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ABSTRACT

The concept known as “social isolation” is a problem that affects many people, but there are certain populations that do not have adequate research performed on them.

Specifically, college students face a risk of social isolation that is detrimental to their well-being and academic success, and there is a gap in the literature about this relationship. This study explored the prevalence of social isolation in college students at a Christian college in West Texas and examined various factors to determine whether any protective factors or at-risk factors existed. An online survey was sent out that used 11 demographic factor questions and a 6-instrument scale called the Lubben Social Network Scale (LSNS-6). The survey had 214 participants. The study also tested the LSNS-6 and its validity to be used with college students. The findings indicated that social isolation prevalence in college students is 8.4% and that there are three protective factors and at-risk factors that influence the risk for social isolation. The study also found the LSNS-6 to be valid when used with college students. The protective factors are being White, Christian, and heterosexual, and the at-risk factors are being female, being a freshman, and having a GPA of 2.6 or lower. This study provides more understanding into how social isolation operates and helps to facilitate future research to examine social isolation and college students.

Exploring the Prevalence of Social Isolation in
Students at a Christian College in West Texas

A Thesis

Presented to

The Faculty of the School of Social Work

Abilene Christian University

In Partial Fulfillment

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By David Bryan Elliott

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

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To my friends, Daniel Austin, Nathan Reynolds, Coley Ruebush,
Matthew San Miguel, and the countless others I made over the years.

You made me feel like I belong and that I am not alone.

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CHAPTER I

INTRODUCTION

In 2016 the American Academy of Social Work and Social Welfare (AASWSW) launched its Grand Challenges for Social Work. Among the 12 Grand Challenges for the profession articulated by the AASWSW was “to eradicate social isolation.” Social isolation is considered an objective state of being with few societal contacts, and loneliness is a subjective state of not feeling like one has anyone close (No Isolation, 2019a). For many people, social isolation is a relatable and familiar concept. However, the nature, scope, and impact of social isolation as a concept is seldom understood fully. Social isolation is often characterized by loneliness, dread, and depression. While this concept is closely related to these terms and characteristics, social isolation is in reality much more. Social isolation is further described as a state of no meaningful communication with friends, family, or acquaintances. Regardless of the precipitating events, this isolation can result in extended periods of staying indoors or in a home, or by having no access to community resources or services (No Isolation, 2019b). The AASWSW identifies social isolation as an issue for public concern that spans across racial, socioeconomic, and age categories. Research on social isolation identifies several population groups impacted by this problem. Social isolation in populations such as the elderly (Fakoya et al., 2020; Jose & Cherayi, 2017), disabled (Repke & Ipsen, 2020), and homeless populations (Bower et al., 2018) is well documented. Among the groups

impacted by social isolation, and a particular focus of this research study, are undergraduate college students.

Problem Statement

Social isolation is a growing concern for many students on many college campuses in the United States (Fernandes et al., 2018; Seon et al., 2019; White et al., 2015). With this rise in social isolation among college students comes significant concerns related to the impact social isolation has on college students' psychological, sociological, and physiological health and well-being (Fernandes et al., 2018; Hämmig, 2019; Mampaey, 2017; White et al., 2015).

Social Isolation

Students entering college for the first time experience a range of emotions. Likewise, students continuing in college beyond the first year, also face challenges and difficulties associated with social isolation, which often goes unrecognized and untreated. Recent studies indicate social isolation increases anxiety and depression, lowers academic achievement, and increases the chance for cognitive impairment, cardiovascular disease, and suicide (Hämmig, 2019; White et al., 2015).

Social isolation can lead to several hazards that affect both the physical and mental well-being of students. Combining these hazards with the developmental milestone of attending college can create detrimental situations for new and continuing students. According to a study by the American College Health Association (ACHA), over half of undergraduate college students surveyed will experience feeling lonely or isolated (ACHA, 2018). In the spring of 2012, 57% of students surveyed felt lonely, which increased by 6.2% by the fall of 2018 (ACHA, 2012, 2018). These data show an

increase in social isolation among college students and other hazards linked to social isolation, such as suicidal ideation and depression/anxiety (ACHA, 2018).

However, current research on social isolation and college students, particularly at small religious-based schools, is less well documented in the research literature. Contemporary literature and research on college students' experiences with social isolation seem to lag in the literature. In addition to this, there is currently a gap in the research on social isolation at small private universities, and this gap is more pronounced concerning social isolation research among private Christian and religious-affiliated universities.

This research aims to explore the prevalence of social isolation among college students attending a small Christian university in West Texas. Also, this research study seeks to assess the appropriateness of the Lubben Social Network Scale (LSNS-6) for assessing college students' social isolation.

Research Questions

This study addresses the following four research questions:

RQ1. How prevalent is social isolation among college students attending a small Christian university in West Texas?

RQ2. Is the Lubben Social Network Scale-6 (LSNS-6) an appropriate instrument to assess social isolation among college students?

RQ3. Is there a difference in the rate of social isolation of first-year students compared to non-first year students at a small Christian university in West Texas?

RQ4. Is there a difference in the rate of social isolation of students who were diagnosed with or treated for depression compared to students who were not diagnosed with or treated?

Study Rationale

The benefits of social networks, friendships, and close family connections are well known. However, for individuals who are more socially isolated, the impacts of social isolation on human beings' biological, psychological, social, and spiritual well-being are less well-known. Colleges and universities with high expectations of student support services and programs should consider and assess students who feel socially isolated. Such awareness can inform resource development and inform student support services that reduce anxiety, depression, and other negative indicators of social isolation. Holding in high regard student retention and graduation rates, colleges and universities who are responsive to socially isolated students' needs may find such efforts beneficial. In the case of faith-based institutions of higher learning, perhaps there is an even greater responsibility to provide services. In this study, the rationale is two-fold. First, exploring students' experiences with social isolation will provide insight for future program planning, services, and development. Second, determining whether the LSNS-6 is a reliable instrument for use with students on the selected college campus will allow for this instrument to be used in future research with college students and help validate this research study if the LSNS-6 is found to be reliable.

Key Terms

The following key terms are important for this study on social isolation. Terms being utilized in this document are defined here to provide clarity and understanding.

- *Social isolation* an objective state of being, having few societal contacts (No Isolation, 2019a). Another definition is the absence of social connection or belonging through friends, family, and acquaintances. Oftentimes, but not always, social isolation is experienced when a person feels lonely (No Isolation, 2019b).
- *Social belonging* refers to the fact that human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships (Baumeister & Leary, 1995).
- *Loneliness* is a subjective state of feeling like one has nobody close to them or has no meaningful social relationships (No Isolation, 2019a). Loneliness and social isolation share very similar definitions, but the difference between the two is that the nature of loneliness is an emotion felt by someone and social isolation is a state of being. Oftentimes, but not always, the feeling of loneliness is felt when a person experiences social isolation.
- *Social connection* means the development of positive connections in the world. Another definition is “a person’s subjective sense of having close and positively experienced relationships with others in the social world” (Seppala et al., 2013, p. 412). Social connection has a negative correlation with social isolation; as one increases social connection, social isolation will decrease.

- *Academic achievement/success* describes a student's ability to complete both short-term and long-term academic goals. This can mean a student's grades or overall mastery of a subject or discipline (Cachia et al., 2018).
- *Informal social support* means the individual's perceptions of supportive behaviors from their social network, such as friends or relatives (Seon et al., 2019).
- *Formal social support* is a program or service meant to increase social interaction, such as counseling services or advising programs (Seon et al., 2019).

In the next chapter, a literature review is presented that centers around articles surrounding social isolation research and the concepts and constructs associated with social isolation, as well as relevant information on the biopsychosocial impacts of social isolation. Also, the upcoming literature review explores documented resulting manifestations and iterations of social isolation on academic success, suicidal ideation, and depression/anxiety.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this literature review is to provide a conceptual grounding, historical context, a summary of social isolation, distinguishment from other isolating conditions, identify key risk factors, and contemporary practices that mitigate the impact on college students.

The strategy for conducting this literature review systematically was to access the ACU Library search function for the EBSCO database. An advanced literature search using the terms “social isolation” with an additional search for “university or college students” was conducted. The search then included another term, “interventions” and produced two articles that helped to refine the search to “social belongingness interventions.” Another search for any literature surrounding social isolation and cardiovascular disease was made, as well as a search for articles that had any findings on social isolation and academic performance. After a period of searching, there was an extension to suicidal ideation and social isolation studies with a specification in college student or undergraduate student samples. This opened up the literature significantly as more studies assess suicidal ideation using social isolation as a factor. A change from “academic performance” to “academic achievement/success” was made to show articles that looked at the success rather than how a student did in a class. The EBSCO database had some data and articles but additional searches were made to increase the search for

articles. These search terms included social isolation definition, social isolation references, and links to social isolation and depression/anxiety, and “social belonging intervention”. This literature review was conducted to search for the prevalence of social isolation studies on college students and find the commonalities that social isolation has with various factors, as well as find research that asks for the prevalence of social isolation on a university campus.

Social Isolation

“Social isolation” is a term that must be carefully examined to fully understand it. Simply knowing what social isolation is does not encompass its value, which makes it important to examine the term through various lenses. To do this, social isolation was applied to different concepts and ideas in a variety of ways, including as a conceptual framework, in its historical context, with its contemporary usage today, how it relates to college students, and what other forms or names of social isolation are there. These lenses better frame social isolation so that it can be applied and measured as accurately as possible.

As a Conceptual Framework

To discuss or study social isolation is to study society, specifically the societal norms and patterns of human beings. Humans are inherently social; from the first days of humans emerging in the world, they found strength and protection in numbers and knew that to be around each other gave everyone strength (Over, 2016; Smithsonian, 2018). There are entire areas of study in both psychology and sociology whose purpose is to try to understand the importance of being social and the implications of being social. To be without a social network can create obvious social disparities. The movie *Castaway*

(Zemeckis, 2000) starring Tom Hanks is a good example of the detriments of social isolation. In the movie, “Chuck Nolan” (played by actor Tom Hanks) gets stranded on an island by himself due to a plane crash. With no people to talk to Chuck eventually resorts to befriending a volleyball, naming it, talking to it, and considering it his friend. The lack of a community is shown by Chuck’s delusion that an inanimate object is a real person, even going so far as to cry when the volleyball gets swept away by the ocean as he leaves the island. This shows the reality of social networks—that they are necessary to human survival and that in times of isolation people will desperately try to imitate them to keep some form of sanity.

Based on the previous research, it can be concluded that being involved in social customs and norms creates stronger mental and physical well-being for the individual and community as a whole (Greenfield, & Marks, 2010; Hudson, 2015; Kitchen et al., 2012; Over, 2016; Seon et al., 2019). Seon et al. (2019) studied the impact of both informal and formal social support to see if they helped increase the academic success of college students who had unstable childhood experiences. Their results found that formal social support increased the level of academic achievement for students, and that having more friends in one’s social circle also translated to higher academic achievement. This study focused on the differences between informal and formal social support as well as the impact they each had on students. Academic achievement can be linked to higher levels of social connection, meaning that social connection can be studied by assessing both the levels of social isolation and the levels of academic achievement. However, a negative level of academic achievement does not automatically correlate with a positive level of social isolation. With this study and others, the need for more social support and

connection becomes a common conclusion, because of the growing rate of loneliness and isolation found in future generations. Cigna, a global health service company, surveyed over 20,000 Americans and asked them various questions about their loneliness. They found that loneliness scores differ across age/generations. Gen Z (aged 18-22) had a loneliness index of 48.3 out of 80 when using the survey scale. Comparatively, The Greatest Generation (aged 72+) had an index of 38.6 out of 80 (Cigna, 2018). This demonstrates that Gen Z is the generation most likely to experience feelings often associated with loneliness (e.g., feeling left out, alone, isolated) (Cigna, 2018).

Historical Context

Historically, humans have always been fascinated by exploring and discovering the facets of socializing. Some of the earliest psychologists and sociologists, Greek philosophers, discussed the importance of friendship, and generally viewed loneliness as a state to be avoided (Aleynikova, 2018). The great existential philosopher Nietzsche once said, “To live alone one must be an animal or a god – says Aristotle. There is yet a third case: one must be both: a philosopher” (Nietzsche & Large, 1998). Humans have been fascinated with the idea of being alone, from wanting to avoid it to actively seeking it for thousands of years. Even the famous psychologist Abraham Maslow discussed that the absence of family, friends, and loved ones causes a man to hunger greatly for affection and experience loneliness and sadness that a man will do anything to stop (Maslow, 1954). There has been a fascination with socialization, but until the 1960s, the term “social isolation” was scarcely found in any literature.

There appears to be a larger uptick in the literature of the term social isolation right around the mid-1960s that grew with time. There was research exploring social

isolation in populations such as the elderly (Lowenthal, 1964), people confined to mental institutions (Cole et al., 1967), and even children (Gottman, 1977). This eventually led to a large study in 1979 by two researchers, Berkman and Syme, who presented a nine-year study with almost 7,000 participants that showed that the participants who reported fewer social ties at the beginning of the study were more likely to die than those who reported higher social ties (Berkman & Syme, 1979; Cohen, 2001). These studies all used “social isolation” as a term different from “loneliness,” making social isolation, while related to several other terms, a factor that could be studied and measured.

Social isolation and its ideas can not only be found in the history of the literature but also the history of America. In the 18th century, Quakers in America began to try a pacifistic way to rehabilitate prisoners, which they called “solitary confinement.” Prisoners would be kept in isolation from others for extended periods of time as a method to make them behave. From there it grew to be a severe form of punishment to prisoners in the US as well as other countries, despite people expressing the negative mental health effects (Childress, 2014; Taddonio, 2017). It is seen in movies, with horror and thriller movies often utilizing loneliness and isolation as themes to instill fear in the audience. An example is *I Am Legend* (Lawrence, 2007), a thriller movie with Will Smith who is a doctor searching for a cure to zombie-like people who roam the city. The mental decline he faces from being alone for three years with only his dog to talk to shows in the characters demeanor and speech. He often talks to his dog and a mannequin as if they were real people. He is experiencing social isolation and is suffering because of it. Despite all of the research and prisons and media discussing and researching social isolation, the contemporary usage of social isolation is still mostly for research purposes,

with the majority of the research saying that there needs to be a combined effort to combat social isolation.

Contemporary Usage

The current research for social isolation revolves around primarily elderly and vulnerable populations such as the homeless and disabled, but since 2015 there has been a noticeable uptick in different populations like middle school, high school, and college students (Cigna, 2018; Gunn et al., 2018; Hirsch et al., 2019; Seon et al., 2019). While many articles that discuss social isolation use it as a measurement for other mental health symptoms like depression and stress, more research is measuring and utilizing social isolation as the central factor for academic achievement and suicidal risk (Gunn et al., 2018; Hirsch et al., 2019; Seon et al., 2019). At the most present moment, social isolation is being explored in its relation to “social distancing” and “quarantining,” two terms that grew in importance due to the COVID-19 pandemic that began in late 2019 (Beam & Kim, 2020). Researchers are examining the implications of quarantining to see if there is a detrimental effect on mental health due to the experience of social isolation that many who quarantine face (Beam & Kim, 2020). This research will still take some time to figure out and discover, as the direct implications of quarantining and socially distancing, as it is currently, are not well understood.

It is also important to look at different social theories to better understand how social isolation is used today. Social identity theory, social control theory, and social exchange theory have some role in understanding social isolation on a sociological and psychological level (Cacioppo et al., 2011; Cherry, 2020; McLeod, 2019). Social Identity theory attempts to explain the idea of social grouping, how individual self-esteem is

naturally formed by groups that produce ingroup bias (McLeod, 2019). When an individual forms their ideas of ingroups—such as social class, or academic student, or sports athlete—these ingroups produce a sense of pride and self-esteem, and when these in-groups no longer meet or change, then a loss of pride and self-esteem happens (McLeod, 2019). In college, this could be shown by a student who was an excellent student in high school, who comes to college and does not achieve excellent grades. The student then experiences a loss of pride and self-esteem, potentially causing a decline in social connection, leading to social isolation. Another theory is the social control theory, which was proposed to explain isolation at one point (Cacioppo et al., 2011). This theory used the knowledge that isolation was bad for physical and mental health and proposed that it is the people within a social network who help to discourage negative health behaviors and encourage positive health behaviors (Cacioppo et al., 2011). While social control theory is mainly used to justify why people do not break the law, this theory could also be used to identify reasons why an individual would not interact with someone who displays all negative social behaviors, as opposed to just social behaviors that involve the law. This means that the reason social isolation is so detrimental is that there is nobody who can tell the individual that their behaviors harm themselves. This portion of the theory however was challenged due to human social isolation still being detrimental in other ways than just someone not engaging with them. However, this theory still helps to guide the idea of social isolation and the ways human socialization plays a role within the lack of socialization. The third theory that helps to frame social isolation is the social exchange theory. This theory explains the interaction between two people and how that interaction is a cost-benefit analysis that determines the level of

friendship or interaction someone has with another (Cherry, 2020). This theory could be used to explain how an individual becomes socially isolated or remains socially isolated. When the individual potentially creates a cost-benefit analysis, where the negative and positive traits are weighed out. When a person is seen as not cost-effective, it could cause withdrawal, creating social isolation. The other way to view this theory is that other people see the negative detrimental effects of social isolation and view that individual as too much cost for their benefit, and no one will interact with the individual to form a meaningful relationship, prolonging social isolation (Cherry, 2020). All of these theories can be utilized to try and help form an understanding of social isolation and discover the reason as to why and how individuals become isolated from society.

College Students

Article collection of social isolation leads to several discoveries as it pertains to college students. The majority of the literature on social isolation targets and researches the elderly population (Jose & Cherayi, 2017; Veazie et al., 2019). This necessitates a deeper dive into the literature to seek out social isolation in college students or even college-aged students (18-22), which leads to a discovery of a small collection of research engaging with college-aged students. While this research contained “social isolation” or “loneliness,” it utilized the nature of the terms to only be used to relate to other factors such as academic success, suicidal ideation, or long-term conditions (Cero et al., 2015; Keyes et al., 2012; Wilkinson et al., 2019). As the current climate of social isolation research stands, there is a gap in the literature consistently engaging with college-aged students who are at a higher risk of social isolation (Cigna, 2018; Fernandes et al., 2018; Seon et al., 2019; White et al., 2015). This gap in the literature needs to be

filled by research that focuses on social isolation and the surrounding factors of social isolation and even further research on how to best combat this growing problem. College students already face a higher risk of depression and anxiety (Joiner et al., 2009; Langhinrichsen-Rohling et al., 2017; Ploskonka & Servaty-Seib, 2015; Seon et al., 2019). Introducing social isolation to the list of difficulties students face during their time at a college or university creates greater cause for concern.

Other Terms of Isolation

When searching for research involving isolation, it is important to distinguish between “isolation” and other terms. It is also important to know these terms and how they are a part of, or different from, social isolation. Some terms that were found when discussing isolation were “loneliness,” “social belonging,” “social connection,” and “social support,” all of which pertain to social isolation in some way (Centers for Disease Control and Prevention, 2020). Loneliness and social isolation are very similar concepts that can be paired with one another. However, this is not always the case where an individual can feel lonely without being socially isolated. Social belonging and social connection are also similar terms; social belonging is the desire to be social and feel a sense of belonging, and social connection is the development of positive social interaction, which can help to establish social belonging (Seppala et al., 2013). Social connection, or social connectedness, is achieved through social support, which can be both informal and formal (Seon et al., 2019). Social support introduces social connection to increase social belonging which decreases social isolation. Articles that discuss social connection or social support are also in a way discussing social isolation and its nature.

Risk Factors and Social Isolation

The literature surrounding social isolation proposes several themes that relate to ways social isolation can create various difficulties for students on college campuses. This review of the literature will focus on several themes found in the literature, specifically depression, anxiety, and their impact on academic success, and suicidal ideation.

Depression

Depression has been linked to social isolation both as a contributing factor as well as a symptom of social isolation (Chang et al., 2019; Fernandes et al., 2018; Hirsch et al., 2019; Saeed et al., 2018). Depression is widely known to be detrimental to motivation and concentration, which contributes to a lack of academic achievement, and it is also known to cause self-worth loss and mood swings, which contribute to social isolation (Chang et al., 2019; Hirsch et al., 2019; Saeed et al., 2018). Additionally, transitional periods in life, such as entering college, increase the propensity for aggravating mental health and other risk factors (Joiner et al., 2009; Langhinrichsen-Rohling et al., 2017; Ploskonka & Servaty-Seib, 2015). Further investigation of the literature found depression to be linked to suicidal ideation and anxiety, two factors that both negatively affect academic achievement and social engagement (Cero et al., 2019; Chang et al., 2019; Keyes et al., 2012). In many cases depression was the mediating factor between stress and suicidal ideation, higher stress was an indicator that more depressive and suicidal behaviors were exhibited (Dellinger-Ness & Handler, 2007; Fernandes et al., 2018; Hirsch et al., 2019; Joiner et al., 2009). However, the literature is stating that if all of these factors are contributors, then each should be treated with equal amounts of

intervention. Rather than just targeting a single factor, incorporating social isolation interventions into suicide and depression interventions could potentially reduce all factors rather than only one or two.

It would be naïve to oversimplify the complexity of understanding the human psyche and human behavior more generally. However, there is value in seeking clarity regarding the lived experiences of teenagers and young adults who have transitioned to college and experience social isolation with or without accompanying depression and suicidal ideation. Perhaps an even more important course of inquiry is what the effect of perceived social isolation has on academic success.

Implications of Social Isolation on Academic Success

The impact of social isolation on academic success can be profound. Contemporary literature in this area indicates that students who are isolated perform worse academically than those who are connected, and students who are depressed or stressed perform worse academically (Cero et al., 2015; Keyes et al., 2012; Liu et al., 2019; Luca et al., 2016; Mampaey, 2017; Saeed et al., 2018; Walton & Cohen, 2011). Luca et al. (2016) discuss the relationship between suicidal ideation, behavioral health, and college academic performance, observing the behavioral health in freshman and sophomore students, and if these conditions hinder their academic success. The study looked at suicidal ideation, extracurricular activity involvement, race, and relationship status, as well as current living situation. The study found that students with suicidal ideation had lower academic success (Luca et al., 2016), were younger (Luca et al., 2016; Seon et al., 2019), less likely to report romantic relationships (Luca et al., 2016; Saeed et

al., 2018), more likely to report a religious affiliation, and were more likely to live with a family member or roommate (Luca et al., 2016).

Participants with reported suicidal ideation in the last twelve months of the study reported a lower GPA than their peers, and the data indicates that cumulative GPA rises the longer one is in college (Luca et al., 2016; Seon et al., 2019; Walton & Cohen, 2011). The findings with the variables mentioned above showed several links between the variables, such as students having a higher GPA if they participate in an extracurricular activity or are a part of a mentor group. The study does mention that extracurricular activities can be both anxiety-inducing or anxiety reducing for certain students, due to anxiety manifesting differently (Luca et al., 2016).

Students who screen positive for mental health illness are more likely to have trouble with academics (Keyes et al., 2012; Liu et al., 2019; Seon et al., 2019). The Keyes article suggested students who screen positive for a current mental illness are at a greater risk for social isolation, suicide, and academic impairment (Cero et al., 2015; Keyes et al., 2012; Liu et al., 2019; Luca et al 2016; Mampaey, 2017). The Keyes article also showed support for the idea that being free of mental illness does not mean that they are mentally healthy (Keyes et al., 2012; Langhinrichsen-Rohling et al., 2017; Lockman, & Servaty-Seib, 2016). These findings help to evaluate current practices that assess mental health and support the idea that mental health is closely tied to academic success (Keyes et al., 2012; Lockman & Servaty-Seib, 2016). Students who struggle with academic achievement may not need tutors or better places to study. They may need better social support and mental health services on a college campus to help them feel like they can achieve even through their mental struggles.

Suicidal Ideation

“Suicidal ideation” refers to the thoughts and feelings of wanting to commit suicide. Suicidal ideation is a noted precursor to suicide and can be extremely detrimental to college students. Thomas Joiner, a psychologist who specializes in suicidal behavior, produced a book titled *Why People Commit Suicide* (Joiner, 2005). This book describes suicidal ideation by breaking it down into two parts: thwarted belongingness and perceived burdensomeness. Thwarted belongingness (TB) is the belief that a suicidal individual feels that they do not belong to any group or situation they are a part of or in (Joiner, 2005). TB has a similar definition to social belonging, so the two can sometimes be paired together. Perceived burdensomeness (PB) is the belief that a suicidal individual feels that they are a burden to the people around them when they talk about their problems or struggles (Joiner, 2005). The link between suicidal ideation and social isolation is high according to several studies performed (Cero et al., 2015; Dellinger-Ness & Handler, 2007; Hollingsworth et al., 2018; Joiner et al., 2009; Liu et al., 2019; Ploskonka & Servaty-Seib, 2015).

Contemporary Practices that Mitigate Negative Impacts

Within the search for the risk factors of social isolation, it is important to also discuss the current practices in use that can mitigate the negative impacts of social isolation. This search can help aid in seeking out the best practices for combating social isolation through various interventions and practices. One study found that formal social support increased both social connectedness and academic achievement (Seon et al., 2019). However, informal social support is found to be the solidifying factor in maintaining social connection and academic achievement (Seon et al., 2019). Additional

practices that have been found to mitigate the negative effects of social isolation, such as loss of identity and feelings of loneliness, are community and identity enrichment programs, as well as one-on-one therapy sessions that discuss how an individual can feel a greater sense of identity and community within themselves (Greenfield & Marks, 2010; Liu et al., 2019). Some practices even utilize compassion as a tool for discovering social connections (Gunn et al., 2018; Seppala et al., 2013). A compassion intervention is where a psychologist or therapist will introduce compassion techniques and practices, such as loving-kindness meditation, to a population, such as foster youth, to then see how that population increases in social connection. Seeing that there is a growing rise of isolation there is a greater need for social connection to occur. However, there is currently limited research on isolation in college students.

Knowing that social connection is important and reduces feelings of isolation (Greenfield & Marks, 2010; Gunn et al., 2018; Hirsch et al., 2019; Hollingsworth et al., 2018; Ploskonka & Servaty-Seib, 2015; Seon et al., 2019), there must be a stronger call for social connection to occur in facilities that interact with student-aged individuals. Social isolation can hinder students' ability to succeed academically, mentally, and physically; therefore, the beginning solution to social isolation is both finding and testing the best practices that involve increasing social connection and social connectedness.

In late 2019, a committee was formed called the Coalition to End Social Isolation and Loneliness (later "COVID-19" was added to the title). This committee is made up of representatives from several organizations, such as the American Psychology Association (APA) and Meals on Wheels America, who committed to aiding in eradicating social isolation. The coalition has three main mission goals: disseminating research findings,

developing and advocating for federal and state legislative and regulatory policy interventions, and leading public awareness events in Washington, DC as well as across the nation (Coalition to End Social Isolation & Loneliness, 2020). The Coalition mainly engages with policy practices in the US and advocates for policies that include or establish social isolation and its risks (Coalition to End Social Isolation & Loneliness, 2020). This Coalition is helping to increase awareness of social isolation research and promote policies that could aid socially isolated people in the US. Thankfully, organizations like the Coalition to End Social Isolation and Loneliness and additional research is causing the gap in social isolation research to decrease. Additionally, more researchers and institutions are becoming aware, but there is still more research that needs to be done to determine both the levels and solutions to social isolation.

CHAPTER III

METHODOLOGY

This exploratory quantitative research study centers on social isolation among undergraduate students at a small Christian university in West Texas. This exploration into social isolation on this college campus will be conducted using survey research to fully utilize the instrument and collect data pertinent to the four guiding research questions. All procedures for this study will be closely monitored to ensure compliance with the Institutional Review Board (IRB) guidelines. The primary research question in this study is as follows: what is the prevalence of social isolation in students attending a small Christian university in West Texas, along with three other related research questions.

RQ1. How prevalent is social isolation among college students attending a small Christian University in Texas?

RQ2. Is the Lubben Social Network Scale-6 (LSNS-6) an appropriate instrument to assess social isolation among college students?

RQ3. Is there a difference in the rate of social isolation of first-year students compared to non-first year students at ACU?

RQ4. Is there a difference in the rate of social isolation of students who were diagnosed with or treated for depression compared to students who were not diagnosed with or treated?

Research Design

The study used a quantitative research design using the following survey research instruments: the modified Lubben Social Network Scale-6 (LSNS-6) (Appendix C) and a demographic questionnaire. The modified version of the LSNS-6 has been used with college-aged students (Seon et al., 2019) to measure perceived social isolation. The survey (Appendix B) was administered online. Further research needs to be conducted on the possible link between social isolation and academic achievement, but for this study, academic achievement will be measured by a self-reported GPA entry in a survey. Social isolation will be measured using the LSNS-6 scale.

Procedures

This study was submitted to the Institutional Review Board (IRB) for review and approval for the conduct of research involving human subjects. The researcher took all necessary steps to ensure the confidentiality of study participants as outlined by the IRB guidelines. All research data collected for this study were stored on a password-protected computer. After the study concluded, data from this study will be maintained by Dr. Malcolm Scott (Co-PI) and thesis chair on a password-protected computer in a locked on-campus office. Due to the nature of this study and its usage of human subjects, the Institutional Review Board (IRB) was used to ensure that the functionality of this research study was upheld to the fullest extent and highest standards. Additionally, since the human subjects are students, they are part of a protected population group, making this necessary for ethical research to be conducted. The primary investigator sought out approval from the IRB by submitting the proper forms and documentation needed. Once

IRB approval was obtained (Appendix A), the principal investigator proceeded with the survey outreach to begin the data collection process from the sample population.

Sample Population

The sample population for this study was undergraduate college students currently attending Abilene Christian University. The researcher ensured that this would be the sample population through a selective process utilizing email and professor assistance. The study gained access to the population through professors helping to administer the survey to students in their classes. The key demographic questions of the survey asked for age, race, ethnicity, gender, sex, classification in school, military service, Church of Christ affiliation, a self-reported GPA score of the most recent year of school, hometown, home state, home country, and relatives living in town. Each of these demographics represents potential higher or lower risks for social isolation. An example would be an atypical college-aged freshman who is 29 connecting with other peers aged 18-19. To qualify for this study the participant must be a current student at Abilene Christian University in their undergraduate degree program. This is to ensure that the data collected are for current students on campus and not former or graduate students who have differing levels of connection to campus.

Instrument

The instrument chosen for this research study is the Lubben Social Network Scale-6 (LSNS-6). The LSNS-6 was created in 1988 as a 12-question survey for social isolation in the elderly. It was later revised in 2002 to an abbreviated 6-question survey and an expanded 18-question survey (Boston College, n.d.). The instrument works by being administered to the participant, where six questions are asked about the

participant's perceived levels of connection with family members and friends within the past month. A 5-point rating scale is used to measure out the number of contacts the participant has, ranging from zero to nine or more. An example question is "how many relatives do you see or hear from once a month?" and the answers would use the 5-point rating scale. The six questions are the same three questions repeated twice, once for family members and once for friends. The answers are rated from zero to five and are added together to receive the perceived social support level of the participant. A score of twelve or less is regarded as at risk for social isolation and potentially means that the participant experiences some level of social isolation. This instrument has been primarily used in elderly populations, but recently it was used to survey college students to assess their levels of perceived social support (Seon et al., 2019). The reason for the LSNS-6 being used over the LSNS-12 is that the reliability of the LSNS-6 is .83 using Cronbach's α , while the LSNS-12 has a reliability of .70 (Lubben Social Network Scale, n.d.). Both of these instruments are valid by having a reliability score above .60; however higher reliability scores tend to be more utilized in research. Additionally, the LSNS-6 was selected over the other versions of this instrument due to the nature of the survey and the administration of the survey being online, as the shorter instrument would help retain participation and aid in fulfilling the survey's completion.

Data Analysis Process

This study used the statistical analysis software program known as IBM's Statistical Package for the Social Sciences (SPSS) to enter all quantitative data. Dr. Malcolm Scott, assistant professor of Social Work at Abilene Christian University (ACU), supervised the use of SPSS and data analysis. The following statistical methods

will be used to analyze results: descriptive and inferential statistics will characterize the sample, and an independent sample *t*-test analysis will examine major variables. Bivariate descriptive analyses will be conducted to determine the relationship between perceived social isolation (LSNS-6) and self-reported GPA scores. Several more bivariate analyses will be conducted on perceived social isolation and other demographic data to find the relationship of social isolation to various types of students on campus. An independent sample *t*-test analysis will be done to determine statistical significance. The value used to determine statistical significance will be $p < .05$.

CHAPTER IV

FINDINGS

Participants

In this chapter, the findings of the survey and statistical analyses will be presented. The survey asked 13 demographic questions, which are grouped in no certain order, other than to make the data more readable. After the demographic statistics, four chi-squared analysis tests are shown which designate demographics that are related to low LSNS-6 scores. Then two multiple regression analysis charts will be presented, one logistic and one linear. This test was done to determine which demographic choices were predictors of lower or higher LSNS-6 scores.

The survey conducted had a total of 216 students who participated. Of the 216 respondents, 214 were valid based on their completion of the survey. The table below, titled Table 1, shows the characteristics of the student participants. This survey asked for information regarding the participant's age, race, gender, and sexual orientation for the sake of collecting data involving these demographics. These data are important to determine whether any demographics are related to a higher or lower LSNS-6 score.

Table 1*Characteristics of the Sample (N = 214)*

Variable	Category or Range	<i>n</i> or <i>M</i>	% or <i>SD</i>
Age	18 or younger	37	17.3
	19-20	94	43.9
	21-22	43	20.1
	23-24	21	11.2
	25+	16	7.5
Gender	Female	155	72.4
	Male	56	26.2
	Gender Variant/Non-conforming	2	0.9
	Prefer not to say/Other	4	1.9
Sexual Orientation	Straight/Heterosexual	199	93
	Bisexual	9	4.2
	Prefer not to say	5	0.5
Race	American Indian/Native Alaskan	1	0.5
	Asian	4	1.9
	Black/African American	15	7
	White/Caucasian	181	84.6
	Multiracial	7	3.3

Age, Race, Gender, and Sexual Orientation

Expression of oneself can be a wonderful source of establishing a connection with others, but it can also act as an alienator at times. This expression of the self revolves around factors that people both attribute to themselves and others. Age, race, gender, and sexual orientation are areas of expression that influence how people are perceived and perceive others. As shown in Table 1 above, of the 214 participants surveyed, the majority of participants were aged 20 or younger (61.2%) and the lowest number of respondents were participants aged 25 or older (7.5%). This matches the general

assumption that an average undergraduate college-aged student would be between the ages of 18 and 22. This data is important to determine if there is any relationship between age and social isolation. The majority of participants were also White/Caucasian, totaling 181 (84.6%). Currently, more research is needed on race and its relationship to social isolation, but it is generally regarded that social isolation permeates through all people (Cigna, 2018).

Years as Student, Religious Affiliation, and GPA

Alongside the demographics listed above, three more questions were asked to get more insight into students' lives, asking about their grade point average (GPA) their religious status, and how many years they had been attending college at the time of the survey. These questions were used to check for any relationship between academic success (through GPA), religious affiliation, years attending the university, and social isolation in the surveyed population.

The self-reported GPA found in Table 2 shows participants years in college, their religious preferences, and their self-reported grade point average or GPA. For GPA, those who had attended the university for one year or less would use their current semester for their GPA score.

Table 2*Characteristics of the Sample (N = 214)*

Variable	Category or Range	<i>n</i> or <i>M</i>	% or <i>SD</i>
Years in College	1 year or less	94	43.9
	2 years	72	33.6
	3 years	13	6.1
	4 years	21	9.8
	5+ years	14	6.5
Religion/Spirituality	Christian	201	93.9
	Non-Christian	1	0.5
	Non-religious/Agnostic	4	1.9
	Spiritual	6	2.8
Grade Point Average (GPA)	Below 2.0	1	1.5
	2.1-2.6	4	1.9
	2.7-3.5	64	29.9
	3.6-4.0	143	66.8

The large majority being Christian could be because the university researched, ACU, is a Christian-affiliated university. There were no participants who selected atheist. The years attending university shows that mainly first year or less and second-year students participated in the survey. The lowest participation was from third-year students, this cause is unknown and could be due to the distribution methods of the survey

Depression and Military Service

The final demographic section asks more personal questions, specifically about a depression diagnosis and military status. Table 3 shows the participants selection. This question was asked because depression is linked to social isolation (Chang et al., 2019; Fernandes et al., 2018; Hirsch et al., 2019; Saeed et al., 2018). Military status was asked

to find any significance with social isolation and military status while attending a university, but the survey did not have enough data to determine anything.

Table 3

Depression Treatment and Military Service (N = 214)

Variable	Binary	<i>n</i>	%
Have you been diagnosed with depression?	No	177	82.7
	Yes	35	16.4
Have you served in the military?	No	213	99.5
	Yes	1	0.5

Residency in the US and Texas

When a person leaves their home or country, they are often going to a place that may have different values or culture. This difference might influence how socially connected an individual is to their community. This research did not find any evidence for residency and social isolation. Table 4 displays the results of the survey questions for residency.

Table 4

The Residency Status of US and Texas (N = 214)

Variable	Binary	<i>n</i>	%
Were you born in the United States?	No	12	5.6
	Yes	202	94.4
Are you a resident of Texas?	No	28	13.1
	Yes	186	86.9

LSNS-6 Scores and Findings

In order to answer the research questions, the following tests were run: Chi-square analysis, multiple logistic regression, and multiple linear regression. To determine any

relationships between demographic characteristics and LSNS-6 scores that denoted a risk for social isolation, a Chi-square test of independence was conducted, comparing each demographic characteristic with LSNS-6 scores, which led to 11 Chi-square tests being run. A significant relationship was found in four demographic characteristics, and no significant relationship was found in seven demographic characteristics.

Table 5

Chi-Square Analysis of Demographic Characteristics and LSNS-6 Scores (N = 214)

Variable		Value	df	Asymptotic Significance (2-sided)
Sexual Orientation	Pearson Chi-Square	27.428a	4	.000*
	Likelihood Ratio	15.129	4	.004
	Linear-by-Linear Association	0.058	1	.809
	N of Valid Cases	214		
Race/Ethnicity	Pearson Chi-Square	15.118a	5	.010*
	Likelihood Ratio	10.932	5	.053
	Linear-by-Linear Association	4.469	1	.035
	N of Valid Cases	214		
Depression	Pearson Chi-Square	6.670a	2	.036*
	Likelihood Ratio	4.325	2	.115
	Linear-by-Linear Association	4.748	1	.029
	N of Valid Cases	214		
GPA	Pearson Chi-Square	15.566a	4	.004*
	Likelihood Ratio	9.381	4	.052
	Linear-by-Linear Association	3.954	1	.047
	N of Valid Cases	214		

Table 5 shows the results of the Chi-Square tests that held a significant relationship with LSNS-6 scores. For sexual orientation, the Pearson Chi-Square was found to be significant ($X^2(4, N = 214) = 27.428, p = 0.000$), meaning that LSNS-6 scores that denote risk are dependent on sexual orientation. For race/ethnicity, the Pearson Chi-Square was found to be significant ($X^2(5, N = 214) = 15.118, p = .010$),

which shows that LSNS-6 scores are affected by which race the participant is. For depression, the Pearson Chi-Square was found to be significant ($X^2(2, N = 214) = 6.670, p = .036$), which means that LSNS-6 scores are influenced by whether or not the participant had been diagnosed with depression in the last six months. For GPA, the Pearson Chi-Square was found to be significant ($X^2(4, N = 214) = 15.566, p = .004$), meaning that GPA scores that were less than 2.7 affected the LSNS-6 score.

Descriptive Statistics of Major Findings

This section will discuss two regression analyses that were done to find which demographic variables were predictors of higher or lower LSNS-6 scores. The two regression analyses were a multiple linear regression and a multiple logistic regression, both of which found significant variables. Two regression analysis were performed in order to best assess the given data. The linear regression looked at the variables and what their relationship was to the LSNS-6 scores, and the logistic regression looked at the variables and if they increased the odds of LSNS-6 scores increasing or decreasing.

Table 6

Linear Regression Analysis of Social Isolation and Variables (N = 214)

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	14.806	1.807		8.192	.000
Female	-2.200	0.701	-0.212	-3.139	.002*
Heterosexual	2.212	1.206	0.122	1.834	.068
White	2.197	0.842	0.171	2.610	.010*
Christian	2.555	1.278	0.131	1.999	.047*
Depression Diagnosis	-1.039	0.841	-0.083	-1.236	.218
Traditional Student	0.128	0.778	0.011	0.165	.869
Freshmen	-1.259	0.610	-0.135	-2.063	.040*
GPA at or below 2.6	-4.686	2.071	-0.152	-2.262	.025*

Linear Regression Analysis

A multiple linear regression analysis and multiple logistic regression analysis were conducted to find the relationship, if any, to social isolation and different populations of students. Table 6 displays the linear regression analysis that was used to predict LSNS-6 scores based on participants' demographic information. LSNS-6 scores decreased 2.200 points for each 0 coded female answer, 1.259 points for each 0 coded freshman answer, and 4.686 points for each 0 coded GPA at or below 2.6 *r* answer. LSNS-6 scores increased 2.197 points for each 0 coded white answer and 2.555 points for each 0 coded Christian answer. Female, freshman, and GPA at or below 2.6 were significant predictors of lower LSNS-6 scores (greater risk for social isolation), while white and Christian were significant predictors of higher LSNS-6 scores (lower risk for social isolation).

Logistic Regression Analysis

In Table 7, the logistic regression analysis table is shown and was conducted to test for the probability that participants' demographic information influenced LSNS-6 scores. After finding the regression equation, significance was found with both the heterosexual and white demographic categories. The heterosexual variable was found to have a B coefficient of -1.800 with a standard deviation of 0.762. The Exponentiation of the B coefficient or $\text{Exp}(B)$ was 0.165 with a significance level of 0.018. This means that participants who were heterosexual were 16.5% less likely to be at risk for social isolation. The white variable was found to have a B coefficient of -1.610 with a standard deviation of 0.595. The $\text{Exp}(B)$ was 0.200 with a significance level of 0.007. This means that participants who were white were 20% less likely to be at risk for social isolation.

Table 7*Logistic Regression Analysis of Social Isolation and Variables (N = 214)*

Model	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Constant	-0.577	1.475	0.153	1	.696	0.562		
Female	2.223	1.137	3.820	1	.051	9.236	0.994	85.832
Heterosexual	-1.800	0.762	5.581	1	.018*	0.165	0.037	0.736
White	-1.610	0.595	7.322	1	.007*	0.200	0.062	0.642
Christian	-1.146	0.928	1.526	1	.217	0.318	0.052	1.959
Depression	0.012	0.741	0.000	1	.987	1.012	0.237	4.322
Traditional Student	-0.296	0.625	0.224	1	.636	0.744	0.219	2.531
Freshmen	0.418	0.585	0.509	1	.475	1.518	0.482	4.780
GPA at or below 2.6	2.679	1.435	3.487	1	.062	14.571	0.876	242.480

CHAPTER V

DISCUSSION

Discussion of Research

The purpose of this chapter is to discuss the statistical data and the similarities and differences to the data found from the literature review. This section will review the four research questions, articulate implications of the research data and findings, list recommendations based on the findings, acknowledge the limitations of this study, and provide a conclusion to this study.

This research study explored the prevalence of social isolation in college students attending a private Christian university in West Texas. The results of this research study indicate that eight percent (8.4%) of students are at-risk for social isolation. While eight percent may appear at first glance small and insignificant, this is only eight percent of students surveyed and is not reflective of the university as a whole. The at-risk designation is key because the eight percent represents the students who are most likely to experience the associated detriments that social isolation brings. Cigna et al., (2018) performed their survey with over 20,000 participants, and their findings indicate that over half of adults aged 18-22 identify with feelings of loneliness (Cigna et al., 2018), which can be related to social isolation. Over half of 18-22 students experience some form of loneliness, but Cigna did not look at those at-risk to social isolation, while this research looked at those who are impacted by social isolation, and found that eight percent are

most likely experiencing social isolation and its detriments. This percentage also only designates participants who were at-risk of social isolation and did not factor in students who were at a slight risk of social isolation. This was not done because the instrument used, the LSNS-6 is only used to determine those at-risk for social isolation. Further analysis of the data revealed that both heterosexual and white students were less likely to be at risk for social isolation than students who did not identify as being heterosexual or white. These findings somewhat align with previous research. Liu et al., (2019) performed a study that found participants who are non-heterosexual are more likely to experience suicidal ideation and are more likely to have a mental health diagnosis of some kind (Liu et al., 2019). Both suicidal ideation and mental health diagnoses like depression and anxiety are factors associated with social isolation, affirming that being heterosexual would lead to lower social isolation scores on the LSNS-6. The previous research done on this subject leads the conclusion to be that non-heterosexual students are at a higher risk, but the actual reason for this could be attributed to something other than their sexual orientation.

Being white and having less of a risk for social isolation has mixed findings. Liu et al. and Cigna et al. both found that there was no significant difference between white and black students with suicidality and loneliness, but Liu et al. found that minority students were less likely to report mental health diagnoses (Cigna et al., 2018; Liu et al., 2019). These findings could be used in future research to try to discover the relationship between white and non-white students and social isolation on this campus.

Furthermore, students who were diagnosed with depression or students whose GPAs were lower than 2.7 were more likely to be at risk of social isolation. This is

similar to other studies, which also found that depression or GPA led to a higher risk of isolation or other isolation factors (Chang et al., 2019; Cigna et al., 2018; Hämmig, 2019; Keyes et al., 2012; Saeed et al., 2018; Seon et al., 2019). Specifically, Keyes et al. (2012) found a relationship between mental health and academic success, and since poor mental health is a factor of social isolation, this helps the current research to further understand the relationship between academic success and social isolation and its factors.

Regression analysis found that on this campus, being white, Christian, and heterosexual led to lower scores of social isolation risk. The regression analysis aligned with this study's Chi-square analysis in showing that there is a relationship between social isolation and being white, Christian, and heterosexual for this population. These three demographics were found to have a positive influence over social isolation scores, meaning that students who were in these demographic categories were at a lower risk for social isolation. There is some information about race and social isolation, and there is more about heterosexuality and non-heterosexuality, but there is little research to be found on Christianity and social isolation.

It is possible that following social identity theory, which explains the idea of social grouping and how individual self-esteem is naturally formed by groups that produce ingroup bias, can be a potential factor for Christianity and social isolation (McLeod, 2019). Christians who attend a Christian-affiliated university are more likely to be in the ingroup within the university community, bolstering their level of social connection and ingroup bias, which would influence non-Christians and how they form a relationship with the community. This same theory could also be applied to heterosexual

students and non-heterosexual students, where the heterosexual students form an ingroup bias that alienates non-heterosexual students from the community.

The regression analysis also found that being female, a freshman, or having a lower GPA led to higher scores of social isolation risk. Gender has not been found to be linked to social isolation, but some research states that there is some significance between men or women when it comes to factors such as depression or suicidal ideation (Chang et al., 2019; Fernandes et al., 2018). The research did not find any relationship between social isolation and military status, being born in the US, being a resident of Texas, or being a certain age. These factors could still potentially have an impact on social isolation in students, but more research needs to be conducted utilizing more specific methods, rather than attempting an exploratory study.

The Prevalence of Social Isolation

The prevalence of social isolation in college students attending a small Christian university in West Texas is 8.4% of students out of 214 surveyed. This answer was produced by using the LSNS-6 to score the risk of social isolation, using a point system of 30. Students who scored less than 12 on this survey are at-risk of being socially isolated. This varies from other research on college students since research on social isolation and college students is still growing, rather than being established through different research. This research further discovered that certain demographics of college students have a higher or lower risk of social isolation, so while 8.4% of students surveyed had an at-risk score, this did not include students who could be at a relative risk or slight risk for social isolation. An additional instrument to measure levels of social isolation or other factors such as loneliness or social connection could help to understand

the true level of social isolation at a university setting, rather than just the at-risk population.

The Lubben Social Network Scale-6

The Lubben Social Network Scale-6 was an instrument originally designed to be used with the elderly population. This research study explored the use of the LSNS-6 for use with college students to determine if the LSNS-6 was an appropriate instrument for measuring social isolation risk within this population. According to Dr. Sullivan, the editor-in-chief of the *Journal of Graduate Medical Education*, an instrument can be evaluated by looking at validity and reliability (Sullivan, 2011). Among the key characteristics to be considered is instrument reliability. The reliability of the instrument is measured using internal consistency reliability, which can be measured by the alpha coefficient reliability, which is called Cronbach Alpha (Bonnet & Wright, 2015; Sullivan, 2011). A research instrument is said to be reliable if it has Cronbach's Alpha coefficient (α) ≥ 0.60 to 0.95 (Bonnet & Wright, 2015). This is not a definitive number, as there have been studies that have used instruments with reliability lower than $.60$; however, it is generally accepted that to be considered reliable, the coefficient must be above $.60$. In the case of the LSNS-6, the Cronbach's Alpha coefficient score was $.782$. The LSNS-6 did have an internal reliability score listed in the document, which was $.83$ and is assumed to be tested using its original population. This provides an answer to the second research question and makes the LSNS-6 a valid and reliable instrument to be used for college students and social isolation risk.

First-Year Students and Social Isolation

The third research question asked for this survey was if there was a difference in social isolation scores between first-year students and non-first-year students. This research found some significance on first-year students and social isolation from the linear regression analysis performed. The regression analysis found that students who were in their first year of school, also known as a freshman, scored 1.2 points lower than non-first-year scores. This relationship causes being a first-year student to be a factor in increasing social isolation. Previous research done on this topic is not well known or studied, meaning that there is little to no research found on years attending a school and social isolation. However, there is research on age and social isolation that is established and found that loneliness factors and symptoms are increasing with younger generations at the same or greater rate than older generations (Cigna et al 2018). While this research did not find any significance with age and social isolation, knowing that there is on average an age difference between first-year students and non-first year students, there could be a reason to believe that first-year students are more at risk for isolation due to their age. Luca et al. found in their research that students who had suicidal ideation reported lower academic success levels and were younger on average (Luca et al., 2016). However, if it is known that GPA increases the longer one is in college (Luca et al., 2016; Seon et al., 2019; Walton & Cohen, 2011), then this may be related to academic success since non-first-year students had a lower risk for isolation. This factor of being a first-year student in a new environment is permeable, as it is involved with other factors such as depression diagnosis and GPA. If social connection is the opposite of social isolation,

then a key to mitigating depression and lower GPA is to establish effective social connection interventions that target first-year students.

Depression Diagnosis and Social Isolation

A final research question was asked before the survey was sent out, asking if there was a difference in social isolation risk scores between participants who had been diagnosed with depression and those who had not. The results indicated that there was a significant relationship between depression diagnosis and LSNS-6 scores that were less than 12 (higher risk for social isolation). Chi-square analysis showed a correlation between depression and LSNS-6 scores, with a significance value of .036 ($p = .5$). This relationship was not found to be statistically significant in either multiple regression analysis performed. This means that while someone who is depressed is more likely to have a lower LSNS-6 score, the results did not find a specific influence depression has on LSNS-6 scores. This could mean several things, one of which is that since depression is a symptom of social isolation, those who are depressed also experience social isolation; however, being depressed does not automatically make you more at risk for social isolation. This could also mean that there is another factor that was not studied that influences both depression and social isolation that causes a correlation to occur, but not a relationship through regression analysis. The literature review discussed the cyclicity of social isolation and depression and how the two can feed off of each other, with depression making one more socially isolated and social isolation making one more depressed. These findings indicate that the cyclical nature could contain more factors that feed into social isolation and depression.

All of these research questions helped to find data within the study that can help to further the research of social isolation and college students. Knowing 8.4% of students are at risk of social isolation, that the LSNS-6 can be used with college students, that first-year students are more likely to be isolated, and that depression is correlated to social isolation, more research can be performed to learn more about social isolation.

Implications

This section will explain the conclusions made from the findings of this study as well as how these conclusions can be applied to future research, policy and practice involving the university researched, and awareness. This section will also include a recommendation and limitation section that will recommend possible next steps in research, and discuss the limiting areas of this study.

These findings of 8.4% and a significance of social isolation risk with various populations, creates a greater need for more research. Since this study was exploratory in nature, finding more data to use is the base goal, but with more data, more questions arise, as is the case with most research. Knowing that 8.4% of students surveyed are at risk for social isolation gives way to questions such as, are the factors looked at in this survey the cause of this risk, or is it something else? Are these students graduating the same as non-at-risk students? There are additional questions to be asked here, but this means that the study was a success in that raising more questions helps to find more answers and bridge the gap between social isolation and college student research. The college student life office could benefit from this research and could use it to propel further studies into this topic. Knowing the social isolation risk of students could be a measurement for community engagement programs or events or could show if first-year

students are integrating and building social connection with the campus community. Future research can continue to be exploratory in nature, or it can shift towards identifying interventions or policies that mitigate social isolation, or grow social connection with students.

To understand the findings more, one must understand the community where the survey was conducted. Community is dire to development and social connection, and being alienated and isolated from a community could lead to negative factors of isolation. The ACU community is a collection of around 5,000 students, of which the majority are Christian, white, heterosexual, and female. The findings reflect these demographics but also uncover the reality of ingroups and outgroups. The meaning of being white, heterosexual, and Christian leading to lower LSNS-6 scores could come from the university being a predominantly white institution, which means ACU has a white student population of 50% or greater, and being a faith-based institution. The dominating community, or ingroup, is centered around Christianity, which can alienate people who are not Christian and not heterosexual, due to Christianity's differing view of non-heterosexual people. Altogether, this creates a community that naturally integrates and promotes being white, Christian, and heterosexual. Since these variables are the ingroup they do not face alienation and have less risk of being socially isolated. Further research should be conducted on this relationship, specifically at universities that are predominantly a different race than white. This can help determine if there is an actual difference in race and social isolation or if it is the dominant race of the community that imposes alienation on other races. Even further, it may be worth exploring the resiliency of minority communities and determining if due to their decreased presence in the

dominant community, that the minority community forms their own sub-community that then strengthens their social connection. Further research should also be conducted on non-faith-based institutions. This research can find out if the community determines the risk of an individual, and if religious groups are a protective factor due to their prevalence in the community or from their own community like church or group meetings.

Based on the findings, the university where this study was conducted (ACU) should begin the process of integrating social isolation awareness and outreach into already existing facilities aimed towards student betterment. While it might be possible to spearhead a separate facility on its own, integration would be better suited due to the prevalence and permanence of social isolation. Specifically, faculty and staff members should watch for students who withdraw from social interaction or have a noticeable decline in GPA. Providing outreach to those students that gives them resources to access or be involved with communities could prove useful in diminishing their social isolation risk. Faculty and students could use the LSNS-6 or its predecessor, the LSNS-12, to measure students' social isolation risk, which can provide some insight into their isolation level. Tools that assess for loneliness or depression can also be used to find students who are isolated or are at risk, but there is currently no evidence-based tool that effectively measures the level of isolation one experiences. One avenue to gaining better awareness for assessment is policy practice, which can shape entire communities.

Policy has an important role in creating rules and actions that best serve a community, whether it is a workspace, a city, a state, or even a country, policy stands as a foundation for building and strengthening a community. With these findings in this study, policy at the local level, specifically college and university campuses, can be fine-tuned

to improve itself and the community it serves. If policy includes language and specification on social isolation, then it is possible to be more aware of social isolation within the community. If a policy set in place by the campus administration were to influence additional language about social isolation, then awareness could increase, because if no policy exists to identify or aid those in the community who are at risk for social isolation, they are less likely to receive any services or resources that the community can provide. This research shows that there are students on this campus who are at risk for social isolation. If no policy exists that encompasses or at least acknowledges social isolation, then it creates a gap within the community policy. Incorporating policy that discusses or acknowledges social isolation could be a key beginning step to mitigating social isolation risk in college students.

While policy can be an effective tool to use to raise awareness within the community, utilizing social work practitioners within the community can help to spread the awareness faster. Social workers should be on the forefront of wanting to understand social isolation and its risks, since the majority of populations they work with experience or interact with social isolation to some capacity. Social workers should be aware of the increasing rise in social isolation factors like depression, loneliness, and suicidal ideation, and be advocating their administration to provide the proper education to teachers and students about how to mitigate social isolation. Social workers should also be aware of the impact social isolation can have on individuals, and how the homeless population is affected by social isolation. All social workers can benefit from understanding and researching social isolation with the population they work with, because of the prevalence of social isolation existing across all peoples, especially those who are

marginalized. Social workers discovering how social isolation interacts with people can help to remove social isolation as much as possible, but that is a difficult task.

The difficulty of social isolation, and specifically eradicating it, is that those who experience it are seldom in a position to be vocal to others about their suffering, or they lack the ability or desire to seek help because of factors that hinder their ability to socialize. Socially isolated individuals may simply lack the nuances of social development, also known as being socially awkward, or they could be battling depression. The recommendations for these individuals are difficult to pinpoint because of the additional factors like depression or social awkwardness. Therapy could be a solution for these individuals, and these factors can oftentimes help the other, but more research should be performed on the relationship between the two. For example, if an individual with depression seeks treatment, this could help to reduce their risk for isolation, or seeking assistance with social awkwardness could help reduce isolation in an individual, since they can begin to become involved in a community.

Recommendations

The following recommendations suggest ways to decrease social isolation among first-generation college students in addition to several considerations for future research, so that greater understanding and clarity can be achieved in the area of social isolation and college students. The four recommendations for future research are:

1. Examine other universities and their students to achieve a greater understanding of social isolation on university campuses.
2. Utilize an instrument or instruments that, in addition to measuring social isolation, also measure formal and informal social support.

3. Examine various factors relating to social isolation further, and understand the causes of social isolation.

4. Begin to study various interventions' ability to mitigate social isolation or increase social support in participants.

These four points can help social isolation to be further known and helps to identify how to potentially end social isolation.

The first recommendation, examining other universities and their students, would create a literature presence that can be accurately used when measuring social isolation in student populations. Knowing the prevalence or even how other students experience social isolation will help future research to accurately identify and explore social isolation deeper.

The second recommendation, utilizing instruments that measure additional factors such as social support, is vital for future research to know which instrument can find the most information about social isolation. This study's usage of the LSNS-6 was found to be reliable and valid for research with college students, but future research should consider additional instruments to explore social isolation deeper, such as an instrument to measure social support, to identify factors between social isolation and social support, or other concepts like social connection or social theories.

The third recommendation, understanding the factors and causes of social isolation, revolves around the other three recommendations, and is dire because currently the knowledge about the causes and factors of social isolation is limited. While studies exist that establish factors with social isolation, there is still the possibility for more to

exist, and the factors involved in each other could be prevalent, potentially finding a direct cause for social isolation.

The final recommendation, studying various interventions, is needed for future research to begin to understand how to eradicate social isolation. Interventions that focus on social connection have had studies performed using them, and if future research incorporated intervention assessment, then finding and mitigating social isolation can become possible.

Limitations

The limitations of this thesis revolve around segments or areas of the study that were hindered by various factors. Specifically, the lack of previous research on the use of the LSNS-6 instrument on college students, the lack of research over social isolation and college students, the ethnicity and race question in the survey not containing the Hispanic/Latino answer choice, and personal bias might have influenced the study. These limitations present different areas where the study could have been reinforced or improved upon; however, this does not invalidate the research done. The goal of this section is to discuss and explain the limitations and why they are limiting the study, but they also reinforce the validity of this study despite its limitations presented.

The first limitation is the use of the Lubben Social Network Scale-6 or LSNS-6 instrument in the research survey. The LSNS-6 was initially created for use in the elderly population, and while there has been a previous study utilizing the LSNS-6 with surveying college students, there is no research found that proves that the LSNS-6 is a viable instrument to measure social isolation risk in college students. The LSNS-6 is also a very brief instrument, which only measures the risk of social isolation. This creates a

very shallow understanding of social isolation itself, since the instrument only indicates if the participant is at risk or not, and does not give any indication about the level of risk. The only indication of level of risk is that a score of less than 12 indicates risk. If additional instruments were used that included more in-depth analysis of social isolation, then the study could have been more effective at exploring social isolation in college students. One of the goals of this study was to assess whether this instrument was valid when used to study college students, but since there is no previous research to reinforce the validity of the instrument and its reliability with the student population, the usage of the instrument is inherently limiting to the overall study. The usage of this instrument in future research involving social isolation and college students will help to close this limitation further, if this instrument is used and measured.

The second limitation is the lack of previous research on college students and social isolation. This limitation makes it difficult to find accurate studies and creates the need to infer through several different studies to come to various conclusions. While research on college students and research on social isolation are both large in their own respects, combining the two together without previous research that involves both subjects can create a limitation that can only be closed by establishing more research into this area of study. The limiting factor comes from combining research that is not meant to be combined, or interpreting the research incorrectly while combining it. This limitation, like the first, acts as both a limitation and a strength for the study, since this study aims to help close the gap in the literature that was a limitation for itself.

The third limitation is the missing Hispanic/Latino answer choice in the ethnicity/race question of the survey. This oversight was not realized until after the

survey had been sent out, and created an issue with exploring various ethnicities and races and how they relate to the risk of social isolation. The surveyed population has a notable percentage of people of Hispanic/Latino descent and created a blind spot in the exploratory study of social isolation and college students. This means that there could be a significant relationship between Hispanic/Latino students and social isolation risk, but this study did not have the means to examine it due to this limitation. Future research having a comprehensive list of ethnicities and races that are found within the population of study will allow for better dissemination of various ethnic groups and discovery of their relationship to social isolation.

The fourth limitation is bias, a type of thinking that affects all humans, and it is important to assess the biases that are both innate and learned that the researcher has, especially if these biases influenced the research in some way. Being raised Christian, there exists a bias of the Christian experience and lifestyle. This could have influenced how the researcher interpreted the data surrounding Christianity being a protective factor. Another bias is the researcher's experience with social isolation and depression. These experiences could have influenced the researcher to disproportionately lean into depression and its relationship to social isolation, rather than unbiasedly assessing all factors and their relationship. These biases could have caused the researcher to try to find the answers to questions, rather than utilize this study to explore an area of research and gain knowledge from the findings.

A final limiting factor must be discussed because of the relevance to the topic of this thesis. The COVID-19 pandemic started during the development of this thesis, and the survey sent out was conducted while there was a government-enforced lockdown that

encouraged self-isolating to mitigate the spread of the deadly virus. This engagement in isolation is a limitation because the data could be influenced by the isolation effects of a global pandemic lockdown, since self-isolating and staying away from others naturally increased social isolation. More research should be conducted after the pandemic has subsided on this same population to assess if there was any difference in the two social isolation results.

Both the use of the LSNS-6 and the lack of previous research present a limitation that, while present, is diminished due to the study proceeding, which proves positive for future research revolving around social isolation and college students. The missing answer choice in the survey limits the area covered in this research, and the biases could have influenced the research to go outside of what it was meant to find. These limitations diminish the full potential of the research but do not invalidate the entirety of the research. The limitations of this research were found and discussed, and ultimately concluded that they did not invalidate the research, but are noted to assure that there was thought and consideration when discussing the research and its findings.

Conclusion

This study examined the prevalence of social isolation in college students on a small Christian campus in West Texas. The literature contained numerous studies that involved social isolation or studied a known factor or cause of social isolation, like depression. The study found that while only 8.4% of students surveyed experience social isolation, there are different factors that increase or decrease the risk of social isolation in students. Being female, a first-year college student, and having a GPA lower than 2.6 increased the risk of social isolation, and being white, heterosexual, and Christian

decreased the risk. These findings implicate that universities and social workers should begin to implement social isolation programs, and raise awareness. Social isolation is a growing concern, and it is detrimental to the mental health of all who experience it. If social isolation can be studied and known, then it can eventually be removed. Without social isolation, connection can happen and help those who feel alone.

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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



August 10, 2020

David Elliott
Department of Social Work
Abilene Christian University

Dear David,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled "Exploring the Prevalence of Social Isolation in Students on Small College Campuses",

(IRB# 20-088) 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

APPENDIX B

Social Isolation Survey

1. What is your age?
 - a. 18 or younger
 - b. 19-20
 - c. 21-22
 - d. 23-24
 - e. 25+
2. To which gender identity do you most identify?
 - a. Female
 - b. Male
 - c. Transgender Female
 - d. Transgender Male
 - e. Gender Variant/ Non-Conforming
 - f. Prefer not to answer
3. What is your sexual orientation?
 - a. Straight/Heterosexual
 - b. Gay or Lesbian
 - c. Bisexual
 - d. Prefer not to say
 - e. other
4. What is your race? (can select multiple)
 - a. America Native or Alaska Native
 - b. Asian
 - c. Black or African American
 - d. Native Hawaiian or Other Pacific Islander
 - e. White/Caucasian
5. How long have you been a student at ACU?
 - a. 1 year or less
 - b. 2
 - c. 3
 - d. 4
 - e. 5+
6. What is your religious affiliation?
 - a. Christian
 - b. Non-Christian
 - c. Non-religious/ Agnostic
 - d. Spiritual

- e. Atheistic
- 7. What was your GPA last year? (Freshman may use last semester GPA)
 - a. Below 2.0
 - b. 2.0-2.6
 - c. 2.7-3.5
 - d. 3.6-4.0
- 8. Within the past six months, have you ever been treated for or diagnosed with depression?
 - a. Yes
 - b. No
- 9. Have you served in the military?
 - a. Yes
 - b. No
- 10. Were you born in the United States?
 - a. Yes
 - b. No
- 11. Are you a resident of Texas?
 - a. Yes
 - b. No

APPENDIX C

Lubben Social Network Scale-6

FAMILY: Considering the people to whom you are related by birth, marriage, adoption, etc.

1. How many relatives do you see or hear from at least once a month?
 - a. none
 - b. one
 - c. two
 - d. three or four
 - e. five thru eight
 - f. nine or more
2. How many relatives do you feel at ease with that you can talk about private matters?
 - a. none
 - b. one
 - c. two
 - d. three or four
 - e. five thru eight
 - f. nine or more
3. How many relatives do you feel close to such that you could call on them for help?
 - a. none
 - b. one
 - c. two
 - d. three or four
 - e. five thru eight
 - f. nine or more

FRIENDSHIPS: Considering all of your friends including those who live in your neighborhood.

4. How many of your friends do you see or hear from at least once a month?
 - a. none
 - b. one
 - c. two
 - d. three or four
 - e. five thru eight
 - f. nine or more

5. How many friends do you feel at ease with that you can talk about private matters?
 - a. none
 - b. one
 - c. two
 - d. three or four
 - e. five thru eight
 - f. nine or more
6. How many friends do you feel close to such that you could call on them for help?
 - a. none
 - b. one
 - c. two
 - d. three or four
 - e. five thru eight
 - f. nine or more