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# The Relationship Between Resilience and Social Support Among College Students During the COVID-19 Pandemic

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## ABSTRACT

Due to the unprecedented and unexpected nature of the COVID-19 pandemic, there is little data to date that have investigated the impact on college students. The current study evaluated the relationships between resilience, social support, and distress levels among college students during the COVID-19 pandemic. One-hundred and ninety-one college students in a psychology course completed three measures assessing resilience, social support, and distress during the COVID-19 pandemic. The first hypothesis was that as social support increases, then resilience will also increase in a college population during a worldwide pandemic. A second hypothesis was that as resilience increases, then distress will decrease among this population. A third hypothesis was that as social support increases, then distress will also decrease among college students during the COVID-19 pandemic. To further evaluate the relationships between these constructs, it is hypothesized that resilience and social support will predict low distress levels in participants. There was a significant correlation found between resilience and social support. There were significant negative correlations found between resilience and distress and social support and distress. Results indicated that there was a collective significant effect between resilience, social support, and distress. Social support made a stronger contribution to distress than resilience. Resilience was not significantly predictive of distress while social support was significantly predictive of distress scores.

The Relationship Between Resilience and Social Support Among College Students  
During the COVID-19 Pandemic

A Thesis

Presented to

The Faculty of Department of Psychology

Abilene Christian University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science

In Clinical Psychology

By

Amy Baskin

May 2021

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

Master of Science in Psychology



Assistant Provost for Graduate Programs

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## ACKNOWLEDGMENTS

I wish to express my sincere appreciation to my thesis committee chair, Dr. Cherisse Flanagan for her invaluable supervision, support, and tutelage during the course of this project as well as during my time at ACU. I would also like to thank the other members of my thesis committee (Dr. Richard Beck and Dr. Scott Perkins) for your encouragement and guidance which has not been just limited to this project. As I reflect upon my short but profound two-year journey at ACU, I recognize the positive influence each professor has had upon my life. To my parents, thank you for your unwavering love and support wherever I go and in whatever I pursue. I also wish to thank my friends especially those in my awesome little cohort for your encouragement, humor, and support (including but not limited to hearing about this study over and over for an entire year) all of which were much needed throughout this process. I am grateful for every one of you.

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## CHAPTER I

### LITERATURE REVIEW

#### **Pandemic (“Life Upside Down”)**

The initial outbreak of the coronavirus disease (COVID-19) emerged in Wuhan, China, at the end of December 2019 (Rothan & Byrareddy, 2020). The World Health Organization (WHO) declared COVID-19 to be a pandemic on March 11, 2020, and the United States declared a National Emergency on March 13, 2020 (Huckins et al., 2020; Khachfe et al., 2020). The impact was sudden and disrupted everyday living across virtually every setting including work, education, business, and social settings. The pandemic significantly heightened public health concerns (Chahrour et al., 2020; Sohrabi et al., 2020). This unprecedented occurrence affected over 1.5 billion students in 194 countries as of April 11 (United Nations Educational, Scientific, and Cultural Organization, 2020). Colleges and universities across the United States, which has one of the world’s largest education systems, were dramatically impacted due to COVID-19 (Duong et al., 2020). As of early May, more than 124,000 public and private schools in the United States closed, which affected roughly 56.6 million primary and secondary school students and 19.9 million college students (Education Week, 2020; National Center for Education Statistics, 2020). Higher educational institutions were impacted in many different ways including the transition to online delivery mode, change in student living arrangements, cancellation of many school events, and adjustment to new safety measures (Ana et al., 2020; Sahu, 2020).

## **Transition to Online Learning**

One primary way higher educational institutions were impacted during the pandemic centered around the transition to online delivery mode. Colleges and universities switched from face-to-face class instruction to entirely online delivery mode (Ana et al., 2020; Sahu, 2020). Due to the unexpected nature of COVID-19, this transition to online learning was rapid (Bozkurt et al., 2020; Dohaney et al., 2020; Hodges et al., 2020; Horn, 2020). Hodges and colleagues (2020) labeled the transition as “emergency remote teaching” because of the speed of this transition (para. 5). On March 7, The University of Washington was the first institution to close their campus and move to an entirely online platform (Duong et al., 2020). Most colleges and universities in the United States followed suit by transferring in-person classrooms to online platforms and cancelling all on-campus activities such as conferences, workshops, and sports (Duong et al., 2020; Huckins et al., 2020). Huckins and colleagues (2020) outlined the progression of events after the establishment of the pandemic at Dartmouth College starting with cancelling all athletic competitions to all events having more than 50 individuals. Prior to COVID-19, roughly 30% of graduate students studied exclusively online and over one-third of postsecondary students enrolled in at least one online course (Horn, 2020).

Each subject area in higher education was impacted differently due to the challenges presented by the pandemic. For instance, following mass changes in pedagogy from residential to online, one concern focused on student adjustment and cooperation to online learning. In a study consisting of 78 college students taking pedagogical courses while in quarantine, it was found that nearly all participants (91%) expressed concern about the university-wide transition to distance learning (Terenko & Ogienko, 2020).

However, 100% of participants showed their readiness to conquer existing difficulties related to the pandemic (Terenko & Ogienko, 2020). In addition, all respondents acknowledged that the transition to online learning was the right decision during quarantine conditions (Terenko & Ogienko, 2020).

The transition to online delivery also impacted the assessment and evaluation of classes (Sahu, 2020). Several colleges suspended or changed final examinations although overall course assessment continued as courses moved to online delivery (Huckins et al., 2020; Johnson et al., 2020; Sahu, 2020). As a result, students were left uncertain about the procedures for administering outstanding assignments, projects, and other course assessments (Sahu, 2020). Johnson and colleagues (2020) found that out of 897 faculty and administrative members from 642 colleges or universities roughly two-thirds (64%) of participants lowered the expected number of assignments, nearly half (46%) eliminated exams or assignments, and nearly half (49%) allowed students to shift to pass/fail grades for the semester. In addition, students without Internet capability were disadvantaged in participating in class (Sahu, 2020). In a study on the transition to online learning during COVID-19 that consisted of 646 male college students and 1,625 female college students, it was found that uncertainty related to exams and overall course assessment was the highest stressor among both groups where it was found 32% for male students and 48% for female students (Moawad, 2020).

### **Advantages to Online Learning**

Although the shift to online learning was swift and unexpected, there were some positive outcomes. For instance, concerning COVID-19, online learning allowed for a flexible and continual transfer of communication and information with regard to

schoolwork without the risk of transmitting the virus (Bozkurt et al., 2020; Stawicki et al., 2020). Online learning also ensured a greater chance for students to abide by social distancing practices to assist in reducing the spread of COVID-19 (Bozkurt et al., 2020; Gudi & Tiwardi, 2020). Video conferencing tools such as Zoom and MS Teams were utilized to facilitate effective communication in the classroom (Bozkurt et al., 2020; Mukan & Lavrysh, 2020; Terenko & Ogienko, 2020). These technologies are user-friendly and allow students and teachers live interaction with numerous teaching tools (Mukan & Lavrysh, 2020). Zoom has many useful functions like breakout rooms (separating students into small groups), co-annotation (allowing students to collaboratively write on a shared screen), polling function (creating polling questions that students can answer), and compatibility with many other online tools and platforms (Mukan & Lavrysh, 2020).

### **Challenges to Online Learning**

Challenges were identified in the transition to online learning during the pandemic. Certain subjects proved more difficult to transition to online delivery mode, such as music, film, and dance (Iwai, 2020). When assessing online education between psychiatric disabilities and non-psychiatric disabilities among college students, Murphy and colleagues (2019) found that both groups selected “Lack of In-Person Contact with Professor” and “Time Management” more often than other possible choices. Both groups also reported self-motivation problems, concentration difficulties, and lack of hands-on learning in varying amounts (Murphy et al., 2019). Diminished emotional engagement between professors and students as well as students and other students were also a disadvantage when solely utilizing online learning methods (Murphy et al., 2019).

## **Previous Studies on Online Learning**

Previous studies about online learning in the collegiate setting identify some pedagogical problems. For example, Dumford and Miller (2018) found that as the number of online classes went up, students reported lower levels of effective teaching practices. Further, they were less likely to engage in student-faculty interactions, collaborative learning, and diverse conversations with others (Dumford & Miller, 2018). Murphy and colleagues (2019) focused on the benefits and challenges of online education between psychiatric disabilities college students and non-psychiatric disabilities college students. It was found that both groups reported similar benefits such as increased study time, convenience, and better fit around work schedules (Murphy et al., 2019). The primary advantage found between these groups was greater flexibility while taking an online course (Murphy et al., 2019). This study also revealed that college students with a psychiatric disability reported different challenges in online learning like concentration difficulties, time management, and difficulties navigating course websites compared to college students without a psychiatric disability (Murphy et al., 2019). In a study consisting of 748 college students, it was found that approximately 20% of participants experienced difficulties maintaining access to technology (Gonzales et al., 2020). In addition, those of color and lower socioeconomic status disproportionately experienced poor functioning laptops, which were associated with lower grade point averages (Gonzales et al., 2020).

## **Financial Challenges**

Financial challenges were primary concerns for many college students during the pandemic. Online learning was particularly challenging for college students who did not

have access to a computer or Internet capabilities where they were quarantining (Bozkurt et al., 2020; Sahu, 2020). This may have interfered with the student's academic performance (Sahu, 2020). In addition, this may have caused some financial strain for students purchasing the proper equipment to participate in online learning while at home (Horn, 2020). In April, the United States Department of Education dispersed roughly \$14.25 billion to higher education institutions, wherein \$6.28 billion was earmarked for emergency grants to students (Mowry, 2020; Reid, 2020). Many colleges and universities like the Southern New Hampshire University in Manchester and Rivier University in Nashua assisted students with technology limitations as well as other economic concerns through this federal money and other university funds (Mowry, 2020). The Southern New Hampshire University also utilized other university resources like the Penmen Emergency Fund and Campus Care Team program to support students who faced financial difficulties due to the pandemic (Mowry, 2020; Southern New Hampshire University, 2019). The Penmen Emergency Fund helped students encountering one-time non-tuition related financial hardships primarily concerning housing difficulties (Mowry, 2020; Southern New Hampshire University, 2019). The Campus Care Team program helped students financially with technology problems and limitations as well as housing, health, and food limitations (Lachance, 2018; Mowry, 2020). Some universities like Mississippi State University opened their libraries for limited hours and distributed mobile hotspots to students who did not have access to proper internet capabilities (Mississippi State University, 2020; Smalley, 2020). The pandemic caused other kinds of financial strain on college students. For instance, many students lost their jobs as businesses have closed due to COVID-19 (Lee, 2020). In addition, some families

experienced a loss of income due to the pandemic, which might have added to college students' stress of tuition (Cao et al., 2020).

### **Living Accommodations**

Due to the pandemic, college students who lived on college campuses were required to adjust their living arrangements. For many college students, this meant moving home, which brought new stressors to college students, especially if there were multiple people in the home, all of whom were adjusting to working from home (Sahu, 2020). This also caused computers and information technology (IT) equipment to be in high demand in the home (Sahu, 2020). This demand was due to multiple individuals (including parents, siblings, other family members, and roommates) needing to use technological devices and reliable Internet access around the same area and time as one another. In addition, this demand was influenced by some students not having their own personal devices, so they needed to acquire one from someone else or buy one for themselves (Bozkurt et al., 2020). College students living in homes where there were younger individuals who did not have digital literacy skills may have caused additional stress (Bozkurt et al., 2020).

It is important to note that there are many students who did not have any other accommodations outside of their college (Sahu, 2020). For instance, international college students were unable to travel home during this critical time due to travel restrictions. Therefore, this group of college students were faced with a unique set of challenges such as finding living and food accommodations as well as increased worry about the health of their families (Sahu, 2020). Colleges and universities asked international students to refrain from travel outside the country during the pandemic (Sahu, 2020). As a result,



these institutions requested international students to continue their schooling from hotels or on shuttered campuses (Sahu, 2020). Other vulnerable college student populations included out-of-state students, foster students, and students who otherwise have nowhere else to go were also allowed to remain on campus (Smith, 2020). These colleges and universities closed many services like libraries and recreation facilities due to the pandemic; however, dining halls and counseling and health centers remained open for students in need of those services (Smith, 2020). Although still on campus, these students adjusted to revised dining hours, options, and procedures such as taking their meals back to their rooms or apartments (Smith, 2020). In addition, some students were required to change residential halls to better accommodate for safety protocols and changes in staff personnel (Smith, 2020).

### **Cancellation of Events**

Colleges and universities were forced to cancel many school-related events such as sports games, social activities like club dances and fundraisers, academic conventions, guest lectures, and other events due to COVID-19 (Huckins, 2020; Lee, 2020). Commencement ceremonies and special events were also canceled or postponed when many colleges and universities began having students back on campus (Alpert & Nuygen-Feng, 2020). Milestone events such as these allowed students to process proper farewells and families and other students to acknowledge the student's recent academic accomplishment. Some students also lost paid summer internships due to travel restrictions, safety precautions, and business closings as a result of COVID-19 (Alpert & Nuygen-Feng, 2020). This potentially interfered with some students' career outlooks (Alpert & Nuygen-Feng, 2020).

## **Adjustment to New Safety Procedures**

College students adjusted to new safety precautions to protect themselves from person-to-person contact and lived in self-isolation. These safety precautions included social distancing and wearing a mask to cover their nose and mouth (Khachfe et al., 2020). Social distancing restricted college students' ability to interact with one another and prioritized the use of technology for communication purposes. College students who remained on university campuses during the COVID-19 outbreak adapted to safety procedures and environmental changes as university campuses accommodated for significantly less numbers of students on campuses (Burns, 2020). These students adapted to building closures, modified operating hours and procedures for services still available, and social distancing while on campus (Smith, 2020). In addition, they grew accustomed to seeing safety signs placed throughout college campuses, especially in residential and dining halls (Burns, 2020).

## **Communication**

College students needed to become more flexible and responsible when engaging in online/offline activities as a result of the pandemic (Bozkurt et al., 2020). They were required to manage a variety of technological problems. Communication between students and professors changed due to COVID-19. There was increased regular communication through electronic means between students and professors (Bozkurt et al., 2020). This was particularly true for students who experienced difficulties acquiring online materials in that they are required to speak with professors about alternative assignments (Bozkurt et al., 2020).

## **Social Support**

The term *social support* refers to the social and psychological support one receives or perceives in his/her environment (Chao, 2012). It involves the reliance on others for guidance and assistance as well as disclosure of problems (Chang et al., 2020; Taylor, 2011). Social support is a construct that varies across cultures, issues, and situations (Chang et al., 2020). There are four common types of social support: emotional, instrumental, informational, and appraisal (Sterrett et al., 2011). In social support literature, the construct is commonly divided into structural and functional support. Functional support refers to the perceived quality of social relationships, whereas structural support refers to the existence and quantity of relationships (Hefner & Eisenberg, 2009).

### **Social Support Before Pandemic**

Individuals receive different types of support from different groups of people in their lives. This includes support from family members and support from peers. College students receive support from other additional groups like from university professors and staff members. There are groups in the college student population that receive differing levels of support such as first-generation college students.

### **Family Support**

Family members have typically played influential roles in a college student's life. However, there are expected changes to the degree of support when students leave home to go to college (Friedlander et al., 2007). Even as students left for college, many parents continued to provide implicit support (spending time with their children) and explicit support (financial, emotional, and practical support) to their students (Fingerman et al.,

2016; Yazedjian et al., 2007). In a study evaluating the quality of life of 440 college students, it was found that high social support from parents was associated with moderate and higher quality of life (Roming & Howard, 2019). First-generation college students reported less social support from parents compared to non-first-generation college students (Bonanno et al., 2015). In a study of 1,378 students, Hefner and Eisenberg (2009) found that participants reported slightly higher social support from family than friends and significant others. College students reported they are more likely to contact family members at least once a week compared to at least once a day (Hefner & Eisenberg, 2009). Participants in older age groups, graduate students, those reporting financial difficulties, and those not living with relatives reported significantly lower frequency of contact with family members (Hefner & Eisenberg, 2009). In addition, those reporting a lower quality of social support and lower prevalence of contact with family members were classified as male, Asian, and in the “other or multiple” racial or ethnic category (Hefner & Eisenberg, 2009). Friedlander and colleagues (2007) conducted a study of 115 undergraduate students and discovered that out of four areas of adjustment (social, academic, personal/emotional, and overall adjustment) only overall adjustment was significantly improved when there was an increase in social support from family members. Hirsch and Barton (2011) found that the contributions of peers and parents were equally important to a college student’s support network.

### **Peer Support**

In a college student population, connection to friends and other college students is important to a student’s overall academic and personal life. College students reported they are more likely to contact friends at least once a day compared to at least once a

week (Hefner & Eisenberg, 2009). Frequency of friend contact differed significantly by the same demographic subgroups as family contact, with the exception of gender and sexuality (Hefner & Eisenberg, 2009). Factors that contribute to a student's adjustment to college include the quality of friendships and overall sense of belonging at university (Friedlander et al., 2007; Pittman & Richmond, 2008). In a study consisting of 79 college students in their freshman year, it was found that those who engaged in interventions focused on increasing social support and assisting in creating meaningful social ties to peers adjusted better to college during their first semester compared to those who did not participate in such interventions (Pittman & Richmond, 2008). In another study with 115 undergraduate students, improved overall, social, and personal/emotional adjustment but not academic adjustment was related to increased support from friends (Friedlander et al., 2007). Support from peers was found to be especially significant for first-generation students (Yazedjian et al., 2007).

### **First-Generation College Students**

First-generation college students are classified as students whose parents had received a high school diploma or less (Nunez & Cuccaro-Alamin, 1998; Sebleton & Soria, 2012). They may have faced unique challenges during the pandemic. This group of college students was identified as the most at risk for leaving college without earning a certificate or degree (McFadden, 2016). First-generation students encountered similar challenges as non-first-generation students. In a study of 230 undergraduate students, both non-first-generation and first-generation students reported similar themes related to challenges related to coursework, importance of helpful peers and faculty members, and overall acceptance by others on campus (Costello et al., 2018). However, first-generation

students faced unique challenges like lack of support from friends and family, insufficient academic preparation, and problems related to cultural adjustments (House et al., 2020). There were mixed results when examining social support among first-generation students. Chang and colleagues (2020) found that first-generation college students underutilized social support because of apprehension of negatively impacting their close relationships. These concerns centered around burdening others and being judged by others (Chang et al., 2020). Chang and colleagues (2020) exhibited implicit and explicit social support in their study on first-generation college students. Participants used implicit social support when engaging with peers to develop companionship and reduce stress as these social interactions did not center around the disclosure of a difficulty or problem (Chang et al., 2020). Participants used explicit support as a final resort, which highlighted the underutilization of social support among first-generation college students (Chang et al., 2020). Another study of 1,647 undergraduate students found that non-first-generation students reported significantly more social support from friends and parents but not significant others than did first-generation students (Jenkins et al., 2013). This study found no significant difference between first-generation and non-first-generation college students on support from significant others (Jenkins et al., 2013). House and colleagues (2020) conducted a study of 1,355 undergraduate students wherein 356 students were classified as first-generation college students. The results of the study revealed that first-generation students reported no significant difference from non-first-generation students related to family support and other social support as well as academic success (House et al., 2020).

## **Studies Over Other Groups of College Students**

There are other groups of college students that experienced varying levels of social support such as international students, low-income students, and student veterans (Campbell & Riggs, 2015; Hefner & Eisenberg, 2009; Roksa & Kinsley, 2019; Shu et al., 2020; Whiteman et al., 2013). In a study consisting of 276 international students, there were multiple sources of support highlighted, including family, friends, significant others, and institutions (Shu et al., 2020). Of the multiple sources of social support, perceived support from one's university/college and friends was found to be significantly predictive of successful adjustment to one's university/college (Shu et al., 2020). This study revealed that support from family was a positive predictor of school-related adjustment; however, the relationship between support from family and adjustment was not found to be statistically significant (Shu et al., 2020). Hefner and Eisenberg (2009) examined the relationship between social support and mental health among a college student population consisting of 1,378 participants. The study found that international students, those reporting financial problems, and those not living with a significant other reported a lower quality of social support (Hefner & Eisenberg, 2009). A study consisting of 728 low-income first-year students found that familial emotional support was associated with improving positive academic success (Roksa & Kinsley, 2019).

In a study consisting of 117 student veterans, it was found that social support was predictive of academic adjustment (Campbell & Riggs, 2015). In another study consisting of 380 college students, in which 181 were civilian and 199 were military service member/veteran students, it was revealed that the latter group reported less support from

their peers, and the increase of support from peers over time was consistent with better academic performance for both groups (Whiteman et al., 2013).

### **University Faculty and Staff Members**

An institution's faculty and staff serve as a social support source for college students. In a college student population, the interaction between college students and university faculty and staff was found to be influential for students' academic and personal successes (Hirsch & Barton, 2011). Another major influential factor for institutional support focused on the overall atmosphere of the university/college (Yazedjian et al., 2007). Yazedjian and colleagues (2007) conducted interviews of 22 undergraduate students wherein they expressed narratives on their experiences as a first-year student. The interviews revealed that students perceive strong support by faculty and staff members when they expressed genuine interest in the students, which consequently encouraged students to approach faculty members for help more often (Yazedjian et al., 2007). This helped illustrate how faculty members can be influential in a student's academic success (Yazedjian et al., 2007). When college students received adequate social support from peers, family members, and university/college institutions, they experienced mental health and academic benefits such as increased likelihood of commitment to college, retention, and graduation, reduced social dissatisfaction and loneliness, and improved coping to college (Hirsch & Barton, 2011).

### **Social Support During Pandemic**

Along with economic and biomedical concerns students also have to be mindful of social consequences of COVID-19 like reductions in social support (Prime et al., 2020). Interaction within families was interrupted due to social distancing protocols



(Prime et al., 2020). Although some communication was maintained with the help of technological devices such as phones and computers, there still was a significant reduction in social support for many especially those outside the home or quarantine location (Prime et al., 2020). College students adjusted to different ways of communicating with other college students and friends. They found themselves spending more time alone or with a selected group of people (Huckins et al., 2020).

Institutional support from faculty and staff members to students changed as a result of the pandemic. In addition, with school closures and the transition to online learning, professors had to adjust their courses and support/availability for students. In a study consisting of 897 administrators and faculty members in 672 institutions, roughly 64% of administrators and 58% of faculty members found that information on how to best support their students remotely would be most helpful when adjusting to changes presented during COVID-19 (Johnson et al., 2020). This group identified increasing student support as their top priority need (Johnson et al., 2020). In addition, roughly 57% of administrators and 53% of faculty members found that information on the best practices to support administrative and faculty staff while working remotely was a major need at their institution (Johnson et al., 2020).

A Swiss study consisted of college students ( $N = 266$ ) in two natural science/engineering programs and one study program who took one questionnaire in September 2019 (before COVID-19 lockdown) and another questionnaire in April 2020 (during COVID-19 lockdown) to measure mental health and social support before the pandemic and during the pandemic (Elmer et al., 2020). The study measured five social networks: emotional support, informational support, friendship, pleasant interaction, and

costudying (Elmer et al., 2020). It was found that emotional and informational support networks slightly increased, and friendship networks remained stable over time (Elmer et al., 2020). When comparing within cohort, participants studying during COVID-19 lockdown reported greater isolation and less contact in all social networks excluding emotional support (Elmer et al., 2020).

Social support has changed for international students due to the pandemic. The pandemic caused a number of questions for international students regarding living and financial conditions, immigration status, and continuing schoolwork while in quarantine (West, 2020). Some international student advisors at universities like the University of Central Florida contacted students by telephone to ensure students had the most up to date information regarding the pandemic (West, 2020). This communication also included questions on how international students are coping with the pandemic and if they needed anything (West, 2020). International student advisors found that communicating with students by telephone allowed them the opportunity to better assess how to provide support for their students (West, 2020). In addition, students revealed that being contacted by telephone rather than email made them feel more valued and appreciated (West, 2020). The International Student and Scholar Services at the University of Minnesota established virtual coffee hours to remain connected to their international students as well as allow international students to remain connected to one another (West, 2020). This and other similar activities enhanced the social support available to international students during the pandemic.

## What is Resilience?

Resilience can be viewed as an outcome, process, or capacity. As an outcome, resilience focuses on an individual's ability to bounce back or cope from a stressful or traumatic experience (Portnoy et al., 2018). As a process, resilience describes the interaction between an individual and the environment (Portnoy et al., 2018).

Psychological resilience as a capacity focuses on the connections between different measures of mental health as well as overall functioning (van der Meulen et al., 2020). This approach helps make predictions about one's well-being and functioning during stressful circumstances like during a disaster or pandemic. This is beneficial to occupations that experience frequent exposure to multiple and severe stressors like the military as well as to other traumas related to physical and sexual abuse, hurricanes, fires, other natural disasters, and other related occurrences (Bonanno, 2008; Bonanno & Mancini, 2012; van der Meulen et al., 2020). Those classified as resilient preserve stable mental health in the face of seriously stressful events (Bonanno, 2008).

There has been some debate among professionals in resilience research, which can influence how resilience is defined and measured in empirical studies. Specific definitions or terms used along with resilience in research literature include *hardiness*, *mental toughness*, and *persistence* (van der Meulen et al., 2020). This can help highlight the challenge of measuring resilience. For example, different terms may contribute to changing effect sizes depending on which term is being used in a particular study (van der Meulen et al., 2020). Psychological resilient individuals have been found to endure stressors and appear to be less stressed compared to those who scored lower on resilience measures (van der Meulen et al., 2020). Both civilian and veteran populations showed

that greater resilience yields few PTSD symptoms, higher levels of education, and the greater likelihood to be older and Caucasian (Portnoy et al., 2018). Among young adults (ages 18 to 25) there was a positive correlation found between resilience and facets of personality including conscientiousness, openness to new experiences, and extraversion (Das & Arora, 2020). In addition, for this population, resilience was found to be negatively correlated with neuroticism (Das & Arora, 2020). Resilience can be pertinent in a young adult's pursuit of postsecondary education (Warren & Hale, 2020). This was especially true for college students from underrepresented groups like Black college students (Strayhorn & DeVita, 2010). Among college students, Galatzer-Levy and colleagues (2012) identified significant relationships between one's ability to cope and resilience levels.

### **Resilience Among College Students**

Resilience proved to be a protective factor in positive college adjustment among first-year college students (Kahn et al., 2019). In a college student population, other factors that are associated with resilience include optimism and academic self-efficacy (Chemers et al., 2001; Kahn et al., 2019). Through the process of identifying and characterizing resilience in college students, it was found that optimistic students were more likely to be resilient than the maladaptive group (Kim & Lee, 2018). In addition, the resilient group was more likely to experience greater career satisfaction six months after college graduation when compared to the maladaptive group (Kim & Lee, 2018). Out of 321 undergraduate and graduate students from Taiwan, those who emerged as resilient were less likely to procrastinate, possessed good social skills, and were able to communicate effectively with others compared to other groups (Ko & Chang, 2019).

Among first-generation college students, a major indicator of resilience focused on the ability to overcome challenges in an academic setting such as worries about financial aid, establishing good friendships, making good grades, time management, enjoyment at college, and other college-related issues (Hammermeister et al., 2020). In a study sought to assess resilience, trauma history, and stress in a population of 54 first-year low socioeconomic college students and their overall college academic performances, no significant relationship was found between resilience and academic outcomes or resilience and history of traumatic or stressful events (Warnecke & Lewine, 2019). Data collected of first-generation college students from longitudinal and cross-sectional studies showed the emergence of educational resilience among this population (Azmitia et al., 2018). One finding indicated that over 80% of first-generation college students overcame adversity to graduate even though they experienced lower levels of belonging and greater marginalization compared to non-first-generation students (Azmitia et al., 2018). In another study of 100 undergraduate students, it was found that first-generation college students reported greater emotional intelligence and resilience when compared to non-first-generation college students (Alvarado et al., 2017).

Resilience was associated with other similar constructs like grit in research literature (Vela et al., 2018; Warren & Hale, 2018). For example, data were collected from 289 undergraduate college students at a minority-serving university to assess the relationships among academic rational beliefs, grit, work habits, and resilience (Warren & Hale, 2018). A student's work habit appeared positively correlated with resilience as well as grit (Warren & Hale, 2018). The study contained other variables such as gender, enrollment status, work habit evaluations, and race/ethnicity (Warren & Hale, 2018).

Enrollment status (part-time or full-time) and college status (continuing-generation or first-generation) both appeared to have similar levels of resilience, so there were no significant differences found between these groups (Warren & Hale, 2018). The study showed that race/ethnicity was not related to resilience, which suggested that resilience levels have minimal variation across this variable (Warren & Hale, 2018). However, gender was associated with resilience in that male college students reported significantly higher levels of resilience than female college students (Warren & Hale, 2018). In another study focused on the relationship between valued living and resilience, there were no significant differences found between male and female college students (Ceary et al., 2019).

The relationship between resilience and valued living was shown instrumental in a college student population (Ceary et al., 2019). A study revealed that students reporting greater levels of success when engaging in valued living for three months exhibited higher levels of resilience during this time (Ceary et al., 2019). The study found a decrease in resilience with the presence of negative stress life events in the previous year (Ceary et al., 2019). However, this relationship was moderated by valued living in that this relationship only appeared when valued living was lower (Ceary et al., 2019).

### **Resilience and Disaster/Stressful Events Among College Students**

Although little is known about college students during a pandemic, college students can be exposed to multiple stressful situations such as the death of loved ones, natural disasters, accidents, physical and/or sexual assault, illness, and other related events that may cause significant distress (Burnet et al., 2016; Galatzer-Levy et al., 2012; Read et al., 2012). Read and colleagues (2012) observed 735 first-year students who

experienced at least one stressful event wherein 11% of participants experienced a natural disaster, 47% of participants experienced a life-threatening injury or illness, and 65% of participants experienced the sudden death of someone close to them. The prevalence of college students' exposure to stressful and/or traumatic events ranged from 67% to 84% (Read et al., 2011). Students who experienced a natural disaster, fire, earthquake, or flood reported an increase in alcohol usage within the past 30 days of the study and year of the event (Burnett et al., 2016). This was particularly true for male college students in this study when compared to female college students (Burnett et al., 2016). Burnett and colleagues (2016) controlled for resilience to emphasize the connection between alcohol use and the experience of a disaster, and they found that resilience did not make a significant difference between the groups. Regarding coping skills, students who had more flexible coping skills experienced greater resilience than other students (Galatzer-Levy et al., 2012).

### **Resilience Among College Students During COVID-19**

Due to the unprecedented and unexpected nature of the COVID-19 pandemic, there have not been many empirical studies completed that highlights the emergence of resilience among college students during the current pandemic. Two researchers conducted interviews with college students from New York University and the University of Minnesota, Duluth in late April to provide commentary on how college students are adjusting to COVID-19 where it was found that resilience played an important role in assisting students in their academic and personal lives (Alpert & Nguyen-Feng, 2020). They found themes like the pandemic being instrumental in highlighting the resilience of college students and their ability to find a new normal (Alpert & Nguyen-Feng, 2020).

Another theme that emerged focused on appreciation for essential and health care workers, friends, and schools supplying students with free meals (Alpert & Nguyen-Feng, 2020).

A second study assessed the victim experience of COVID-19, mental health, positive thinking, and resilience in 384 college students in Wuhan, China (Yang et al., 2020). It was found that resilience along with positive thinking decreased the negative impact of COVID-19 (Yang et al., 2020). Both constructs improved the mental health among this group of college students (Yang et al., 2020). In another study from China consisting of 7,800 college students, resilience and social support was found to mediate the relationship between symptoms of acute stress disorder and stressful experiences related to COVID-19 (Ye et al., 2020).

### **Social Support and Resilience**

There was research found linking resilience and social support in a college student population. In a study consisting of 527 at-risk freshman students, resilience and social support as well as other constructs like coping styles were measured to determine differing levels of adjustment like academic, social, personal, university environment, and overall university adjustment (Rahat & Ilhan, 2016). Resilience was found to be the strongest predictor of overall adjustment and other dimensions of adjustment for this population (Rahat & Ilhan, 2016). In this study, resilience and social support made the greatest contributions to social adjustment (Rahat & Ilhan, 2016). Online interaction among college students accounted for overall social support needs of this population which increases resilience levels of college students (American Sociological Association, 2019). This study of 500 college students found that online social support and online



interaction were positive predictors of resilience for this population (American Sociological Association, 2019). In addition, online social support mediated the relationship between resilience and online interaction among college students (American Sociological Association, 2019).

Social support was found to be a significant predictor of resilience among 2,752 individuals in New York City following September 11, 2001 (Bonanno et al., 2007). Individuals with medium levels of social support were found to be roughly 30% less likely to be resilient compared to individuals with high levels of social support (Bonanno et al., 2007). This also remained true when for those with lower levels of social support, even though this study's results were slightly outside of the 95% confidence interval (Bonanno et al., 2007). Interestingly, individuals with a college education were only about half as likely to be resilient compared to individuals who had less than a high school education (Bonanno et al., 2007).

### **Resilience in Adverse Events**

There have been multiple studies conducted on the connection between resilience and past stressful or traumatic events such as Hurricane Katrina, the 2010 earthquake in Haiti, the terrorist attack on September 11, 2001, and the 2003 outbreak of severe acute respiratory syndrome (SARS) in Hong Kong (Bonanno et al., 2005; Bonanno et al., 2006; Bonanno et al., 2008; Mesidor & Sly, 2019; Ng et al., 2006). During a time of crisis, resilience can focus on the ability to minimize stress and properly handle continual distress (Bonanno, 2020). A study assessing the resilience of those who recovered from SARS found that roughly half of survivors remained resilient while recovering from distress (Bonanno et al., 2008; Brewin et al., 2000). Those who were resilient showed

significantly higher levels of social support compared to those who showed a reduction in psychological functioning, which suggests that social support plays a pivotal role in the maintenance of resilience following hospitalization (Bonanno et al., 2008; Dirkzwager et al., 2006). Men were more likely to remain resilient in this study compared to women (Bonanno et al., 2008). Resilience and social support had a significant positive relationship among survivors of the 2010 earthquake in Haiti (Mesidor & Sly, 2019). Data collected 6 months after the terrorist attack on September 11, 2001, in New York City observed resilience in 65.1% of the population of people with high levels of exposure during the attack (Bonanno et al., 2006). Regarding this population of highly exposed individuals, roughly 35% remained resilient when data was recollected at 7 and 18 months after the terrorist attack (Bonanno et al., 2005).

### **The Current Study**

The current study is expected to illustrate how students cope with COVID-19 and adjustment to stressors as well as changes to the collegiate environment. These contributions were especially important given the unexpected nature of COVID-19 and the limited research conducted on COVID-19 as it relates to resilience. Considering the cost and benefit of college education, the need to examine the factors that increase resilience was critical for the future of higher education. Success in college will ultimately impact the individual's economic stability as well as the economic stability of the individual's community and perhaps country. Generally, college education may allow individuals to be better consumers of society. An understanding of how to increase resilience could steer universities to better accommodate students and facilitate a stronger environment for students. Failure to cultivate resilience could be detrimental to an

individual's overall well-being, which contributes to the well-being of their community and country. An understanding of the relationship between resilience and social support would be beneficial in facing not only this pandemic but also future trials and tribulations. This study was particularly important given the abrupt interruption or change of social systems during the beginning of the pandemic. Also, the present work had implications for future studies relating to resilience, higher education, and disaster-related research. Therefore, the current study was proposed to examine the strength and direction of the relationships between resilience, social support, and distress among a college population during the COVID-19 pandemic. Correlational data were used to understand the relationships. In addition, the study examined if resilience and social support predicted low levels of distress. This study used regression analysis to examine this prediction. This study had four predictions: as social support increased then resilience would also increase; as resilience increased then distress would decrease; as social support increased then distress would decrease; and resilience and social support would predict low levels of distress.

## CHAPTER II

### METHOD

This current study evaluated the relationships between resilience, social support, and distress levels among college students during the COVID-19 pandemic. The first hypothesis was that as social support increases, then resilience will also increase in a college population during a worldwide pandemic. A second hypothesis was that as resilience increases, then distress will decrease among this population. A third hypothesis was that as social support increases, then distress will also decrease among college students during the COVID-19 pandemic. To further evaluate the relationships between these constructs, it is hypothesized that resilience and social support will predict low distress levels in participants.

#### **Description of Sample**

Of the 191 participants, there were 77% female and 23% male participants, with 25% reporting that they were first-generation college students as reported in Table 1. The majority of participants were under 21-years-old with 47% of the sample being 18-19 years of age and 38% being 20-21 years of age. The sample consisted of 76% of individuals identifying as White or Caucasian, 9% as Black or African American, 4% Asian, 2% American Indian or Alaskan Native, 0.5% Native Hawaiian or Other Pacific Islander, and 8.5% identified as Other. Roughly 23% of participants reported being Hispanic, Latino, or of Spanish origin. Regarding college student classification, 35% of the sample were freshmen, 25% sophomores, 24% juniors, and 16% seniors.

Concerning employment before quarantine, 48% were employed and 51% were unemployed. For employment during quarantine, 45% were unemployed, 29% were employed, 12% were furloughed due to COVID-19 and hoping to return to work, and 4% lost their jobs indefinitely due to COVID-19. Prior to COVID-19, 59.5% of participants were living in residence halls, 28.9% were living in an apartment or house with friends, 8.4% were living in an apartment or house with family, and 3.2% were living in an apartment or house alone. During quarantine, 74.6% were living in an apartment or house with family, 17.5% were living in an apartment or house with friends, 6.9% were living in an apartment or house alone, and 1.1% were living in university residence halls.

**Table 1**

*Participant Demographics*

Variable	Percent
Gender	
Female	77.5
Male	22.5
Race	
White or Caucasian	76.2
Black or African American	9.0
Other	8.5
Asian	4.2
American Indian or Alaskan Native	1.6
Native Hawaiian or Other Pacific Islander	0.5
Ethnicity	
Hispanic, Latino, or of Spanish origin	22.6
Not Hispanic, Latino, or of Spanish origin	77.4

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**Table 1 (continued)****Age**

18-19	47.1
20-21	38.7
22-24	12.0
25-35	2.1

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**Classification**

Freshman	34.6
Sophomore	25.1
Junior	24.1
Senior	16.2

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**Student Housing Prior to Quarantine**

Residence hall	59.5
Apartment or house alone	3.2
Apartment or house with friends	28.9
Apartment or house with family	8.4

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**Student Housing During Quarantine**

Residence hall	1.1
Apartment or house alone	6.9
Apartment or house with friends	17.5
Apartment or house with family	74.6

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*Note.*  $N = 191$

## **Selected Measures**

There were three different measures used in this study in order to assess this study's hypotheses. Each measure was centered around one specific construct, such as resilience, social support, and distress. These measures are the Resilience Assessment Questionnaire, Medical Outcomes Social Support Survey, and Distress During Pandemic Scale.

### **Resilience Assessment Questionnaire**

The Resilience Assessment Questionnaire (RAQ) assesses an individual's resilience to help identify areas where his/her resilience levels could be strengthened (Mowbray, 2011). The self-report inventory consists of 35 questions wherein each are rated on a 1 to 5 Likert scale (1 = no, never; 5 = yes, always). The scale contains 7 subscales: vision, interaction, problem solving, relationship, determination, organization, and self-confidence. Vision focuses on one's plan for the future. Example items include: "I know what I want to achieve during my lifetime" and "My current work is a step towards achieving what I want in my lifetime." Interaction focuses on measuring how one behaves towards other people. Example items include: "I always listen and understand what others are talking to me about" and "I have a personal brand that I think I regularly demonstrate to others." Problem solving measures one's ability to rise to a challenge and solve a problem successfully. Example items include: "I normally enjoy solving problems" and "I help others solve their problems and challenges." The relationship subscale assesses one's ability to forge relationships with individuals that provide appropriate reinforcement and support. Example items for this subscale include: "I sometimes share my innermost secrets with a select number of friends" and "I

normally see myself as self-sufficient.” The determination subscale emphasizes one’s level of determination to achieve things. Example items include: “I have a get up and go approach to life” and “I have ambitions to achieve certain things during my lifetime.” Organization emphasizes one’s ability to plan out one’s day and cope with unexpected occurrences to one’s daily life. Example items include: “I like making lists” and “I normally tackle big tasks in bite sizes.” The self-confidence subscale assesses one’s level of confidence because in subtle manners self-confidence can attract others and reinforce success with others. Example items include: “I know I’m a great person” and “I know what to do in most situations I face.”

Test-retest reliability of 0.94 and split-half reliability of 0.89 was found for this instrument (Srivastava & Bartwal, 2014). Face validity was found for most individuals who completed the assessment (Mowbray, 2011). Evidence of content validity at 0.89 was demonstrated by Srivastava and Bartwal (2014).

### **Medical Outcomes Social Support Survey**

The Medical Outcomes Study Social Support Survey (MOS-SSS) measures multiple dimensions of social support including positive social interaction, tangible support, affectionate support, and emotional/informational support (Sherbourne & Stewart, 1991). It comprises 19 items where each is rated on a 5-point Likert scale ranging from none of the time (1) to all of the time (5) of how frequent individuals have someone to rely on in different situations. Higher points are correlated with greater support.

Positive social interaction measures one’s ability to have a good time and do enjoyable things with others. Example items include: “Someone to get together with for



relaxation” and “Some to have a good time with.” The subscale on tangible support measures how often one has someone to assist them with daily activities like chores. Example items include: “Someone to help you if you were confined to bed” and “Someone to take you to the doctor if you needed it.” Affectionate support emphasizes one’s ability to show love and affection for another person. Example items include: “Someone who hugs you” and “Someone to love and make you feel wanted.” Emotional/informational support focuses on one’s ability to confide in and provide advice to another person. Example items include: “Someone who understands your problems” and “Someone you can count on to listen to you when you need to talk.”

For each dimension, internal consistency was reported greater than 0.9. Good evidence of validity was found in a study of 2987 chronic patients. The Vietnamese version of this instrument found good concurrent validity and construct validity (Khuong et al., 2018). Overall test-retest reliability was found to be 0.76 for this version of the instrument (Khuong et al., 2018).

### **Distress During Pandemic Scale**

The measure of distress was created from the “Coping during Pandemic Scale” which was developed for this study. It consists of six items related to stress to assess stress levels where each item is rated on a 6-point Likert Scale ranging from 1 (Strongly Disagree) to 6 (Strongly Agree). Cronbach’s alpha was found to be 0.638. Example items of this scale include “I can’t seem to escape the stress of the COVID-19 crisis” and “I have been overwhelmed with worry during the pandemic.”

## **Procedure**

This study was approved by the Abilene Christian University's Institutional Review Board (see Appendix A). Participating college students were required to sign and submit a consent to participation form before inclusion in the study. Each participant completed three scales—Distress during Pandemic Scale, MOS-SSS, and RAQ—as well as demographic information. Participants were given extra credit in one of their psychology classes for completing the survey and filling out a form with their identification on it to be granted credit. Participants were not financially compensated in any way. A web link to the online survey tool was provided to participants via an email from the participant's professors. The data was only seen by the researcher. The survey took no longer than 15-20 minutes for participants to complete.

## **Data Analysis**

The goal of the study was to evaluate the relationships between resilience, social support, and distress during the COVID-19 pandemic. It was hypothesized that as social support increased, then resilience would also increase; as resilience increased then distress would decrease; and as social support increased then distress would decrease. A correlation matrix was used to examine the relationships among student resilience, social support, and distress. It was also hypothesized that low levels of resilience and social support would predict distress among this college population. A regression analysis was used to test these variables. Beta weights were examined to see which independent variables (resilience or social support) made a more significant contribution to the dependent variable (distress).

## CHAPTER III

### RESULTS

The following sections detail the results of the analyses from the survey items measuring resilience and social support. Preliminary screens were conducted for missing data. Of the 199 individuals who began the survey, data were collected from 191 individuals.

#### **Resilience and Social Support Hypothesis**

There was a significant correlation found between resilience and social support wherein  $r = .481, p < 0.01$ , which supports the hypothesis that as social support increases, then resilience will also increase in a college population during a worldwide pandemic. The majority of participants reported strong levels of resilience and social support. There was a significant negative correlation found between resilience and distress during the pandemic wherein  $r = -.198, p < 0.01$ , which supports the hypothesis that as resilience increases, then distress will decrease in a college population during a worldwide pandemic. There was a significant negative correlation found between distress during the pandemic and social support wherein  $r = -.373, p < 0.01$ , which supports the hypothesis that as social support increases, then distress will decrease in a college population during a worldwide pandemic. Correlation coefficients for resilience, social support, and distress are presented in Table 2.

**Table 2***Correlation Coefficients for Resilience, Social Support, and Distress During Pandemic*

	Resilience	Social Support	Distress during Pandemic
Resilience			
Social Support	.481**		
Distress during Pandemic	-.198**	-.373**	

**\*\*** $p < .01$ **Gender Differences**

Means in gender were investigated using a t-test analysis to see which group reported higher scores on resilience, social support, and distress. As noted in Table 3, female participants ( $M = 136.57$ ) reported significantly higher levels of resilience when compared to male participants ( $M = 129.08$ ). Female participants ( $M = 83.01$ ) also reported significantly higher levels of social support when compared to male participants ( $M = 77$ ) as referenced in Table 4. Female participants ( $M = 21.03$ ) reported significantly higher levels of distress when compared to male participants ( $M = 18.43$ ) as shown in Table 5.

**Table 3***Differences in Resilience Between Groups*

Resilience			
Groups	<u><i>n</i></u>	<u>Mean</u>	<u><i>SD</i></u>
Female	40	136.57*	17.97
Male	142	129.08	17.81

**\*** $p < .05$

**Table 4***Differences in Social Support Between Groups*

Social Support			
Groups	<i>n</i>	<u>Mean</u>	<u>SD</u>
Female	145	83.01*	14.11
Male	41	77	14.37

\* $p < .05$ **Table 5***Differences in Distress During Pandemic Between Groups*

Distress during Pandemic			
Groups	<i>n</i>	<u>Mean</u>	<u>SD</u>
Female	142	21.03*	5.75
Male	43	18.42	4.99

\* $p < .05$ **College Classification Differences**

Means in college classification were investigated using an ANOVA to see which group reported higher scores on resilience, social support, and distress. College junior participants ( $M = 21.28$ ) reported higher levels of distress when compared to college freshman ( $M = 20.31$ ), sophomore ( $M = 19.75$ ), and senior participants ( $M = 20.55$ ). College sophomore participants ( $M = 138.64$ ) reported higher levels of resilience when compared to college freshman ( $M = 134.41$ ), junior ( $M = 131.18$ ), and senior participants ( $M = 136.24$ ). College senior participants ( $M = 83.68$ ) reported higher levels of social support when compared to college junior ( $M = 81.89$ ), sophomore ( $M = 81.98$ ), and

freshman participants ( $M = 80.33$ ). There were no significant differences between these groups on resilience, social support, and distress as seen Table 6, Table 7, and Table 8.

**Table 6**

*Differences in Resilience Between Groups*

Resilience			
Groups	<u><i>n</i></u>	<u>Mean</u>	<u><i>SD</i></u>
Freshmen	64	134.41	17.27
Sophomore	44	138.64	19.51
Junior	45	131.18	19.18
Senior	29	136.24	15.81

**Table 7**

*Differences in Social Support Between Groups*

Social Support			
Groups	<u><i>n</i></u>	<u>Mean</u>	<u><i>SD</i></u>
Freshmen	63	80.33	15.40
Sophomore	47	81.98	12.40
Junior	45	81.89	13.55
Senior	31	83.68	16.30

**Table 8***Differences in Distress During Pandemic Between Groups*

Groups	<i>n</i>	Distress During the Pandemic	
		<u>Mean</u>	<u>SD</u>
Freshmen	66	20.32	5.42
Sophomore	48	19.75	5.31
Junior	46	21.28	5.50
Senior	31	20.55	4.57

**Resilience and Social Support on Distress**

Multiple regression analysis was used to test if the resilience and social support significantly predicted distress. For this equation, distress was the dependent variable, and the independent variables were resilience and social support. Results indicated that there was a collective significant effect between resilience, social support, and distress, ( $F_{15.168} = 32.834, p < .001, R^2 = .148$ ). Resilience and social support accounts for 14.8% of the variance in distress. Social support made a stronger contribution to distress than resilience. Resilience was not significantly predictive of distress ( $\beta = -.025, p > .05$ ) while social support was significantly predicted distress scores ( $\beta = -.372, p < .05$ ). The regression analysis is presented in Table 9.

**Table 9***Resilience and Social Support Predictions on Distress*

Predictors	Standardized Betas	p-value
Resilience	-.025	.750
Social Support	-.372	.000

*Note.*  $R^2 = .148, p < .001$



## CHAPTER IV

### DISCUSSION

#### **Overview of Results**

The current study found that resilience and social support were related, meaning that students who had higher levels of resilience also seemed to be enjoying higher levels of social support. This could show that relationships are extremely important and act as external factors to resilience which is beneficial when experiencing distress. Additionally, this study found that students who appeared to be resilient also experienced lower amounts of distress compared to those who did not appear to be resilient. This shows that factors such as confidence and self-sufficiency, enjoying problem solving tasks, and having good relationships are instrumental in experiencing less distress. It was found that students having someone to spend time with and get advice from also experienced low amounts of distress. Interestingly, this factor of having someone to depend on and show affection was found to be even more important to distress level than if the student appeared to be highly resilient. This could mean that the external factors of resilience such as relationships and support are more important to assess distress or stress levels when compared to internal factors that contribute to resilience. Finally, the study found that being highly resilient and having strong connections with others produced low levels of distress. This highlights that companionship and resilience are both predictive of less distress among college students. In other words, those who feel supported emotionally

and tangibly as well as those who like challenges, have curiosity for life, and are driven to achieve their goals would expect to experience less discomfort in stressful situations. In fact, those who had someone to aid them in life's challenges was more of a predictive of stress than being resilient.

### **Limitations of Current Study**

One limitation of the current study was the size and narrowness of the sample. Since this study was conducted with only college students, similar studies need to be conducted in other populations. This will allow comparisons to be made between different populations such as adolescents and adults which could help show if college students are reporting greater or lesser resilience levels than other populations. The majority of this study's sample was White or Caucasian, female, less than 21 years old, and Christian. As a result, there were small numbers of participants for some demographic groups like male participants, African American, Asian, and junior and senior college students. Therefore, the study will need to be replicated in other populations to better examine resilience and social support in those populations. Doing so could help illustrate which gender, racial/ethnic, and/or age groups reported greater resilience, social support, and distress. University or counseling settings that cater to underrepresented populations could find this information especially helpful. This study's sample small effect size and group sizes could have been accounted for by having a larger sample size and greater spread of participants across groups. Regarding gender, it could be that women college students experience greater levels of distress, resilience, and social support than male college students. However, given that 77% of the population

identified as female it would be interesting to see if having an equal number of male and female participants would yield the same results.

The cross-sectional nature of the study of a unique construct posed another limitation. The present study measured resilience levels among participants at the very beginning of the pandemic. The impact of the pandemic over time could be investigated if there was a follow-up where participants completed these measures again in one year. It may be that college students adapt and become better over time at resilience, social support, and coping. This has been shown to be true in other vulnerable populations including military personnel (Campbell-Sills et al., 2017). This will also show the course of the impact of the pandemic on this sample and similarly the ability to strengthen or increase an individual's resilience levels. Since the survey was administered near the beginning of the pandemic and quarantine (in April 2020), the effects of quarantine and results of the impact of COVID-19 might have changed in later months. Thus, a follow-up to this study later in the pandemic might highlight resilience and social support over the course of the COVID-19 pandemic.

Since resilience is a construct that changes over time, difficult to define, and associated with other terms like hardiness and persistence, it might be worth exploring if an instrument focused on measuring hardiness would yield similar results to this study. This could illustrate relationships between similar constructs when measuring distress levels and see if hardiness or persistence produces a stronger or weaker relationship with social support than resilience as well as if they predict lower or higher levels of distress compared to resilience.

Another weakness of this study was related to the measure of distress. The measure was specifically developed for this study therefore it was not previously validated and had somewhat weak reliability at 0.638. In addition, there were only six items on this measure and not a strong measure of distress. Another measure of distress could be used that has established strong reliability and validity which could yield different results when compared to the resilience and social support measures used in this study.

The resilience measure used in this study contains seven separate subscales that could provide additional information to this study's results. For this study, resilience was interpreted as one overall measure; however, if this measure was broken down into the different subscales one could explore if any of these subscales produced greater levels of social support and predict lower levels of distress compared to the other subscales. It could be that relationship and determination subscales correlated higher with social support than subscales on vision and self-confidence and produced lower levels of distress.

### **Future Directions**

In regard to future research directions, additional considerations are worth mentioning. Since resilience is a construct that can change over time, it would be advisable to develop a longitudinal study. This information could be helpful in adding to resilience research on college students during the COVID-19 pandemic. Knowing more about how to increase resilience among college students could be beneficial for mental health and other professionals such as university professors when working with college students during a pandemic. This information could be useful when educating college

students about how to strengthen resilience during and following times of crises. This could help show how resilience levels influence mental and physical health, relationships, professional development, substance abuse, and other areas in a college student's life.

In the future, an experimental design that investigates how to build resilience in a vulnerable population during a crisis could expand on the largely correlational design of the present study. Such a study would be enhanced if it measured interventions to strengthen resilience and social support in a college setting (e.g., at a counseling center or student service office) and included a control variable. The control variable could be implemented in a social or selective group on a college campus. An investigator could give a sample a resilience measure as well as social support and distress measures to two groups. After a period of time with the variable (i.e., resilience strengthening tool) being implemented in one group, one could examine the resilience, social support, and distress levels in that group. Both groups could then be provided the same instruments again to see if there was any change. Comparisons could be examined between both groups to see if resilience was strengthened over time as well as if social support or distress changed over time as well.

This study elaborated on the potential relationship found between coping strategies and resilience during the pandemic. However, it did not dive deeper into this relationship. Therefore, a future investigation could add a measure to assess coping strategies of participants to examine if good coping strategies could produce or improve an individual's level of resilience. This future investigation could also include social support to see if support relates to better coping. In addition, a study could use a selected

number of coping strategies as a controlled variable to see if a causal relationship could be determined.

While this study does mention information about certain vulnerable populations like international students and first-generation college students, there are still other vulnerable populations like LGBT+ college students that could be further explored to assess if this population reported higher or lower levels of resilience, social support, and distress during the pandemic when compared to other college students. It would be interesting to see how LGBT+ college students fared during the COVID-19 pandemic as it relates to resilience, social support, and distress.

### **Implications of Current Study**

The purpose of this study was to examine the relationship between resilience, social support, and distress in a college population during the COVID-19 pandemic. Previous studies on adverse events such as the 9/11 terrorist attacks and natural disasters have found strong resilience levels among individuals in these stressful events (Bonanno et al., 2008; Brewin et al., 2000). Resilience and social support have been established as important factors for individuals overcoming stressful situations (Bonanno et al., 2007). However, due to the unprecedented nature of the COVID-19 pandemic and massive disruption in social settings at the time of the current investigation, there have been no studies conducted on resilience and social support levels. Similar to Yang et al. (2020), the present study focused on measuring resilience during COVID-19 pandemic but went a step further and sought to contribute to this limitation by exploring resilience, social support, and distress factors among a college student population.

The most significant finding of the current study was that social support was an even more significant mitigator of distress during the COVID-19 pandemic than resilience. College students who had better systems of support through family, friends, and roommates, coped with the stress of the pandemic better than those who did not. That is, when college students had people in their lives available to talk to, spend time with, and help them with daily tasks of living, they were less distressed because of the quarantine and pandemic than those with less social support. This finding reflects the importance of a unique stressor of COVID-19 which centers around isolation. As a result of COVID-19, individuals found themselves isolated from others. This was primarily due to distancing protocols and quarantine. This study's finding shows that interactions with others proved to be more important to distress levels than an individual's internal characteristics that would contribute to their resilience levels like being self-sufficient, achievement-driven, and confident. Previous studies showed that resilience played a greater contribution to overall adjustment among college students than social support (Rahat & Ilhan, 2016). However, due to the nature of COVID-19 and the increase in isolation among this population, this study found that social support contributed to less distress than resilience among college students.

Resilience was highly correlated with social support and related to better coping, but not as much as social support. This could largely be due to the nature of the COVID-19 pandemic which caused students to be more isolated from others making connections with others even more important. This could suggest that external factors that contribute to resilience are more important especially when assessing distress levels than internal factors of resilience. Internal factors that contributed to resilience included confidence,

achievement orientation, self-sufficiency and a get up and go attitude. College students with these characteristics were able to better cope with the stress of the pandemic than those with less resilience.

When this study was conducted, in April 2020, at the beginning of quarantine, college students had to find different ways to facilitate social support. Within the family support system, families were either being physically distanced or quarantined together in the same home. Each of these scenarios had its own pros and cons. The quality of family life could be a sense of stress for a college student. When a college student is quarantined with their family, they are forced to accommodate all the nuances of their family including schedules which could be taxing for a student trying to continue their schoolwork during an unprecedented time. A college student being quarantined with their family could also add a sense of support during a tumultuous time. A college student being around their family could prevent them from feeling isolated. In addition, family members could give advice and spend time with college students when they are needing to relax. Given the impact the quality of family life, this could be a good area of future research among college students.

In the same way, peer support was interrupted by online learning and changes in student housing. College students could not live in on-campus housing with other students and were not able to be in the classroom and participate in on-campus activities. This was a drastic change for many students. Those who fared best were those who adapted quickly to the changes in their social environment. Those who did not adapt their social milieus were more likely to feel overwhelmed, disconnected from the world, and report unhealthy behaviors and lower moods. Of course, college students quarantined



with their friends had the same pros and cons as those quarantined with their families, thus social support would depend on the quality of that situation.

Given the impact peers have on fellow college students, it might be interesting to look into this relationship when measuring resilience and social support among college students. With the strong association between social support, resilience and levels of distress, it is important to strengthen and support these among college students. This includes creating systems to expand social support among different groups of students and identifying those who do not have social support in these groups. Student life and counseling services may be utilized to help students to develop social networks or social skills for students at risk such as first-generation and international college students. An ideal program could focus on initial reach out to major social groups on-campus. It could also be a program that connects with freshmen students and assess how they are adjusting to college or provides a survey for students to fill out each year to assess their levels of social support, resilience, and distress each year. Once the program pinpoints students with low levels of support and/or resilience, it could provide resources to improve these in the students' lives.

There are implications for clinical assessment. This can include assessments related to mood or emotional disturbances, suicidality, and concentration or learning difficulties. Given the impact of social support and resilience on distress and other mental health problems especially during the COVID-19 pandemic, it is important that counselors assess these constructs. This could include the counselor giving clients a survey to assess resilience, social support, and stress. There could also be specific questions related to COVID-19. It could provide information on the course of COVID-19

as it relates to these measures in clients. These measures could contribute to problems like depression, anxiety, substance abuse, concentration problems, and relationship problems. It could also illustrate what these measures would look like as universities, businesses, and people transition back to “normal life” or a life that is post-COVID-19.

There are implications for clinical practice. Given the connections that resilience and social support could have on a client’s life and mental health, it is important for counselors to actively assess these constructs in therapy. It could help illustrate the daily impact of COVID-19 as well as how resilience and social support could be strengthened in a client’s life. Given the lasting impact COVID-19 will likely have on individuals, it is important to continue to assess these constructs post-COVID-19 which could also provide information on if resilience and social support levels strengthen or weaken as clients transition their daily lives away from quarantine and back into “normal life.”

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## APPENDIX A

### Institutional Review Board Approval Letter

#### ABILENE CHRISTIAN UNIVERSITY

*Educating Students for Christian Service and Leadership Throughout the World*

**Office of Research and Sponsored Programs**

320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103  
325-674-2885



April 17, 2020

Cherisse Flanagan  
Department of Psychology  
Box 28011  
Abilene Christian University

Dear Cherisse,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled "A Survey of Psychological Functioning During COVID-19 Crisis",

(IRB#20-048 )is exempt from review under Federal Policy for the Protection of Human Subjects.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

*Megan Roth*

Megan Roth, Ph.D.  
Director of Research and Sponsored Programs

*Additional Approvals/Instructions:*

Waiver of Documentation of Consent, based on the following justification:

\* The research presents no more than minimal risk of harm to subjects, and involves no procedures for which written consent is normally required outside of the research context.

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

- If there are any changes in the research (including but not limited to change in location, members of the research team, research procedures, number of participants, target population of participants, compensation, or risk), these changes **must be approved by the IRB prior to implementation**.
- Report any protocol deviations or unanticipated problems to the IRB promptly according to IRB policy.
- Should the research continue past the expiration date, submit a Continuing Review Form, along with a copy of the current consent form and a *new* Signature Assurance Form approximately 30 days before the expiration date.
- When the research is completed, inform the Office of Research and Sponsored Programs. If your study is Expedited or Full Board, submit an Inactivation Request Form and a *new* Signature Assurance Form. If your study is Exempt, Non-Research, or Non-Human Research, email [orsp@acu.edu](mailto:orsp@acu.edu) to indicate that the research has finished.
- According to ACU policy, research data must be stored on ACU campus (or electronically) for 3 years from inactivation of the study, in a manner that is secure but accessible should the IRB request access.
- It is the Investigator's responsibility to maintain a general environment of safety for all research participants and all members of the research team. All risks to physical, mental, and emotional well-being as well as any risks to confidentiality should be minimized.

For additional information on the policies and procedures above, please visit the IRB website <http://www.acu.edu/community/offices/academic/orsp/human-research/overview.html>

or email [orsp@acu.edu](mailto:orsp@acu.edu) with your questions.

## APPENDIX B

### Resilience Assessment Questionnaire

On scale of 1 (No, never) to 5 (Yes, always)

1. I know what I want to achieve during my lifetime.
2. I have ambitions to achieve certain things during my lifetime.
3. I normally enjoy the company of other people.
4. I sometimes share my innermost secrets with a select number of friends.
5. I normally enjoy solving problems.
6. I like to write down my list of things to do each day.
7. I know what I want to get from each day.
8. I am determined to achieve certain things in my lifetime.
9. I often rely on others to help me achieve what I want.
10. I have a personal brand that I think I regularly demonstrate to others.
11. I have strong relationships with those who help me achieve what I want.
12. I love challenge.
13. I plan my holidays at the last minute.
14. I tackle most challenges I face.
15. I can tell when I'm feeling good about the way my life is going.
16. I have a get up and go approach to life.
17. I know myself very well.
18. I have good friends who provide me with the emotional support I need

19. I really enjoy unravelling causes of problems.
20. I normally tackle big tasks in bite sizes.
21. I like taking the lead.
22. My current work is a step towards achieving things I want in my lifetime.
23. I know what to do in most situations I face.
24. I always listen and understand what others are talking to me about.
25. I normally see myself as self-sufficient.
26. I can solve most of my problems.
27. I like making lists.
28. I normally feel comfortable in new situations.
29. I know what I have to do to achieve what I want in life.
30. I have a strong motivation in achieving what I want.
31. I am normally curious about people.
32. I prefer travelling on my own.
33. I help others solve their problems and challenges.
34. I review my achievements regularly.
35. I know I'm a great person.



## APPENDIX C

### Medical Outcomes Study Social Support Survey

None of the time	A little of the time	Some of the time	Most of the time	All of the time
1	2	3	4	5
1. Someone you can count on to listen to you when you need to talk				
2. Someone to give you information to help you understand a situation				
3. Someone to give you good advice about a crisis				
4. Someone to confide in or talk to about yourself or your problems				
5. Someone whose advice you really want				
6. Someone to share your most private worries and fears with				
7. Someone to turn to for suggestions about how to deal with a personal problem				
8. Someone who understands your problems				
9. Someone to help you if you were confined to bed				
10. Someone to take you to the doctor if you needed it				
11. Someone to prepare your meals if you were unable to do it yourself				
12. Someone to help with daily chores if you were sick				
13. Someone who shows you love and affection				
14. Someone to love and make you feel wanted				
15. Someone who hugs you				
16. Someone to have a good time with				

17. Someone to get together with for relaxation
18. Someone to do something enjoyable with
19. Someone to do things with to help you get your mind off things

## APPENDIX D

### Distress During Pandemic Scale

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6

1. I am maintaining healthy behaviors during quarantine. (Reverse coded)
2. Recently, my spirits have been high. (Reverse coded)
3. Since quarantine, my sleep has been disturbed.
4. Quarantine has caused me to feel disconnected from my own world.
5. I can't seem to escape the stress of the COVID-19 crisis.
6. I have been overwhelmed with worry during the pandemic.