage my household, spend time with my children, and study. I have gained more than 3 hours a day when considering commute and time needed to get ready for work.</p> <p>However, the stress of trying to protect my children and myself from Covid has been absolutely terrible. Covid has also put a burden on my finances. Money that I am not spending on gas is now going to groceries and other household bills that have increased in price.</p>
	<p>My partner give me distractions with exercise and person to communicate with to express feelings.</p>
	<p>It was nice to be able to work remote in 2020 to be able to spend the first year of my child's life together.</p>
<p>Support System      Students describe the importance of a support system on mental health</p>	<p>My 2nd child was born 1 week into “2 weeks to flatten the curve” so I got to work from home for 2 years and be a bigger part of her early formative years.</p>
	<p>I think resiliency is what has made communities stronger and stand up against difficulties and challenges. There is a need to have problems so humans improve their way of living. Sometimes it takes time to rebound and have the courage to confront adversities, but at some point, it always will bring a positive outcome.</p> <p>You have to have supportive people around you to give you strength, if you surround yourself with people</p>

who are down and depressed you will  
never get out of your own funk.

APPENDIX B:  
2020 SURVEY

**COVID-19 and Student Mental Health  
All Campus Survey**

**Demographics:**

- 1. Check your classification**
  - Undergraduate
  - Graduate
  - Professional
  - Postdoctoral Fellow
  
- 2. With what gender do you identify:**
  - Female
  - Male
  - Transgender man
  - Transgender woman
  - Gender nonconforming
  
- 3. Please indicate your age: \_\_\_\_\_**
  - Less than 19
  - 19 -20
  - 21– 25
  - 26-30
  - 31-35
  - Over 35
  
- 4. What ethnicity are you:**
  - Hispanic or Latino
  - Non-Hispanic or non-Latino
  
- 5. With which of the following race categories do you identify?**
  - American Indian or Alaskan Native
  - Asian
  - Black or African American
  - Native Hawaiian or Other Pacific Islander
  - Other Race
  - White
  - 2 or more races, if yes, please indicate
  
- 6. US Citizenship**
  - US Citizen (yes/no)
  - If no, select:
    - Non-US National
    - Permanent resident

- International

**7. What school are you affiliated with?**

- Arts & Sciences
- Business
- Dentistry, Medicine, Optometry
- Education
- Engineering
- Graduate
- Health Professions
- Joint Health Sciences
- Nursing
- Public Health

**8. Expected year of graduation or fellowship completion: \_\_\_\_\_**

- 2020
- 2021
- 2022
- 2023
- 2024
- 2025
- 2026 or later

**9. Indicate whether or not you identify as part of the following populations (Answer Yes or No)**

- Having a disability
- Veteran
- Person of color
- LGBTQ
- First generation college student
- Low income
- International
- English as a second language
- Parent of infant to school-age children

If Yes then,

Based on your response(s) to the previous question, how would you describe the impact that those identities have had on your mental health?

Very negative impact

No impact

Very positive impact

-10-----0-----+10

Open Response: Describe how your identity has impacted you during COVID-19 (open response)

### **Training**

**1. Indicate your level of experience in online learning:**

- I had never participated in online learning prior to COVID-19
- I was a fully online student prior to COVID-19
- I have taken some online courses prior to COVID-19

**2. Pass/Fail Grade Option**

- Did you utilize the pass/fail option for classes? (yes, no)
- To what degree did having a pass/fail option impact your mental health?

Very negative impact

No impact

Very positive impact

-10-----0-----+10

Open Response: Describe how the pass/fail option impacted you (either positively or negatively)?

**3. Do you participate in mentored research?**

- Yes
- No

If yes, indicate:

- Thesis
- Doctoral
- Postdoctoral
- Directed research
- Other (\_\_\_\_\_)





Please Describe:

**3. Check any of the following events that have impacted your mental health**

- Difficulty accessing internet
- Lack of necessary technology for classes
- Change or loss in job
- Change or loss in income
- Killings of Blacks/African Americans (e.g. George Floyd)
- Local and national protests related to racial violence and racism
- Moving home to a stressful environment
- Moving home to a positive environment
- Changes in health and medical conditions
- Personally-experiences discrimination or hostile behavior related to COVID-19
- Personally-experienced discrimination or hostile behavior related to race
- Change and added responsibility for caring for family members or children
- Difficulty converting to online classes, encountering challenges
- Lack of space to study and do schoolwork
- Food insecurity (difficulty affording and accessing food)
- Housing insecurity (lack of housing)
- Isolation due to social distancing
- Difficulty accessing necessary and appropriate healthcare
- Change in opportunities about your future career options
- Inability to return home because of barriers (e.g. international)
- Relative or self with COVID-19 diagnosis
- Non-COVID-19 death of a family member or loved one
- Loss of a participating in a significant life event (graduation, wedding, funeral)
- Work or job has transitioned to remote work
- Other (Open-response)

**Race**

**1. How much have the events related to racism and racial injustice impacted your academic success?**

Very negative impact

No impact

Very positive impact

-10-----0-----+10

Please Describe:

**2. How much have events related to racism and racial injustice impacted your research?**

Very negative impact                      No impact                      Very positive impact

-10-----0-----+10

Please Describe:

**3. How much have the recent killings of Blacks/African Americans impacted your mental health?**

Very negative impact                      No impact                      Very positive impact

-10-----0-----+10

Please Describe:

**4. Following the COVID-19 pandemic, have you personally experienced (online exchanges or in-person) any discriminatory or hostile behavior due to your race/ethnicity (or what someone thought was your race/ethnicity)?**

- Yes
- No

If yes, describe the impact that this has had on your overall mental health?

Very negative impact                      No impact                      Very positive impact  
-10-----0-----10

Please describe:

**5. Following the COVID-19 pandemic, have you personally witnessed (online exchanges or in-person) any discriminatory or hostile behavior towards others due to their race/ethnicity (or what someone thought was their race/ethnicity)?**

- Yes
- No

If yes, describe the impact that this has had on your overall mental health?

Very negative impact                      No impact                      Very positive impact  
-10-----0-----10

**6. Following the recent killings of blacks African Americans (e.g., George Floyd), have you personally experienced any discriminatory or hostile behavior due to your race/ethnicity (or what someone thought was your race/ethnicity)?**

- Yes
- No

If yes, describe the impact that personally experiencing discriminatory or hostile behavior related to recent killings of Blacks/African Americans has had on your overall mental health?

Very negative impact                      No impact                      Very positive impact  
-10-----0-----10

Please describe:

**7. Following the recent killings of blacks African Americans (e.g., George Floyd), have you personally witnessed (online exchanges or in-person) any discriminatory or hostile behavior towards others due to their race/ethnicity (or what someone thought was their race/ethnicity)?**

- Yes
- No

If yes, describe the impact that personally witnessing someone else experience discriminatory or hostile behavior related to the recent killings of Blacks African Americans has had on your overall mental health?

Very negative impact                      No impact                      Very positive impact  
-10-----0-----10

Please describe:

**Mental Health - How are you feeling?**

**1. Please select all that apply below to how you are currently feeling [Select all that apply]**

- Fear
- Shock
- Anxiety
- Grief/Loss
- Uncertainty
- Anger
- Frustration
- Annoyed
- Confusion
- Apathy
- Numb
- Hope
- Inspired
- Connection to humanity
- Lonely/Alone
- Depressed
- Discouraged
- Inspired
- Content
- Happiness
- Desire to serve and help
- Guilt that I am not doing enough
- Pressure to be productive
- Technology fatigue
- News fatigue/overwhelmed by News
- Other \_\_\_\_\_

**2. Over the last 2 weeks, how often have you been bothered by the following**



- Positive social media practices (following, posting positive content)
  - Using online self-help apps or online mental health platforms
  - Limit exposure to news and media
  - Increased substance use
  - Decreased substance use
  - Other coping strategies: (open response)
6. **Which of these are the most effective for your mental health now? [Please select up to five]**
7. **Which of these are the least effective for your mental health now? [Please select up to five]**
8. **Share your thoughts about what you need from UAB to support your mental health. We want to hear from you. Our goal is to work with students to come up with actionable, sustainable strategies that address shared needs.**

Open Response: (REQUIRED)

9. **What is your preference for information about UAB resources, support and services for your mental health and wellbeing (counseling, health, wellness) [Rate top five, 1 being the most preferred]**
- Social media platforms such as Instagram, Facebook, Twitter
  - My UAB health or mental health provider
  - GreenMail and UAB Reporter
  - University, department, school and program websites
  - Newsletters from schools and programs
  - Engage
  - Faculty, program directors, or advisors
  - Teaching Assistants
  - Canvas and/or BlazerNet notifications
  - Email notifications
  - Printed information such as flyers, pamphlet, etc.
  - Other students
  - Other, please specify

Some UAB student mental health resources that are available:

- UAB Student Counseling Services and Distance Counseling Appointments:
  - Web booking, call to schedule, portal message, current counselor  
<https://www.uab.edu/students/counseling/>
- TAO Self-Help Online Platform
  - Online evidence-based therapy platform including stress management, depression, anxiety, mindfulness
  - Free for all UAB students; enroll at student counseling services website  
<https://thepath.taoconnect.org/local/login/index.php>

- Live Events and Recorded Resources
  - Mental Health Ambassadors: Online sessions including meditations, coping workshops  
**Instagram and Twitter: @uabmha**  
**YouTube Channel and Facebook: UAB Mental Health Ambassadors**
  - Student Counseling Services Resiliency Hub: Videos, Podcast, Social Media  
<https://www.uab.edu/students/counseling/resources>
- Kognito Interactive Simulations to Support Student Mental Health
  - Objectives: Identify warning signs of depression, anxiety and suicide; Build skills to lead conversations with students in distress; Assess the need for a referral  
<https://kognitocampus.com/>  
 Create a new account by selecting “Click Here” above the email and password fields; Follow the prompts and enter the appropriate enrollment key for students: uabus
- Black and African American Mental Health and Trauma Resources for Students, Staff, & Faculty
  - <https://docs.google.com/document/d/e/2PACX-1vQxBtKANpsH-KoM499dOppr9AKjn2hmi0S-THMPMXO2OWAkkConCRV7IcaS-IntXZc5cSnjVU4pKcSL/pub>
- Crisis and Emergency Support
  - National Crisis Text Line: “UAB” to 741-741
  - National Suicide Prevention Line: 1-205-273-8255
  - Emotional Support Line for COVID-19: 1-866-342-6892

Please email Dr. Robin Lanzi [rlanzi@uab.edu](mailto:rlanzi@uab.edu) if you are interested in learning more about student mental health supports on campus.



APPENDIX C:  
2022 SURVEY

**COVID-19, Race, and Student/Postdoctoral Fellow Mental Health:  
A Longitudinal Mixed Methods Study  
All Campus Survey**

**Demographics**

**1. Check your classification**

- Undergraduate student
- Graduate student
- Professional student
- Postdoctoral Fellow

**2. With what gender do you identify:**

- Cisgender Woman
- Cisgender Man
- Transgender Man
- Transgender Woman
- Gender Non-conforming
- Non-binary
- Agender
- Other (open response)

**3. Please indicate your age:**

- \_\_\_\_\_ (*fill in blank*) and *multiple choice*
- Less than 19
- 19-20
- 21-25
- 26-30
- 31-35
- Over 35

**4. What is your ethnicity?**

- Hispanic or Latino
- Non-Hispanic or non-Latino

**5. With which of the following race categories do you identify?**

- Asian Indian or Alaskan Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- Other Race
- White
- 2 or more races (if yes, please indicate)

**6. Are you a U.S. Citizen?**

- Yes

- No

If “No” then ask

What is your citizenship status?

- Non-U.S. National
- Permanent resident
- International

**7. What school do you identify with?**

- Arts & Sciences
- Business
- Dentistry, Medicine, Optometry
- Education
- Engineering
- Graduate
- Health Professions
- Joint Health Sciences
- Nursing
- Public Health

**8. Expected year of graduation or fellowship completion:**

- 2022
- 2023
- 2024
- 2025
- 2026
- 2027
- 2028 or later

**9. Check the following identities that apply to you:**

- Having a disability
  - If checked, please choose which of these apply:
    - Attention Deficit Hyperactivity Disorder (ADHD) and Learning Disabilities
    - Autism Spectrum Disorders (ASD)
    - Mobility/ Sensory Impairments or Medical Disabilities
    - Psychiatric Disorders
    - Traumatic Brain Injury (TBI)
- Veteran
- Person of Color
- LGBTQIA+
- First Generation College Student

- Low income
- International
- English as a second language
- Student-Athlete
- Parent of infant to school-age children

**10. Do you conduct research, individual or on a research team?**

- Yes
- No

If “Yes” then ask

What kind of research are you conducting?

- Thesis
- Doctoral
- Postdoctoral
- Direct research
- Other (open response)

**COVID-19 Impacts**

**1. How much has the COVID-19 pandemic impacted your mental health? (weight the options from 1 – 5)**

1. Very negative impact
2. Some negative impact
3. No impact
4. Some positive impact
5. Very positive impact

**2. Describe how COVID-19 has impacted your mental health:**

**3. How much has the COVID-19 pandemic impacted your academic success? (weight the options from 1 – 5)**

1. Very negative impact
2. Some negative impact
3. No impact
4. Some positive impact
5. Very positive impact

**4. Describe how COVID-19 has impacted your academic success:**

**5. How much has the COVID-19 pandemic impacted your research? (weight the options from 0 – 5)**

0. I am not participating in research
1. Very negative impact
2. Some negative impact
3. No impact
4. Some positive impact
5. Very positive impact

**6. Describe how COVID-19 has impacted your research:**

### **Racism and Racial Injustice Impacts**

**1. How much have the events related to racism and racial injustice impacted your mental health? (weight the options from 1 – 5)**

1. Very negative impact
2. Some negative impact
3. No impact
4. Some positive impact
5. Very positive impact

**2. Describe how the events related to racism and racial injustice have impacted your mental health:**

**3. How much have events related to racism and racial injustice impacted your academic success? (weight the options from 1 – 5)**

1. Very negative impact
2. Some negative impact
3. No impact
4. Some positive impact
5. Very positive impact

**4. Describe how the events related to racism and racial injustice have impacted your academic success:**

**5. How much have events related to racism and racial injustice impacted your research?**

**(weight the options from 1 – 5)**

1. Very negative impact
2. Some negative impact
3. No impact
4. Some positive impact
5. Very positive impact

**6. Describe how the events related to racism and racial injustice have impacted your research:**

## **Events and Factors Impacting Mental Health**

**1. List what events and/or factors are *currently* impacting your mental health? (open response)**

**2. *Since March 2020 (beginning of COVID-19, when school first moved to completely remote and online), list up to five events and/or factors that have impacted your mental health? (open response)***

## **Mental Health – How are you feeling?**

**1. Please select all that apply below to how you are currently feeling (Select all that apply)**

- Fear
- Shock
- Anxiety
- Grief/Loss
- Uncertainty
- Anger
- Frustration
- Annoyed
- Confusion
- Apathy
- Numb
- Hope
- Inspired
- Connection to humanity
- Lonely/Alone
- Depressed
- Discouraged
- Content
- Happiness
- Desire to serve and help
- Guilt that I am not doing enough
- Pressure to be productive
- Technology fatigue
- News fatigue/overwhelmed by News
- Other

**2. Rate your stress level (weight the options from 0 – 4)**

0. No stress
1. Low stress
2. Some stress, but manageable

3. Moderate stress
4. High stress

**3. Rate your resiliency (ability to bounce back from difficulties/challenges) right now: (weight the options from 0 – 4)**

0. Extremely low
1. Somewhat low
2. OK, Fine
3. Somewhat high
4. Extremely high

**4. Describe your resiliency right now in terms of your own life difficulties, challenges, and stressors.**

**5. Describe how you think or feel about resiliency as a way to bounce back from life's difficulties, challenges, and stressors.**

**6. What is your outlook on the future?**

1. I feel very positive
2. I feel somewhat positive
3. I feel neutral
4. I feel somewhat negative
5. I feel very negative

**7. Over the last 2 weeks, how often have you been bothered by the following?**

a. Little interest or pleasure in doing things? (weight the options from 0-3)

0. Not at all
1. Several days
2. More than half the days
3. Nearly every day

b. Feeling down, depressed, or hopeless? (weight the options from 0-3)

0. Not at all
1. Several days
2. More than half the days
3. Nearly every day

**8. How often have you been bothered by the following over the past 2 weeks?**

a. Feeling nervous, anxious, or on edge

0. Not at all
1. Several days
2. More than half the days

3. Nearly every day
- b. Not being able to stop or control worrying
0. Not at all
  1. Several days
  2. More than half the days
  3. Nearly every day
- c. Worrying too much about different things
0. Not at all
  1. Several days
  2. More than half the days
  3. Nearly every day
- d. Trouble relaxing
0. Not at all
  1. Several days
  2. More than half the days
  3. Nearly every day
- e. Being so restless that it's hard to sit still
0. Not at all
  1. Several days
  2. More than half the days
  3. Nearly every day
- f. Becoming easily annoyed or irritable
0. Not at all
  1. Several days
  2. More than half the days
  3. Nearly every day
- g. Feeling afraid as if something awful might happen
0. Not at all
  1. Several days
  2. More than half the days
  3. Nearly every day

**9. Rate how you are coping currently:**

1. Extremely poorly
2. Somewhat poorly
3. OK, Fine
4. Somewhat well
5. Extremely well



**10. Of the coping behaviors you are using, which of these are the *most* effective for your mental health now? (Select up to five)**

- Exercise, movement, walking
- Yoga
- Mindfulness exercises
- Spending time outside and in nature
- Creative ways of connecting with others online
- Balanced diet/nutrition
- Unhealthy eating behaviors
- Self-help reading
- Setting a schedule, having a daily routine
- Talking to friends/family about how I'm doing
- Time creating something (music, art)
- Time connecting to people I care about
- Service to or helping others
- Setting boundaries to protect my time and my energy
- Play - dancing, games, fun
- Meeting with a counselor
- Positive social media practices (following, posting positive content)
- Using online self-help apps or online mental health platforms
- Limit exposure to news and media
- Increased alcohol use
- Decreased alcohol use
- Increased substance use
- Decreased substance use
- Other coping strategies: (open response)

**11. Of the coping behaviors you are using, which of these are the *least* effective for your mental health now? (Select up to five)**

- Exercise, movement, walking
- Yoga
- Mindfulness exercises
- Spending time outside and in nature
- Creative ways of connecting with others online
- Balanced diet/nutrition
- Unhealthy eating behaviors
- Self-help reading
- Setting a schedule, having a daily routine
- Talking to friends/family about how I'm doing
- Time creating something (music, art)
- Time connecting to people I care about
- Service to or helping others
- Setting boundaries to protect my time and my energy

- Play - dancing, games, fun
- Meeting with a counselor
- Positive social media practices (following, posting positive content)
- Using online self-help apps or online mental health platforms
- Limit exposure to news and media
- Increased alcohol use
- Decreased alcohol use
- Increased substance use
- Decreased substance use
- Other coping strategies: (open response)

**12. What UAB services or programs have you utilized for supporting your mental health since March 2020 (when COVID impacts began):**

- Appointment with Student Counseling Services
- Downloaded and used the UABwell Mental Health App for students
- Participated in modules and self-help features in TAO (Therapy Assistance Online) app
- Enrolled and utilized Togetherall platform for 24-7 access to online chat platform with peers
- Participated in a student organization focused on mental health (Active Minds, Mental Health Ambassadors, GROW (Graduate Resilience, Outreach and Wellness))
- Completed the Kognito interactive module about how to help someone who may be struggling with mental health concerns
- Participated in a mental health training or workshop (such as QPR Suicide Gatekeeper Training, Blazers Bounce Back Resiliency Training, Control the Controllables, Mental Health First Aid)
- Utilized facilities, activities and/or classes at UAB University Recreation
- I have not used any UAB support services or programs
- Other (open response)

**13. Share your thoughts about what you need from UAB to support your mental health. We want to hear from you. Our goal is to work with students to come up with actionable, sustainable strategies that address shared needs. (open response)**

END SURVEY

Screen after end of survey

**Thank you for participating in the COVID-19 and Student Mental Health All-Campus Survey!**

**Some UAB student mental health resources that are available:**

- UABwell Mental Health App: [www.uab.edu/app/](http://www.uab.edu/app/)
- UAB Student Counseling Services and Distance Counseling Appointments:
  - Web booking, call to schedule, portal message, current counselor  
<https://www.uab.edu/students/counseling/>
- TAO Self-Help Online Platform
  - Online evidence-based therapy platform including stress management, depression, anxiety, mindfulness
  - Free for all UAB students; enroll at student counseling services website  
<https://thepath.taconnect.org/local/login/index.php>
- Live Events and Recorded Resources
  - Mental Health Ambassadors: Online sessions including meditations, coping workshops
  - **Instagram and Twitter: @uabmha**
  - **YouTube Channel and Facebook: UAB Mental Health Ambassadors**
  - Student Counseling Services Resiliency Hub: Videos, Podcast, Social Media <https://www.uab.edu/students/counseling/resources>
- Kognito Interactive Simulations to Support Student Mental Health
  - Objectives: Identify warning signs of depression, anxiety and suicide; Build skills to lead conversations with students in distress; Assess the need for a referral <https://kognitocampus.com/>
  - Create a new account by selecting "Click Here" above the email and password fields; Follow the prompts and enter the appropriate enrollment key for students: uabus
- Black and African American Mental Health and Trauma Resources for Students, Staff, & Faculty
  - <https://docs.google.com/document/d/e/2PACX-1vQxBtKANpsH-KoM499dOppr9AKjn2hmi0S-THMPMXO2OWAkkConCRV7IcaS-lntXZc5cSnjVU4pKcSL/pub>
- Crisis and Emergency Support
  - National Crisis Text Line: "UAB" to 741-741
  - National Suicide Prevention Line: 1-205-273-8255
  - Emotional Support Line for COVID-19: 1-866-342-6892