SOCIAL ISOLATION IN OLDER ADULTS: A QUALITATIVE STUDY

by

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Abstract

Population aging is a worldwide trend linked to scientific developments such as vaccinations and medical advancements, including improvements in cancer treatment and a lower fertility rate than experienced by previous generations. This phenomenon is poised to instigate one of the biggest social revolutions of the twenty-first century. The consequences of an aging population affect housing, transportation, labor markets, and the demand for goods and services. It also influences interpersonal relationships, including family structures and friendships. This upward drift of improved longevity increases the possibility of developing physical and psychological ailments that can contribute to lifestyle changes and subsequently increase the probability of social isolation. Social isolation has similar adverse effects to loneliness, and the two constructs have often been studied in correlations. However, the parameters have been identified as separate, and this study explores social isolation apart from loneliness. Extensive reports have examined the effects of social isolation in association with gender, culture, and lifestyle choices, but little research is available on the impact of physical location. This qualitative phenomenological study explores the lived experience of social isolation in older adults through the lens of geographic location. The experience of social isolation is compared between rural, suburban, and urban locations. The findings suggest that geographic area may have little to do with social isolation measured in quantitative values. However, there are significant differences between themes that present themselves when discussing the lived experience and a person's relationship with their geographic location.

Keywords. Older adults, social isolation, geographic location.

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“My command is this: Love each other as I have loved you.”
John 15:12

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

Historically, humans have survived by banding together in units and forming tribes to provide reciprocated support and protection (Snyder-Mackler et al., 2020). Humans may no longer need each other to fend off predators or hunt for food. Still, there is overwhelming evidence that humans rely on each other in capacities beyond physical survival (Santini et al., 2020). High-quality social relationships are essential to vital physical and mental health. Social isolation has been identified as a significant health problem for older adults and can pose severe psychological and physical health risks. There are many components to the aging process that determine the ability to stay connected and a person's relationship with social isolation.

Geographic living areas influence the daily lives of individuals as they adopt community cultures and norms and have access to, or exclusion from, resources. While geographic regions once primarily only dictated the number of natural resources available, it has progressed to define many components of lives, including relationships and how individuals navigate the world. Where a person lives can determine the type of job, availability of healthcare, access to the internet, and the means of remaining connected to others. The subfield of geographic gerontology emphasizes the interconnectedness of social dynamics and physical location (Cagney & Cornwell, 2018). There are both advantages and disadvantages to living in different geographic locations. This study will explore the relationship that older adults in the United States have with social isolation per their geographic location.

Background

Life expectancy has approximately tripled throughout human history (Young, 2021). Fertility is declining, and people are living longer (Miles, 2023). For the first time in U.S. history, adults (≥ 65) will outnumber any other age segment of the population (US Census, 2019). According to the Rural Health Information Hub (2019), there were 46 million Americans over 65 in 2020, which is anticipated to be over 90 million by the year 2050 (2019). This growth is accredited to better nutrition, broader accessibility to health care, advances in food safety, better-quality sanitation, immunization developments, and a decline in smoking (Fung et al., 2018; Harper, 2019; Kirkwood, 2017). A longer life span is inadvertently accompanied by medical and psychological conditions affiliated with advanced aging. Diabetes, cataracts, chronic degenerative diseases, some forms of cancer, Alzheimer's disease, and dementia are more frequent among older adults as compared to their younger counterparts (World Health Organization, 2022). Individuals, their families, healthcare workers, and government agencies have noticed the implications affiliated with the dramatic rise of a longer life span. People are living longer but may not be living better.

While an extended life span is a remarkable realization, it also suggests that older adults are more likely to live alone than their predecessors and younger counterparts (WHO, n.d.; Abell & Steptoe, 2021). Between 1997 and 2017, the proportion of older adults living alone increased by 16% (Abell & Steptoe, 2021). According to the Pew Research Center, older adults in the United States are more likely to live alone than in any other part of the world (Ausebel, 2020).

The state of the emergent older adult population has long been looming on the horizon. Identified over two decades ago as the "2030 problem," it includes the challenges in healthcare and social policies to accommodate the aging population's needs (Knickman & Snell, 2002).

Addressing financial concerns affiliated with insurance, increasing costs of prescriptions, and providing support for caregivers are at the forefront of the agenda to reconcile the needs of the older adult population (Knickman & Snell, 2002). In addition to observable economic concerns, there are less obvious but equally significant issues, such as loneliness and social isolation. Each is widespread and often underestimated as a meaningful determinant of a person's well-being. Loneliness and social isolation have usually been studied as interchangeable constructs; however, each condition is now recognized as an independent variable with unique identifying factors (Donovan & Blazer, 2020; Cacioppo & Cacioppo, 2014). Loneliness has been carefully studied as recognized as a state of mind that causes people to feel empty and unwanted. Social isolation is a state of being that can be measured with quantitative data.

At a very early age, being alone is understood to be a negative situation. When a child is put in "time out" or asked to leave the dinner table because of unacceptable behavior, they understand that being alone is a punishment (Dadds & Tully, 2019). Studies have shown that emotionally neglecting infants can disrupt the way a child's brain develops and affect their ability to form attachments throughout life (Blaisdell et al., 2019; Toth & Manly). Amish people employ the technique of shunning, or social rejection, as an extreme form of punishment (Nolt, 2016). Research denotes that people in Amish communities who practice extreme shunning are less likely to leave the community because they fear lifelong isolation (Choy, 2020). In the prison system, solitary confinement is used as a punitive method and has been legally challenged as "cruel and unusual punishment" because of the extreme psychological distress it provokes (Polizzi & Arrigo, 2018). Research indicates that even less than ten consecutive days of isolation can produce adverse effects of psychiatric symptoms that can last up to three years (Brooks et al., 2020). Recently, the sudden quarantine mandate of COVID-19 forced an abrupt seclusion of the

entire population and underscored social isolation's effects. The mental health effects of the quarantine are still being realized in schools, the workplace, and the overall community. Social isolation can be particularly devastating for older adults because they have a lack of resources and higher chances of medical conditions that limit their means of staying connected.

Research on the older adult population's social isolation has consistently indicated a strong correlation with adverse outcomes. People's needs, social circles, and living arrangements change as they age. Relationships are an essential part of our identity. They can shape our personality and inspire or demoralize our self-worth. Mental health is influenced by multiple complex interactions with ourselves and our relationships with others. A person's relationship with the condition of living alone may predict overall physical and mental health. Recent studies have indicated that residential location can significantly impact physical and psychological health. Physical location can provide support for intense physical and mental well-being, or it can catalyze a steep decline.

Christians, individuals, and communities at large are responsible for providing a means of aging with dignity to all members of society. Cultivating appropriate programs and allocating resources to address social isolation will improve how people age and encourage a more positive relationship with the older adult population that will afford enhanced opportunities for a more targeted delivery of social support programs (Hoang et al., 2022; Koszalinski & Olmos, 2022). By comparing the experience of social isolation in rural, suburban, and urban areas, programs can best be conceptualized to suit the community's needs. This research will build awareness of the advantages of healthy lifestyles, including developing and maintaining meaningful social relationships. Funds for providing resources to combat social isolation are limited, and it is essential to be aware of how to utilize resources to benefit those in need most effectively.

Problem Statement

The path to aging is not scripted. Every journey is unique and comprises experiences, circumstances, and relationships that define people and shape their worldviews. The aging process includes significant lifestyle changes, including retirement, a modified income, the death of a spouse or close friend, becoming a caregiver, needing a caregiver, or moving to a new location. As people age, they are more likely to experience multiple conditions, and any of these circumstances can influence their ability, or desire, to socialize.

Socializing and connecting with others via meaningful relationships is a vital part of healthy aging. Research has repeatedly suggested that both loneliness and social isolation are detrimental to a person's mental and physical health. Each concept is different but related.

Loneliness is not caused by being alone. It is a painful human condition that most people experience at some point in their lifetime. It is the perceived lack of social relationships and current relationships. Social isolation, on the other hand, is caused by being alone. It is a quantifiable lack of social relationships. Social isolation is a concern for all members of society; however, adults are exceptionally vulnerable to the adverse effects (Somes, 2021). There has been a significant amount of research identifying the causes of social isolation, including chronic health problems, reduced ability to drive, and a change in family structure. However, the experience of social isolation by a geographic location is an essential and often overlooked variable. Research has not provided a consensus on whether the experience of social isolation varies by geographic location. The characteristics and parameters of a living area may influence the capacity and desire to stay connected with friends and family members.

In rural areas, older adults may experience a lack of connectedness because of limited access to the internet and having fewer people for socializing options. Suburban areas may lack

sidewalks or streetlights, requiring driving to meet with friends and family (Fakoya et al., 2020). Older adults in urban areas live closer to neighbors and resources, such as grocery stores and libraries, but cite not knowing their neighbors or being afraid to go outside due to increased crime rates (Giméz-Nadal et al., 2022).

Everyone's lived experience of social isolation is unique. To understand this experience more fully, it is important to understand the implications of geographic location.

Purpose of the Study

This qualitative phenomenological study examined the lived experiences of social isolation among older adults living in rural, suburban, and urban areas. It also examined how lived experiences are similar and different between geographic locations.

Research Questions

RQ1: How do older adults living in rural areas describe their lived experience with social isolation?

RQ 2: How do older adults living in suburban areas describe their lived experience with social isolation?

RQ 3: How do older adults living in urban areas describe their lived experience with social isolation?

RQ 4: How do the lived experiences of social isolation differ in older adults living in rural, suburban, and urban areas?

RQ 5: How are the lived experiences of social isolation similar in older adults living in rural, suburban, and urban areas?

Assumptions and Limitations of the Study

The study assumed that all participants answered the questions genuinely without prompting or persuasion from outside sources. It also assumed that the participants could process the questions and respond accurately.

The primary limitation of the study is the reliance on the self-report data. Older adults living alone may be tempted to embellish their situation to gain empathy or intentionally extend the conversation because they are seeking conversation and appreciate feeling valued. Alternatively, some participants may be skeptical about disclosing personal information. They might downplay or moderate their situation for fear of judgment, embarrassment, or concerns about an unwanted intervention. The challenge was establishing a degree of trust and respect for the integrity of the study so the most accurate results could be obtained.

Other limitations include the time of year that the study was conducted. Weather conditions and daylight savings time may have influenced the participants' answers. The participants were from 3 different time zones in cities with varying weather patterns. Some research suggests that shorter daylight hours discourage people from evening social activities.

Theoretical Foundations of the Study

The theory that guides this research is Giddens' Structuration Theory. This theory provides an integrative description of a person's ability to shape their own life, the habits in which they routinely perform, and their motivation for making changes (Thompson et al., 2023). The foundation of the theory serves as a catalyst for understanding relationships and provides an integrative approach to understanding social isolation.

According to Giddens, "agency" is the extent to which individuals can act on free choice (Giddens 1979, Giddens, 1995). Individuals with strong "agenic capacities" are capable of making changes in their lives. Agenic capacities are aligned with the process of socialization.

"Structure" is formed from societal and cultural patterns. Both structure and agency are relevant factors in determining social isolation.

The framework of Gidden's Structuration Theory proposes three types of structuration in the social system. The first, structuration, suggests that meaning is coded via language and discourse. The second element is legitimization. This layer consists of normative perspectives entrenched in societal values and norms. Finally, the third component is domination, which describes how power is realized and particularly involves the control of resources.

Geographic location dramatically impacts how a person views the world because of resources and availability of social contacts. Gidden's Theory of Structuration helps explain why the lived experience of social isolation can be intertwined with geographic location. A central premise of the theory suggests that humans have choices. Adam and Eve's decision had far more significant consequences than they were prepared to handle. According to Gidden's Structuration Theory, when people make choices based on a limited knowledge base, their lifestyles can be inhibited. The Bible says, "Trust in the Lord with all your heart and lean not on your own understanding (*New International Version*, 1973/2011, Proverbs 3: 5-6).

Human beings were not created to be alone. Genesis states, "The Lord God said, "It is not good for the man to be alone. I will make a suitable helper for him" (*New International Bible*, 1973/2011, Genesis 2:18). The Bible also says, "Two are better than one, because they have a good return on the labor; If either of them falls down, one can help the other up. But pity anyone who falls and has no one to help them up" (*New International Bible,* 1973/2011, Ecclesiastes 4:7-12.)

Definition of Terms

The following is a list of definitions of terms that are used in this study.

Health and Well-being – The state of complete physical, mental, and social well-being (World Health Organization, 2022).

Loneliness – A subjective feeling of being alone or isolated (Gardiner et al., 2018).

Older Adult – Any person ≥ 65 years of age (NIH, 2022).

Rural– Geographic area of the United States with ≤ 500 people per square mile (Census Bureau, n.d.).

Social Capita – The intangible elements of human relations embodied in levels of trust and quality of social networks (Jackman, 2002).

Social Infrastructure – Programs (such as volunteer organizations, sports groups, religious groups, and member associations) policies include public transportation, housing and education, and physical elements such as libraries, parks, green spaces, and playgrounds supporting social connections.

Social Isolation – The absence of social interaction, contacts, and relationships with family, friends, and society (NIH, n.d.).

Suburban – Geographic areas of the United States that fall within a 10-mile radius of an urban living area and have a population density of ≤ 250,000 and ≥ 100,000 people per square mile (Census Bureau, n.d.).

Urban – A geographic living area with a population density of ≥ 5,000 containing at least 2,000 housing units (Census Bureau, n.d.).

Significance of the Study

This research is significant because high-quality social connections are essential to mental and physical health (Barnes, 2022). Although some interventions for social isolation

exist, they are not effective because they do not meet the needs of socially isolated older adults. Geographic living areas play a strong part in a person's identity.

It is essential to understand a person's relationship with social isolation concerning their geographic living area. By investigating the experience that older adults have with social isolation pertaining to their geographic location, local policies and programs can be implemented to best address the needs of those in the community.

Summary

Abraham Maslow identified "love and belonging" as the third tier in the psychological hierarchy of needs. Humans need to be loved and feel like they belong to a group (Mcleod, 2020). People are living longer than ever and are subsequently more apt to live alone. Socialization and habits are formed throughout a lifetime. Individuals develop a sense of personal identity through interactions with others, which their living area can influence. The aging process includes major disruptions to living situations. When circumstances change, and habits, routines, and behavior patterns no longer fit, it can be challenging to regulate social connections. Recognizing the lived experience of older adults with social isolation concerning their geographic location, assists governments and communities with assessing and implementing crucial services.

Humans were created to belong to be united as the body of Christ (*New International Version*, 1973/2011, Romans 12:5). Every member is important and valued. It is imperative to allow everyone to "stretch out their hand," so that they will become healed (*New International Version*, 1973/2011, Matthew 12:13). Providing resources for an aging community can be burdensome because. As a society, we have never experienced such a unique disbursement of the aging population. We must be cognizant of the needs of older adults and appreciate their

wisdom. Old age should be regarded as a gift, not an affliction. “Gray hair is a crown of glory; it is gained in a righteous life” (*New International Version*, 1973/2011, Proverbs 16:31).

CHAPTER 2: LITERATURE REVIEW

Overview

It is important to appreciate that people are living longer and recognize that there are many complex facets associated with the aging process. Living longer is different from living better. There is much evidence explaining why people live longer, and research describes the conditions associated with a longer life. Social epidemiology research denotes that social relationships are a substantial risk factor for broad-based morbidity and mortality (Cacioppo & Cacioppo, 2014). Social isolation has been repeatedly demonstrated to have negative outcomes for older adults (Cacioppo & Cacioppo, 2014; Donovan & Blazer, 2020; Galambos & Lubben, 2020). Every person has a unique relationship with others, their circumstances, and their geographic living area which may have had a significant impact on who they are as an adult. Some people may greatly enjoy where they live and appreciate the familiarity. Others may feel trapped by their living area and be unable to afford the cost of moving or need to remain close to family to provide or receive care.

Description of Research Search Strategy

A comprehensive literature search was conducted using multiple online databases. These online databases included APA PsycNet, PLOS One, Google Scholar, and Liberty University's doctoral digital commons to look up relevant literature. Advanced search options were used to narrow the search by selecting specific date ranges, article types, and research disciplines. Key terms used within these databases included: social isolation, loneliness, older adults, COVID-19, fertility rates, geographic gerontology, gambling, suicide, health determinants, and neighborhood demographics. The Holy Bible was browsed using the Bible Gateway website, which is searchable by passage and keyword.

Review of Literature

Aging Defined

The world population is aging. An increase in the average lifespan was once a phenomenon experienced only by wealthy and developed countries, but it has now effectively permeated every country in the world (Berg et al., 2020). The shift toward population aging started in high-income countries, but it is now the low- and middle-income countries that are undergoing the most change (World Health Organization, 2022). In 2017, there were an estimated 901 million people over the age of 60 worldwide. That number is projected to reach 1.4 billion by 2030 and nearly 2.1 billion by 2050 (WHO, n.d.). It is estimated that by 2030, 1 in 6 people in the world will be over the age of 60.

Echoing the worldwide trend, people in the United States are also living longer than ever. According to the U.S. Census, in 1975, the average life span for Americans was 71.43 years, as opposed to 78.1 in 2020 (U.S. Census, n.d.), which represents an increase of approximately 9%. The United States Census also indicates that in 2020, there were 55,892,014 people (about twice the population of Texas) over the age of 65 in the United States, which accounted for 16.8% of the total population (U.S. Census, n.d.). This number is expected to escalate to 22% by the year 2040.

At the biological level, aging results from the impact of the accumulation of a wide variety of molecular and cellular damage over time (World Health Organization, 2022). This leads to a gradual decrease in physical and mental capacity and an increased risk of disease and health complications. Beyond biological changes, aging is often associated with other life transitions such as retirement, adjusting to independent living after the death of a spouse, and escalating health concerns.

In addition to living longer, there has been a shift in resources which has had an impact on lifestyles. The increasing number of members of the older adult population has unwittingly paralleled the "Information Age." Also referred to as the "Computer Age" it began in the mid-20th century and is characterized by a rapid shift from traditional industries to an economy centered on information technology (Kline, 2017). The use of computers and technology has led to increased means of communication. It has also led to fewer manual labor jobs which has contributed to fewer work-related injuries. The remarkable advances in science and medicine have also contributed greatly to longevity. Longer lives are a feather in the cap of the medical community and touted as one of the greatest achievements of humankind. Extensive medical advancements have contributed to longer lives.

Vaccinations are recognized as one of the most successful and cost-effective medical interventions in history. The Centers for Disease Control and Prevention (CDC) submits that for children born in the United States during 1994–2013, vaccines will have prevented 322 million illnesses, 21 million hospitalizations, and 732,000 premature deaths (2020). While vaccines have been instrumental in preventing serious illnesses and deaths, the inception of antibiotics has also been a strong influence. Antibiotics are acknowledged as one of the most important discoveries of medical science. It is estimated that antibiotics have increased the average life expectancy by up to 20 years (Gottfried, 2005). The discovery of penicillin transformed treatment and catapulted the research and development of antibiotics. Numerous other advances in medicine have also contributed to extending the life span.

In 1970, cancer was the second leading cause of death in the United States, early intervention in diagnosing both childhood and adult forms of cancer has greatly contributed to a

steady increase in survival rates. The development of treatment and management of other diseases has also had a positive impact on longevity.

Diabetes is a non-communicable disease with major impacts on morbidity and mortality. It is a primary healthcare concern worldwide and the third leading cause of death in the United States (Dowarah & Singh, 2020). Better control of diabetic-related side effects, including controlling blood pressure, glucose, and cholesterol levels, and managing body weight in people with T2D can reduce the risk of diabetes-related complications.

Medical advancements have tremendously contributed to longer lives, however, other, often undiagnosed and overlooked, elements contribute to a decline in longevity. Mental-wellness and strong social support systems have significant impacts on both the quality and length of life. The need for social connections has been evidenced through research on loneliness and social isolation (Newman & Zainal, 2020).

Loneliness and Social Isolation

For many years researchers have examined how social conditions can influence relationships and how the relationship can influence health (Cudjoe et al., 2022). Loneliness and social isolation are conditions that consistently present as having negative consequences on health (Taylor et al., 2023). The conditions can often be cyclical. Loneliness can lead to social isolation and social isolation can result in loneliness. Loneliness and social isolation can be misunderstood as the same phenomena; however, research now identifies them as having individual parameters and qualifying variables (Taylor., 2023). Disentangling social isolation and loneliness helps increase our understanding of each concept.

Loneliness is a subjective, distressing state in which and person is dissatisfied with the quality or quantity of their social relationship sense of belonging (Cacioppo et al. 2002; Cornwell

& Waite, 2009; Ong et al., 2016; Taylor, 2019). It is considered a public health issue because of the potential for a range of negative outcomes, including a marginalized quality of life resulting from an increased risk of deteriorating physical and mental health. Loneliness can encourage unhealthy behaviors, such as neglecting to seek medical care and social services (Gerst-Emerson & Jayawardhana, 2015). Loneliness is the perception of being alone, as opposed to physically being alone, which is recognized as social isolation (Dahlberg et al., 2021).

Social isolation is a quantifiable, objective condition that is described by a lack of contact with other people and being disconnected from groups and social activities (Berkman & Glass, 2000; Cacioppo & Cacioppo, 2014; Cacioppo & Hawkley, 2003; Cornwell & Waite, 2009; Gale et al., 2017; Leigh-Hunt et al., 2017; Holt-Lunstad et al.; 2010 Steptoe, Shankar, Demakakos, & Wardle, 2013). Although measured differently than loneliness, it can have equally devastating outcomes and have cumulative consequences on physical, physiological, and mental wellness.

The effects of social isolation and loneliness are far-reaching and non-discriminatory. However, older adults are exceptionally more prone to adverse outcomes because they are more likely to encounter elements such as living alone, loss of family or friends, and medical conditions, such as hearing and vision loss (National Academies of Sciences, Engineering, and Medicine, 2020; Shukla et al., 2020).

Social Isolation and Loneliness in Older Adults

Studies reveal that 50% of individuals over the age of 60 are at risk for experiencing social isolation (Fakoya et al., 2020; Kaplan 2023). Isolation can occur gradually, such as when one is no longer capable of driving at night, or in heavy traffic, or it can be quite sudden, as in the event of a medical condition or injury.

The extensive agenda of the United Nation's Decade of Healthy Aging (United Nations, 2020) includes addressing the many issues facing a globally aging population, including the social isolation, of older adults. In support of this initiative, The World Health Organization (WHO) and the National Institutes of Health (NIH) have emphasized the importance of advancing research addressing social isolation. In a concerted effort to understand isolation, it is essential to identify the cause.

Consequences of Social Isolation

The effects of living without meaningful social connections can be far-reaching and often go unnoticed. Families and people in the community are often ill-equipped to adequately identify and address the associated problems (Holt-Lunstad, 2017). Social isolation can drastically influence physical, physiological, and psychological health outcomes (Donovan & Blazer, 2020). There is robust evidence that social isolation and loneliness significantly increase the risk for broad-based morbidity and mortality. People who are socially isolated are more likely to be admitted to the emergency room and have longer hospital stays (Holt-Lunstad, 2015).

Physical Effects

Physical ailments that manifest in association with decreased social relationships have been linked to social isolation. According to research, having a sense of purpose in life is linked to stronger immune cells (U.S. Department of Health and Human Services, n.d.). Alternately, a lack of meaningful connections can have a substantial influence on physical health. The effects of social isolation can manifest as physical ailment which rival the consequences of smoking 15 cigarettes a day and obesity (Smith et al., 2019). A lack of social relationships has been associated with a 29% increased risk of heart disease as well as a 33% escalation in the risk of a stroke (Centers for Disease Control and Prevention, 2020).

Diminishing social relationships have been associated with a 29% increased risk of coronary heart disease and a 32% increase in the likelihood of having a stroke (NIH, n.d.). Social isolation is also associated with an increased probability of suffering from migraines, osteoarthritis, over-indulging in alcohol, and an increased risk of long-term mental illness and depression (Hawkley, 2020). Systolic blood pressure has also been demonstrated to have a positive correlation with social isolation (Yazawa, et al., 2022).

There are extensive correlations between cardiovascular disease and older adults with high levels of isolation (Leigh-Hunt, 2017). The World Health Organization (WHO) defines cardiovascular disease (CVD) as a collection of disorders involving the heart and blood vessels, including strokes and coronary heart disease. Older adults who are socially isolated have a 30% increased risk for coronary artery disease and 26% of all-cause mortality and morbidity (Donovan & Blazer, 2020). Studies indicate that people living alone experience a rapid memory and language fluency decline (Curelaru et al., 2021).

The implications of social isolation extend beyond what is exhibited by physical symptoms. Advances and innovations in the scientific and medical communities have allowed researchers to examine the effects of social isolation on the brain as a physical organ.

Physiological Effects

Isolation has also been linked to changes in the brain that are linked to social isolation which are irreversible and have adverse ramifications on the quality of a person’s life. There are neural mechanisms that have been identified as governing our social behaviors. Neuroscience has revealed that the brain houses a “complex homeostatic system” that allows our gray matter to track the state of our basic biological needs (Garcia, 2022, p. 49). Studies on brain images reveal that the subcortical brain regions, including the ventral striatum, have an important role in

motivation and are activated when we acquire pleasure from social activities (Garcia, 2022, p. 51). Further reports have identified that social isolation affects the instigation of dopaminergic and serotonergic neurons which are important to human emotional well-being (Mathews et al, 2016). In a study of over 400,000 participants, socially isolated individuals were found to have lower gray matter volumes in the regions of the brain involved in memory and learning (Shen, 2022).

Mirror neurons in the human brain are aroused when we interact with other people (Acharya & Shukla, 2012). Studies have revealed that there are shifts in the brain's structure in people and animals who experience social isolation (Offord, 2020). The prefrontal cortex is the region of the brain that is often associated with decision-making and social behavior. Scientists have discovered a reduced volume in the prefrontal cortex of the brain in people experiencing social isolation. Animals that have been isolated display unregulated signals in the prefrontal cortex. The hippocampus is associated with learning and memory function, and research indicates that living conditions, such as living alone, reduce the effectiveness of this region of the brain (Scacciano et al., 2006). Researchers have also discovered a correlation between the size of a person’s social network and the volume of their amygdala (Offord, 2021).

Social interactions can be rewarding and stimulate part of the reward circuitry of the brain, including the ventral tegmental area (TS) dopamine (DA) neurons and nucleus accumbens (NAc) (Matthews et al, 2016). Alternately the lack of social interactions can lead to an adverse emotional state (Cacioppo et al., 2006). Psychological effects are also evidenced by research. In addition to the physical and physiological implications resulting from social isolation, are mental afflictions which can be just as caustic.

Psychological Effects

People need social connections to flourish (Lee Smith, 2020). As people age, however, they often find themselves spending more time alone. Studies show that social isolation is associated with higher rates of depression (NIH 2022). Depression is a serious mood disorder that can affect the way you feel, act, and think. It is common in older adults; however, it is not a normal part of the aging process (NIH, 2019). Older adults who have a deficiency in social transactions experience a higher rate of depression than their more active counterparts (Cacioppo, 2020). Depression, as an independent variable, can be challenging but it can also serve as a fertilizer for other psychological disorders. Depression is the most prevalent cause of suicide attempts in older adults (Minayo & Cavalcante, 2015). Suicide is a concern for people of all ages; however, social isolation has been strongly identified as a convincing risk factor for later-life suicide. Suicide attempts (SA) are more common among adolescents and young adults, but older adults mark the highest suicide rate (Conejero et al., 2018). Adults over the age of 75 comprise 12% of the U.S. population but account for 18% of all suicides (American Association of Marriage and Family, 2020). In 2018, males over the age of 85 were most at risk for suicide. Additionally, a systemic review of nursing homes and long-term care facilities reported a correlation between suicides and suicide attempts in residents who were lonely and had fewer social connections.

In 2013, The English Longitudinal Study on Aging (ELSA) measured a cohort of 6,000 participants by verbal fluency and memory recall tasks over four years (Steptoe, 2013). People who reported having few social contacts and engaged in minimal social activities demonstrated an increased, and more rapid, cognitive decline. It is estimated that approximately 40% of dementia cases could be prevented by a variation in social behaviors (Drinkwater et al., 2021).

According to the National Institute of Health, people who are socially isolated experience a 50% greater risk of developing dementia (Novotney, 2019). In addition to other health considerations, social isolation has been associated with an increased risk of developing Alzheimer's disease (AD) which is the most common cause of dementia. Social isolation can be both predator and prey in terms of dementia. It can cause dementia, or dementia can result in isolation. It is estimated that 40% of dementia cases could be prevented by modifications of lifestyle, including increased social interactions, which would be the equivalent of quitting smoking (Drinkwater et al., 2021). From a neurological perspective, social isolation is a strong predictor of dementia and Alzheimer's disease.

Evidence indicates that social isolation can increase paranoia which subsequently encourages further isolation and accelerates a rapid decline in physical health (Cacioppo, 2020). Social isolation has been suggested to enhance psychotic symptoms, including paranoia (Bell et al., 2023).

The population shift in the past 20 years has paralleled the growth in possibilities of staying connected. More people than ever have access to smartphones, computers, and the internet. Being online affords opportunities to connect with friends, loved ones, and healthcare professionals, but it also poses the risks of being susceptible to online fraud.

Fraud

There is a positive correlation between social isolation, older adults, and scam victimization. According to the Federal Trade Commission (FTC), older adults filed the largest number of reports about online fraud and were 45% more likely to report losing money to a friend or family impersonation scam (FTC, 2022). Older adults who were contacted via social media increased to $164 million between 2020 and 2021. The Government Accountability Office

estimates that older adults lose approximately 2.9 billion dollars annually to an assortment of financial scams (Carden, 2021). Recent evidence has revealed that people living alone are more susceptible to being victims of phone and internet scams (Burton et al., 2022). According to the Federal Trade Commission (FTC), older adults who reportedly lose the most amount of money to fraudsters are more likely to be widowed, divorced, and living alone (2021).

Persons who are isolated do not have a social network to discuss their options or even consider the possibilities of illegitimate transactions. They may be experiencing loneliness and be more apt to engage in phone conversations with unfamiliar people. Older adults are often targeted for cybercrime because they tend to be more trusting, have better credit, and assume to have more money in their savings account due to a lifetime of employment. Older adults are more likely than their younger counterparts to answer the phone and give out personal information (Carden, 2021). They live in fear of having their utilities disconnected, being heavily fined for missing jury duty, or having their Social Security income terminated. They willingly give out personal and credit card information due to misplaced trust. Older adults experiencing mental health problems are at an increased risk for cybercrime victimization (National Council on Aging, 2023). The initial stages of dementia or Alzheimer's disease severely impact memory and decision-making skills and can go undetected for long periods by friends or family members. This makes them prime targets because they still have full access to their bank accounts and credit cards.

Humans are a social species. We want to trust and feel valued. It is easy to fall prey when we are alone and most vulnerable. Romance scams are typically more pervasive during times of severe loneliness. Losses reported to the Federal Trade Commission (FTC) from romance scams recently climbed to $139 million, a significant increase from $84 million in 2019. Romance

scams were at an all-time high in the early days of quarantine during COVID-19 and were the most important source of fraud reported to the FTC in both the 60-69 and 70-79 age groups (Knutson, 2021). In addition to financial losses, people are often embarrassed and highly distraught by being taken advantage of and alienating themselves from friends and family.

Many cybercrimes against older adults go unreported as the victims do not know where or how to report the incident. Some older adults are embarrassed or afraid to report being a victim because they fear their children will lose confidence in their decision-making abilities and dramatically alter their living arrangements. Other older adults may not even realize they have become victims of fraud. Older adults in urban areas are more likely to have a computer than their rural counterparts; however, they may also be more aware of and resilient to the dangers of online scams (Berner et al., 2010).

Causes of Social Isolation

Family size and dynamics have changed in the last 50 years (Wethington & Pellemer, 2013). In 1975, the average American family had 2.09 children, compared to 1.9 children in 2020 (Duffin, 2022). Longer lives and smaller families result in more older adults living alone because fewer family members are available to assist with living accommodations (Wethington & Pellemer, 2013). Research has also indicated that education level, income, and ethnicity can be indicators of social isolation (Cudjoe, 2022). Adults in the United States with limited English proficiency are more apt to become socially isolated because they cannot communicate their needs (Jang et al., 2021). People with lower levels of education and income may become socially isolated because they do not have the financial means for transportation or admission fees to engage in social activities (Tapia-Muñoz et al., 2022). Reducing social network size can exacerbate the effects of social isolation (Tapia-Muñoz et al., 2022).

Medical Contributors to Social Isolation

Health issues are a normal part of aging and can contribute to social isolation. According to the World Health Organization, the most common health impediments in older adults include hearing loss, cataracts, back and neck pain, incontinence, diabetes, and dementia (WHO, 2022). Each condition can contribute significantly to obstructing socialization; however, as people age, they are more likely to experience multiple conditions simultaneously, heightening their influence.

Hearing loss is a leading disability among older adults (Freedman & Nicolle, 2020). Research has shown that people with hearing loss feel disconnected and often cease attending social events because they do not feel like they can participate or are embarrassed by their inability to engage in conversations (Heffernon et al., 2022). Audiologists have asserted that social isolation due to hearing loss can lead to depression and social anxiety (Heffernon et al., 2022). Straining to hear a conversation can cause fatigue and exhaustion, which is often cited as a deterrent for further social encounters (Heffernon et al., 2022). While hearing aids have become more socially acceptable, many older adults are still concerned about the stigma or cannot afford the cost. Medicare and insurance policies will not cover the cost of hearing aids (Holm, 2023), and the expense may prohibit older adults living on a fixed income. Hearing loss also makes it difficult for patients to communicate effectively with physicians and mental health care professionals. This can lead to a misdiagnosis, incorrect use of prescription medications, or avoidance of going to the doctor's office (Blumstein & Weinstein, 2016). Just as hearing loss can perpetuate isolation because it severs the ability to interact, losing vision can limit opportunities to interact because it impedes gaining access to others.

Cataracts and weakened vision are a common experience in the aging process. Due to the increasing population of older adults, the number of people with vision impairments or blindness is expected to reach an unprecedented 1.5 billion by 2050 (Bourne et al., 2017). Deterioration of vision can have profound consequences on many different aspects of both physical and mental health. Visual impairments can lead to withdrawal from hobbies and social activities and result in weight gain, diabetes, and depression (Tetteh et al., 2022; CDC, 2022). Vision loss also affects a person's ability to detect hazards and correctly interpret depth perception, which can result in loss of balance and falling. (Singh & Maurya, 2022).

Falls are one of the most common leading causes of unintentional injury and death for older adults in the United States (Park, 2018). More than 1 in 4 people ≥ 65 years of age fall each year (NIH, 2022). Activity limitation due to a fear of falling is common for older adults. The fear of falling frequently results in a reduction of activities, increased frailty, and decreased muscle strength and tone, all of which may inadvertently increase the likelihood of future falls (Enderlin et al., 2015, Wang, 2018). Vision loss also reduces the means to participate in social activities and is frequently the primary reason for no longer being able to drive (Ouyang, 2022; St. Louis et al., 2020).

Many older adults will stop driving due to deteriorating eyesight, an injury, or in response to a medical condition or medication that results in physical or cognitive impairments (St. Louis et al., 2020). With an estimated 85% of persons over 60 holding a valid license, driving is the primary mode of transportation for most adults in the United States (Qin et al., 2020). It is estimated that life expectancy is 7-10 years after the cessation of driving (Qin et al., 2020), which is a substantial amount of time without access to independent mobility. Driving allows you to attend entertainment events, group exercise classes, participate in religious ceremonies,

meet with friends and family, run errands, and travel to medical appointments. The driving reduction or cessation process is a significant life transition and can severely impact one's socializing ability.

The causes and consequences of social isolation are different for every individual. Variables, such as health conditions, may overlap or present at various levels of severity, which can occur gradually or abruptly. Most recently, the COVID-19 pandemic caused an unforeseen and pervasive quarantine of the entire population.

COVID

In March 2020, the World Health Organization (WHO) pronounced the novel coronavirus SARS-CoV2 (COVID-19) a global pandemic (Cucinotta & Vanelli, 2020). The magnitude of the effect on society was unlike anything that we, as a civilization, have encountered in the past 100 years. COVID-19 unceremoniously interrupted the lives of people around the world. The quarantine introduced swift and profound lifestyle changes for the entire population and changed countless aspects of everyday lives, including communication, education, work environment, shopping, and banking. Measures such as diligent handwashing, repeated use of sanitizers, wearing masks in public, social distancing, and mandatory quarantine directives were implemented to lower the spread of the virus. It also paralyzed the ability to socialize.

The intention was to protect everyone, especially the most vulnerable older adults. Eliminating social interactions, participation in exercise groups, and attending religious and spiritual events negatively affected both mental and physical health. The prolonged restrictions and safety measures may have had unintended consequences and ultimately jeopardized the emotional welfare of older adults (Ejiri et al., 2021; Fingerman et al., 2021). The shelter-in-place

quarantine induced by COVID-19 significantly reduced the ability to participate in physical and social activities (Loyola, 2017).

Social distancing had inadvertent negative results because people could not engage in activities, which was particularly devastating for older adults living alone. Even with the introduction of vaccines to reduce the spread and severity of COVID-19, many older adults still feared being exposed and continued to self-isolate. The possibility of contracting the life-threatening virus, enduring the loss of loved ones, and prolonged confinement has been suggested to lead to post-traumatic stress disorder (PTSD) for socially isolated older adults (Abu-Kamel & Alnazly, 2021). COVID-19 also caused a surge in technology adoption by the older adult population.

Older Adults and Technology

From attending worship services, tithing at church, shopping, entertainment, education, and ordering food at a restaurant, computers have infiltrated almost every aspect of our lives. Older adults were once considered reluctant learners of technology; however, many now view computers as a necessity, as opposed to a luxury item, as more tech-savvy than in the past (Mace et al., 2022). Younger generations are quicker to adopt new technology, but as the older adult generation evolves, so does their likelihood of using a computer or smartphone (Wilson et al., 2021). According to the Pew Research Center, 82% of adults ≥ 65 use the internet, and 61% own a smartphone (2020). Companies and marketing agencies are recognizing the older adult demographic as having a substantial place in the consumer market and have branded the age group ≥ 65 as “the silver economy” (Fengler, 2021). This has catapulted technology developers to create devices and software targeted explicitly for older adults and steer them toward a more digitally connected lifestyle. Older adults now maintain a strong presence on Facebook,

YouTube, and apps such as NextDoor and WeChat (Zhang et al., 2021). Social media apps connect people to friends, family, church communities, and special interest groups. This can produce many opportunities to stay connected, but there is a dichotomy between the ability to be socially connected and the encouragement of social isolation.

Technology can enable a person to transform their practices for paying bills, banking, shopping, and socializing. Alternately, the convenience of computers can promote social isolation because leaving home is no longer necessary. A growing body of research suggests that lacking in-person, face-to-face communication encourages social isolation. The more time spent on the internet, the less time there will be socialize with others. The use of technology parallels the availability of internet access, which is often determined by geographic location.

Geography Influences as Potential Contributors to Social Isolation

Geography is an expansive field that encompasses study studying the earth's physical features, human activities, and population distributions. Human interactions of their geographic location. A "built environment" is defined as "settings designed, created, modified, and maintained by human efforts, such as neighborhoods, parks, roadways, and transit systems" (Dannenberg et al., 2012, pg. 12). It influences opportunities to be physically active and to socialize with others.

Regional geography focuses on the interaction of cultural and natural Geo factors in a specific landscape (Paasi, 2020). Every region of the world and within each country has unique natural, cultural, and human elements, and these regional elements affect the way people interact with each other and their communities (Paasi, 2020).

Human geography is an umbrella term for several disciplines, including urban geography, rural geography, population geography, social geography, and political geography (Lee et al.,

2014). It describes how human activity is affected or influenced by the earth's surface. Studies of relationships between communities, cultures, and economies can be helpful in recognizing patterns in social interactions. Human geography and social gerontology have both influenced the field of geographic gerontology.

Geographic gerontology, or the geography of aging, remains an underrepresented dimension of the aging process. This multidisciplinary subject includes the application of geographical perspectives, concepts, and approaches to the study of aging, old age, and older populations (Skinner et al., 2018). The professionals in this field examine and explain how geographical approaches can be used to understand age-related issues (Skinner et al., 2018).

The relationship between older people and where aging occurs is at the core of geographical gerontology. Some studies cite that the meaning of a place or geographical location can be as influential as the amenities and environment (Feng et al., 2019).

The U.S. Census has recently redefined the parameters for identifying rural and urban areas (2020). This is highly significant because it determines eligibility for government funding for transportation, housing, health care, and education. As the population ages, so does the disbursement of the older adult population.

After retiring from the workforce, some people continue to reside in their homes, while others opt to relocate to an area with more moderate weather or more affordable housing. According to the American Association of Retired Persons (AARP), approximately 234,000 retirees moved to a new state in 2022 (Johnson, 2023). Studies have found that people who relocate after retiring often need to pay more attention to account for social network shifts (Kauppi et al., 2021). Social networks are a means of support and provide a means of well-being to older adults.

Geographic location can significantly impact communication. The amenities afforded or restricted due to geographic location may impact an older adult's ability to maintain social relationships.

Ethnographic studies suggest that people living in rural areas are also more likely to know their neighbors but no less likely to feel lonely than their suburban and urban counterparts (Horowitz et al., 2017). This may be attributed to loneliness being a subjective emotional state with little to do with actual social contact.

Sidewalks are an often-overlooked asset to a community. They allow neighbors to mingle and children to walk to school or learn to ride a bike. For older adults who rely on a wheelchair or walker, it is difficult and unsafe to go for a walk for exercise or to visit with neighbors (Finlay & Kobayashi, 2018). Physical activity is associated with numerous positive physical health outcomes, such as lower cognitive impairment, depression, dementia, coronary heart disease, diabetes, and hypertension. Walking and cycling have been shown to reduce the risk of all-cause mortality (Cerin et al., 2017). Neighborhoods not conducive to walking and cycling can increase the likelihood of becoming socially isolated (Cerin et al., 2017).

Understanding the type of living area is vital for community agencies, as well as the federal and local government because it assists with evaluations for the distribution of funding for resources such as community centers, schools, postal services, and the establishment of police and fire departments. Epidemiologists have studied the effects of neighborhoods on physical health, and studies suggest that the health of older adults may be influenced by their neighborhoods (Baranyi et al., 2021). The three main types of geographic living areas in the United States, rural, suburban, and urban, are delineated by population size per square mile.

Rural

The U.S. Census has a broad definition of “rural,” which consists of “all territory, population, and housing units located outside of urban areas” (2022). It is estimated that between 14 and 19% of the U.S. population lives in an area designated by the U.S. Census as rural (Coughlin et al., 2019). Rural areas are the least dense and most affordable because they do not have the complications associated with land scarcity.

Research has stated that while the air quality is often better in rural areas, residents have elevated rates of cancer, diabetes, and cardiovascular disease (Centers for Disease Control and Prevention, 2017; Coughlin, 2019). Rural areas typically demonstrate a higher older adult population and are poorer than their urban counterparts (Holt-Lunstad, 2017). Compared to suburban and metropolitan locations, people in rural areas are less likely to have accessible health care and more likely to live in poverty (Lewis, 2022). It is also documented that rural residents are less likely to have health insurance and, therefore, more reluctant to seek medical attention (Lewis, 2022). Many residents live more than an hour from the nearest hospital, so emergency treatment is complex.

Rural areas have historically trailed behind suburban and urban areas regarding technology ownership, usage, and access to the Internet but have made tremendous gains in the past few years. According to Pew Research, 72% of rural Americans have broadband internet access. However, they are still less likely than their suburban and urban counterparts to own a smartphone, tablet, or traditional computer (Vogels, 2021). This can contribute to social isolation because of the communication options afforded by technology.

According to the Federal Communications Commission, 22.3% of Americans living in rural areas lack internet coverage (2020), which severely impedes access to connect to friends

and family online and fosters social isolation. Many healthcare providers now accept insurance for physical and mental telehealth services. People in rural areas without access to the internet are at a severe disadvantage. Access to mental health services via telehealth could be particularly advantageous to people in rural areas with limited means of transportation or services in their area. It has also been recognized that social isolation and economic challenges have made people living in rural areas especially vulnerable to deaths of despair, including those from overdose, alcoholism, and suicide. Death by suicide increased by almost 50% in rural areas between 2000 and 2018 (Lewis, 2022).

Suburban

Suburban areas primarily comprise residential dwelling units within a 10-mile radius of the urban regions. Many states categorize suburban areas as having between 1,800 and 2,000 persons per square mile (Law Insider, 2023). Recent studies have indicated a shift in the demographic makeup of suburban populations. Unlike rural areas, the overall populace in suburban areas is declining; however, there has been a 39% increase in the representation of older adults. According to the Pew Research Center, suburban areas house 5.2 million people ≥ 65 (Fry, 2020). In urban areas, 14% of the residents were≥ 65 in 2020, which is an increase of 11% from 2000 (Fry, 2020; Parker, 2018). According to the Pew Research Center (2022), American suburbs have seen the most significant increase in poverty compared to other geographic locations. The rise of the older adult population parallels the increase in poverty, which may affect social isolation because of a lack of access to the internet and health care.

Urban

According to the U.S. Census, an area must encompass at least 2,000 housing units or have a population of at least 5,000 people per square mile to be designated as urban. Urban areas

represent densely developed territory and encompass residential, commercial, and other non-residential land uses (U.S. Census, 2022). Despite living near neighbors and family, older adults in urban areas are still at risk for social isolation.

Due to the higher population concentration in urban areas, there are also more cars on the road and industrial buildings that produce harmful toxins. This can be a significant impediment for with older adults with asthma or those that rely on oxygen support. Some residential buildings do not require elevators and are only accessible by stairs (Americans with Disabilities Act, 2020). This law applies largely to the effect of older, rent-controlled buildings with a large population of older adults on a limited income.

Studies also report that older adults who do not speak English are at a greater risk for social isolation. Immigration in the United States is on the rise. Many immigrants opt to live in large urban areas because of the accessibility to community resources, public transportation, and employment opportunities. It is estimated that 90% of the immigrants in the United States live in urban areas (Brandt, 2018).

Urban crime rates have dramatically increased in the past several years. According to the National Crime Victimization Survey published by the Bureau of Justice Statistics (BJS), between the years 2018 and 2020, violent crime was between 29 and 42% higher compared to rural areas (NCVS, 2021).

Regardless of the living area, the desire to be connected to family, friends, and neighbors is commonality. Many aspects of geography reach beyond the physical topology of the earth. Land use, resources, industry, and populations are all aspects of a geographic location.

When considering geographic location, it is relevant to be mindful that loneliness and social isolation are distinctive conditions (Lynch et al., 2021; Marquex et al., 2022). There is a

complex relationship between loneliness and social isolation, and it is critical to differentiate between the paradigms. Loneliness is a perceived experience of being alone. A person can feel lonely despite being surrounded by family and friends. Conversely, social isolation is quantifiable and does not always produce adverse outcomes. A person can be socially isolated and not feel lonely or sad because they enjoy the solitude and are "comfortable in their own company." The common denominators between the two conditions are that they both involve perceptions, and there is a scale of intensity attached to each situation. Research on social isolation and the relationship between social isolation and geographic location remains inconclusive, but the concept of aging and isolation has existed for a long time.

Biblical Foundations of the Study

Aging is a gift that is not bestowed on everyone. Most people want to live a long life but do not want to get old. As a culture, many people go to extreme lengths and great expense to avoid physical evidence of aging and readily accept negative stereotypes of older adults. The Bible has a great deal to say about aging and older adults. It portrays a person's life as a pilgrimage (*New International Version*, 1973/2011, Genesis 47:9) and teaches us that all life is valued and sacred. The Bible tells us to respect our elders and to be proud of the status that comes with aging. "Gray hair is a crown of splendor; it is attained in the way of righteousness" (*New International Version*, 1973/2011, Proverbs 16:31).

From the underpinnings of the story of the Tower of Babel, we can see that God recognized the significance of interacting and communicating with others (*New International Version*, 1973/2011, Genesis, 11:1-9). A lack of relationships can be detrimental to a person's spirit and fracture a community.

Being with others is good for our soul and physical and emotional well-being. It allows us to confide and seek the advice and opinions of other people so we can make sound judgments and gain new perspectives. The Bible says, “For lack of guidance a nation falls, for victory is won through many advisors” (*New International Version*, 1973/2011, Proverbs 11:14). There are many indications that God did not want us to be alone. In the very first book of the Bible, God created a helper for Adam so he would not have to experience isolation or loneliness. (*King James Bible*, 1769/2017, Genesis 2:7).

There are profound feelings of loneliness and isolation frequently evidenced throughout the Bible. When David cried out, “Look and see, there is no one at my right hand; no one is concerned for me. I have no refuge; no one care for my life” (*New International Version*, 2973/2011, Psalm 142:4), it is a desperate plea for help. He felt very alone and isolated from everyone. Older adults who are alone may be crying out for help, but there is no one to hear them and respond to their plea.

Social isolation can have devastating consequences because there is no one to assist when needed. “If either of them falls, one can help the other up. But pity anyone who falls and has no one to help them up” (*New International Version*, 1973/2011, Ecclesiastes 4:10). A person living away from others may fall literally, or figuratively. A physical fall can have serious medical consequences, and a figurative fall can lead a person on a path away from Christ. If there is no one to help them get up, they may soon stray too far from the course.

Summary

Geographic locations are far more than coordinates on a map. The place where a person lives can enhance their identity by providing social circles and offering places to shop, worship, and engage in community activities. There has been a great deal of research and tremendous

strides in understanding the effects of social isolation on older adults. An abundance of evidence supports that there are adverse outcomes associated with social isolation. However, very few studies have investigated the relationship that older adults have with social isolation per their geographic living area. Geographic considerations continue to need more research and literature. Social isolation studies in geographic settings ensure that resources are appropriately distributed and effective interventions can be established to meet the community's needs.

Prioritizing social connections for older adults requires an understanding of the population and their relationship with their geographic living area. Funding for community resources for internet, transportation, healthcare, community centers, and education are determined by the needs of the people who live in each geographic area. The strength of a community resides in the strength of the residents. National, state, local, and tribal governments play an essential role in enhancing the ability to stay socially connected. By prioritizing research funding, they can embed social connections into policies, practices, and programs and create a “culture of connection” for the residents.

Research has increasingly provided evidence that social isolation can have devastating consequences for older adults. Identifying the relationship that older adults have with social isolation in relation to their geographic location can provide evidence to divert funding and resources to best align with the population's needs.

CHAPTER 3: RESEARCH METHOD

Overview

This qualitative phenomenological study aimed to examine the lived experience of social isolation in older adults with respect to their geographic living areas defined among rural, suburban, and urban locations. To maximize effectiveness, the design of this study employed phenomenological qualitative research, which provided a platform for the participants to describe their lived experience with social isolation and their relationship with their geographic living area.

Research Questions

RQ1: How do older adults living in rural areas describe their lived experience with social isolation?

RQ 2: How do older adults living in suburban areas describe their lived experience with social isolation?

RQ 3: How do older adults living in urban areas describe their lived experience with social isolation?

RQ 4: How do the lived experiences of social isolation differ in older adults living in rural, suburban, and urban areas?

RQ 5: How are the lived experiences of social isolation similar in older adults living in rural, suburban, and urban areas?

Research Design

Phenomenological research is a qualitative method that concentrates on experience and seeks to understand, not explain, the meaning of a lived experience (Creswell & Poth, 2018; Wilson, 2015). This design method required exploring the views of those who have experienced

the identified condition or situation (Larsen & Adu, 2022). Phenomenology aims to understand the human condition and explain "the nature of things" through how people experience them. It acknowledges the values, beliefs, attitudes, and perceptions of participants. (vanMaren, 1997). Employing this approach to explore the experiences of socially isolated older adults, concerning geographic living areas, recognizes the human experience and facilitates identification of commonalities and distinctions. According to Creswell and Poth (p. 75), the focus of a phenomenological study is to describe the "common meaning" (2018).

Phenomenological research obliges the researcher to describe the situation objectively before reflecting and harvesting themes and patterns. Questionnaires and surveys were used before the semi-structured interview was conducted. Codes were developed to generate units of meaning. Categories and themes include loneliness, happiness, regret, and physical health. The information was entered into an Excel datasheet for dissemination with PivotTables, and Power BI was used to determine the relationship between the variables. Keywords were identified and used to create a word cloud color-coded by theme to visually represent the feedback.

Participants

The study participants were people ≥ 65 years old who are currently living in the United States and can read and understand English. To avoid translation errors, participants were required to answer the survey questions on their own accord, without the assistance of a translator. Qualified contributors may be from diverse dwelling structures, including apartments, townhouses, or single-family homes; however, they must reside alone. Data from incarcerated participants and those living in a mental health or assisted living facility were not eligible. The names of the participants were removed, and they were identified strictly as numbers for the input of the data.

Saturation is a primary guiding principle for assessing the sufficiency of samples in qualitative research (Morse, 1995, 2015; Sandelowski, 1995). Glaser and Strauss (1967) developed the concept of saturation as “theoretical saturation” and was part of their significant grounded theory approach to qualitative research. The target sample size was between 9 and 12 people per geographic area (rural, suburban, and urban) to reach saturation. Participants were able to request a copy of the completed survey and results. There was no type of compensation for participation.

Study Procedure

Gathering data from isolated older adults can be challenging; however, because of the growing number of older adults in the population, referrals and snowball sampling were employed, and a sufficient number of participants were recruited.

The study procedure encompassed a 4-part progression. The recruitment process began after the study was evaluated and approved by the institutional review board (IRB) board at Liberty University. Using referrals, participants were contacted and sent a link to a survey using SurveyMonkey to collect demographic information and complete the Lubben Social Network index of 6 questions. After submission, participants were contacted to set up a semi-structured, recorded phone interview. The participants were reminded that the conversation was being recorded and that their information would not be publicized. Two questions were asked during the interview. The first, “How would you describe your living situation?” and “Please describe your geographic location.” Prompts for elaboration followed this. After the completion of the interview, the audio files were uploaded to a computer, and Microsoft Word will be used for a text transcription for data analysis.

After reading and reviewing each interview, key themes and frequently were identified. The data was input into Excel with the number of times a keyword appears and the theme in which it aligns. Charts and graphs were created in Excel to display each theme by geographic location. The final data is presented with relevant charts and a word cloud with geographic area represented by color.

Instrumentation and Measurement

It is important to obtain comprehensive background information when studying the lived experience of social isolation in older adults, regardless of geographic location. This study incorporates multiple measures to collect data relevant to understanding the lived experience.

Appendix A: Demographic Survey

The first measurement was an objective self-report survey to collect relevant demographic information. The participants were intended to fill out the survey without any outside influence or assistance and submit it before the semi-structured phone interview. This establishes an awareness of demographic variables and will be documented for descriptive purposes.

Appendix B: Lubben Social Network Scale (LSNS-6)

The Lubben Social Network Scale is an instrument intended to measure social isolation in older adults by gauging perceived social support from family and friends. It was initially developed in 1988 and revised in 2002 (Lubben et al., 2006.) The revised version consists of 6 equally weighted questions measuring the respondent's social network's size, closeness, and frequency. Each of the six questions has an equally weighted score ranging from 0 – 5. The total sum ranges from 0- 30. Persons with a score of ≤12 are considered to be socially isolated. Permission to use the scale for research is freely granted (Boston College, 2015; Lubben et al.,

2006). The survey typically took 5-10 minutes to complete. Participants were required to complete the survey before the semi-structured interview to reduce the chances of interfering with responses.

Appendix C: Semi-Structured Interview Questions.

Once the responses to the survey were collected, a semi-structured interview was conducted. The interviews began with two broad questions. The first, "Can you please tell me about your living situation?" The second prompt was "Please describe your geographic living area? The word "social isolation" was intentionally avoided by the researcher throughout the conversation as it may have a negative connotation and been considered leading.

Data Analysis

Thematic analysis was utilized to interpret the data. Thematic analysis is an analysis method that requires a systematic approach. It entails reading a dataset to derive themes and finding meaning within the information (Creswell & Poth, 2018; Tierney et al., 2023).

The recordings were uploaded to a computer and converted into text. The text was reviewed against the recordings for accuracy, and any errors were corrected in Microsoft Word. An Excel spreadsheet was created with columns representing three geographic locations (rural, suburban, and urban). The frequency of common words will be identified and categorized into themes.

Delimitations, Assumptions, and Limitations

This study was restricted to only adults who are ≥ 65 years of age and live by themselves in the United States. All participants must be able to read and write in English to agree to the written consent and fully respond to the verbal and written questions.

The study assumed that all participants acted of their own accord and that their responses were truthful. It was also assumed that they possess the appropriate mental faculties and recall ability to understand and properly respond to the questions.

A methodological weakness is the time of year the study is conducted. Many older adults do not drive when it gets dark or in unfavorable weather conditions. Also, seasonal depression can be a factor in social isolation. The results may not be replicated if the study is conducted at a different time of the year.

Summary

This chapter summarizes the methods used for this study and includes a justification for the research method. For this research, a phenomenological study design was most appropriate. The potential sensitivity of the topic of social isolation and the objective of more fully understanding the participants' lived experiences warranted speaking with contributors individually and providing a safe venue to convey their experiences.

It was necessary to understand the lived experience of a phenomenon from the perspective of individuals so the information analysis can be more perceptive. The questions guiding the research are clearly identified and will be used to recognize themes in the final data evaluation. The research methods are adapted from *Qualitative Inquiry & Research Design* (Creswell and Poth 2018). This chapter clearly outlines the intended measures for recruiting participants, study procedures, and final data analysis.

CHAPTER 4: RESULTS

Overview

The purpose of this qualitative phenomenological study was to examine the lived experience of social isolation through the lens of geographic location. A follow-up semi-structured phone interview was conducted after completing a survey to collect demographic information and completing the Lubben Social Network Survey (LSNS-6) online. Participants were asked to describe their living situation and geographic area. This chapter will present an analysis of the data collected to answer the five research questions.

Research Questions

RQ1: How do older adults living in rural areas describe their lived experience with social isolation?

RQ 2: How do older adults living in suburban areas describe their lived experience with social isolation?

RQ 3: How do older adults living in urban areas describe their lived experience with social isolation?

RQ 4: How does the lived experiences of social isolation differ in older adults living in rural, suburban, and urban areas?

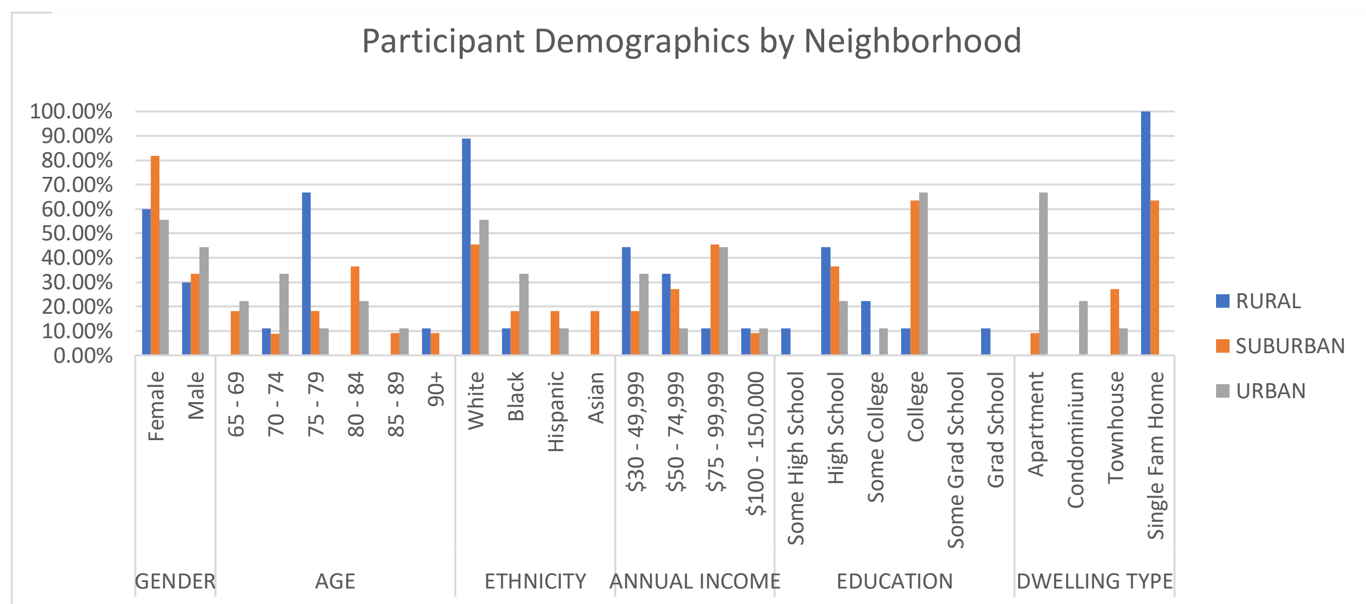
RQ 5: How are the lived experiences of social isolation similar in older adults living in rural, suburban, and urban areas?

Descriptive Results

All participants met the eligibility requirement of being ≥ 65 and had been living alone in the United States for a minimum of the past six months. The sample size of 29 participants was determined to be sufficient based on saturation. Saturation was achieved once no new insights

were revealed. Rural and urban areas were each represented by 9 participants, and 11 contributors were from suburban areas. Females comprised 68.9% of the participants (n=20), and males held the remaining 31.1% (n=9). The age bracket of 75 – 79 was the most heavily represented at 31%. The age brackets of 85 – 89 and 90+ had the fewest participants, with a total of 2 each. Eighteen participants were White, 6 Black, 3 Hispanic, and 2 Asian. Ten participants have an annual income of $75,-000 – and $99,999. None of the participants had an annual income of below $29,999 or above $150,000. None of the participants chose not to answer any of the questions.

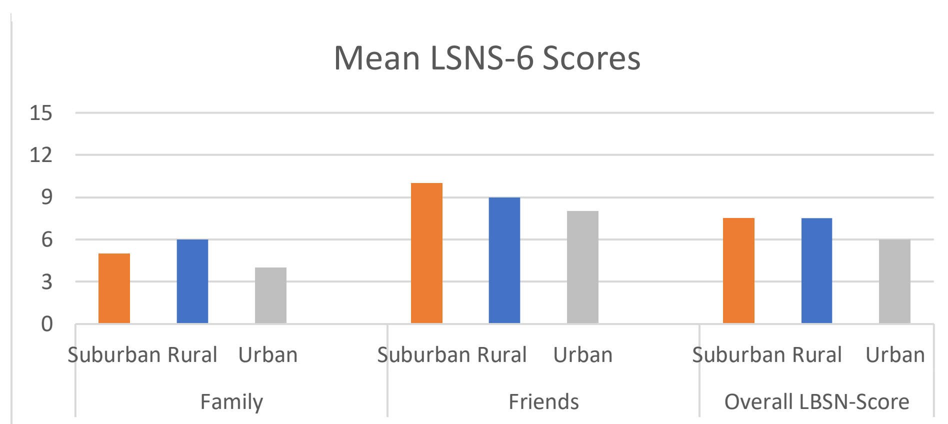
Figure 1
Participant Demographics by Neighborhood



Social engagement was measured using the Lubben Social Network Scale (LSNS-6), administered online and a requirement for participation. The average amount of time it took to complete this portion of the survey was < 2 minutes. The survey consisted of three questions regarding interactions with family and three about interactions with friends. The highest possible

score for each category was 15, with a total possible cumulative score of 30. The highest possible LSNS-6 score is 30, which indicates a high number of social interactions and support. The overall scores were converted to a 15-point scale to be more accurately represented on the chart.

Figure 2
Lubben Social Network Mean Scores



Study Findings

This section will describe the codes and themes revealed during data analysis. It will also present and interpret the data to respond to the 5 research questions. All interviews were voice recorded and converted to text for evaluation. Each interview was reviewed multiple times for accuracy. Numeric codes were established to identify keywords and phrases.

Table 1
Summary of Codes and Themes

Theme 1: Impact of Neighborhood Changes on Social Well-Being
- Code 1: Increased traffic
- Code 2: Increase in nonviolent crime
- Code 3: Increase in violent crime
- Code 4: Stores have closed

Theme 2: Feeling at Home
- Code 5: Church Community
- Code 6: Comfortable in Area
- Code 7: Positive Experience with Community

Theme 3: Accessibility to Resources
- Code 8: Medical Facilities and Providers
- Code 9: Grocery Stores
- Code 10: Church

Theme 4: Decline in Social Interactions
- Code 11: Fewer Friends
- Code 12: COVID
- Code 13: Lack of Transportation

Theme 5: Greater Amount of Interaction with Friends than Family
- Code 14: Children Moved Away
- Code 15: Difficult to Travel to See Family
- Code 16: Friends are Closer in Proximity

Theme 6: Access to Technology as an Obstacle for Connecting with Others
- Code 17: Computers are Important for Well-Being
- Code 18: Lack of Internet
- Code 19: Difficult to Access Internet

Theme 7: Negative Attitude Toward Geographic Location
- Code 20: Regret of choices
- Code 21: Inconvenience
- Code 22: Value of Relationship with Community

Theme 8: Positive Attitude Toward Geographic Location
- Code 23: Appreciation of the Natural Beauty of Location
- Code 24: Expressions of Gratefulness for Conveniences

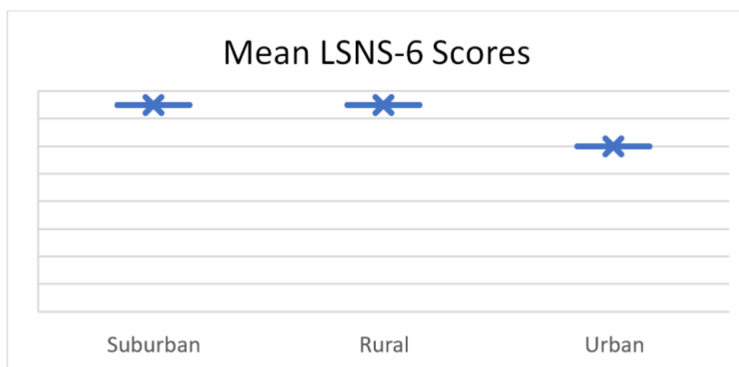
Theme 9: Resilience
- Code 25: Expressions of Contentment
- Code 26: Expressions of Happiness
- Code 27: Expressions of Gratitude

Theme 10: Autonomy
- Code 28: Enjoy Independence
- Code 29: Pride in Self-reliance

After the codes were identified by reviewing the transcripts, the LSNS-6 scores were input into Excel and categorized by neighborhood for comparison. The highest possible total was 15 for friendships and family, with the highest possible score being 30 overall. Higher scores indicate more significant numbers of social relationships and support. The data collected were used to respond to the research questions.

Figure 3

Mean LSNS-6 Scores by Neighborhood



Research Question 1: How do older adults living in rural areas describe their lived experience with social isolation?"

In answering RQ1, four themes emerged to describe the experience of social isolation among older adults living in rural areas. The themes were 1) a positive description of their geographic area, 2) Feeling at home, 3) More interactions with friends than family, and 4) Technology could improve connections with others.

The first theme of having a positive description of the geographic living area was cited by more than half of the participants. Some of the keywords were "beautiful," "peaceful", and "serene." Participants expressed an appreciation of nature and being able to "breathe my own air" when describing their geographic location. Participant R-P3 stated, "It's my peaceful place in a crazy world," R-P5 cited, "The sunrise gives me something to look forward to each day."

Participant R-P2 stated, “It’s just something about the air out here—like there is enough for everyone. The quiet clears your mind.”

The interview results also reinforced the second theme of feeling at home supported. All participants felt connected to their community and had a sense of pride and ownership regarding their community. Seven of the nine participants specifically used the words “home,” “content,” or “happy” to describe their living situation, and three specifically cited that they would not want to leave the area. Participant R-P9 had the lowest total LSNS-6 score, stating, “I’ve lived here my whole life and can’t imagine anyplace else is better.” R-P2 said, “The neighbors might not live close by, but you know who they are.”

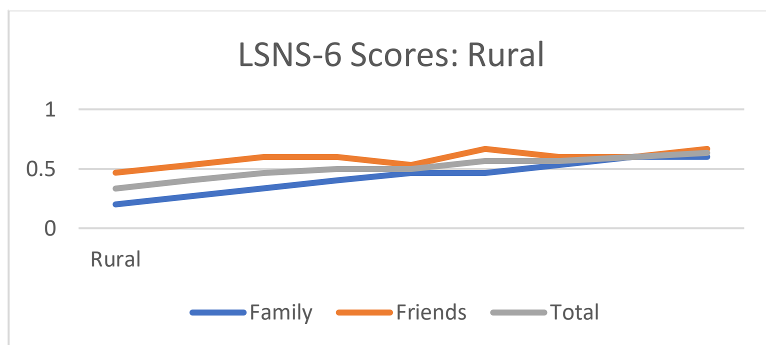
The third theme was that rural area participants had more social assistance from friends than families. All participants from rural areas indicated having more social support from friends than family members. The LSNS-6 scores indicate a 10% difference between the amount of interactions with friends and family. Several participants noted that their siblings had passed away or moved out of the area, so they relied more on their friends due to their proximity. One member stated having more interactions with friends because they “just had more in common.” Participant R-P6 said, “My sister lives just down the road, but she is busy taking care of her husband, and her daughter moved back home. They don’t have time for me. I spend more time with my friends who are also widowed. They are the ones I call when I need a ride.” Adult children leaving the area was also a factor in having less interaction with family members. Participant R-P5 stated, “You know how it is; kids move away and don’t have time to come back home. They have their own life now, and I don’t want to be a burden.”

The fourth theme presented from rural areas was the need for more access to technology. All the participants stated owning a computer, tablet, or iPhone, and each had an e-mail account.

R-P7 noted, "[Computers] used to be a luxury item, but now I don't know anybody without one." Four participants said they did not use their devices frequently because the internet was unreliable or not affordable. R-P3 stated, "My granddaughter gave me an iPad the Christmas before last, but I don't have good internet, so I don't use it. I know it upsets her." Participant R-P9 stated, "I have a Facebook account with an email, but have to go to the McDonalds to get internet. It is hard in bad weather." R-P2 observed, "On some days, I've got nothing but time, but the Internet doesn't seem to have time for me."

People living in rural areas had the highest average LSNS-6 scores for interacting with friends. They were the only group not to mention any safety, crime, or violence concerns when describing their location. None of the participants from the rural group expressed any regret for living in their geographic area.

Figure 4
LSNS-6 Scores: Rural



Research Question 2: How do older adults living in suburban areas describe their lived experience with social isolation?"

In answering RQ2, three themes emerged to describe the experience of social isolation in older adults living in suburban areas. The themes were: 1. Neighborhood changes, 2. Feeling at home, and 3. Autonomy.

When asked to describe their living situation, participants from suburban areas were most likely to cite neighborhood changes. Most participants implied that they felt disconnected from their neighborhood and that it no longer felt like home. Keywords included “friends moving away,” “traffic,” and “stores closing down.”

One participant shared that they no longer felt an attachment to the neighborhood because so many friends moved away, and she found it challenging to meet new families. “A lot of my friends have moved out of the neighborhood, and some have passed away. The young families moving in just ignore me. They seem disappointed that there aren’t kids here, but this used to be the house where all the kids used to play” (S-P7). Another suburban participant noted, “When you don’t have kids in school, you just don’t get involved with the neighborhood. We [mothers] used to stand at the bus stop every morning and chat long after the bus left. I still like to watch the kids out there, but I don’t know any of them.”

Stores and restaurants going out of business were also contributing elements to changes in the neighborhood. S-P1 said, “It’s hard to even recognize the neighborhood. It feels empty with some of the stores and restaurants closed.”

Increased traffic emerged as a contributing factor to changes in the neighborhood, as did a hesitation to drive. Participant S-P2 stated, “There is so much more traffic now than there used to be, so I don’t like to drive unless I have to. I get things delivered whenever I can.”

Crime was also recognized as a factor of neighborhood change. Three participants stated they felt the neighborhood was going downhill because of stolen packages. “It wasn’t long ago that I’d never even heard of porch pirates, but I had two packages taken from my steps at Christmas.” That didn’t happen here before---not in *this* neighborhood.” Two participants stated

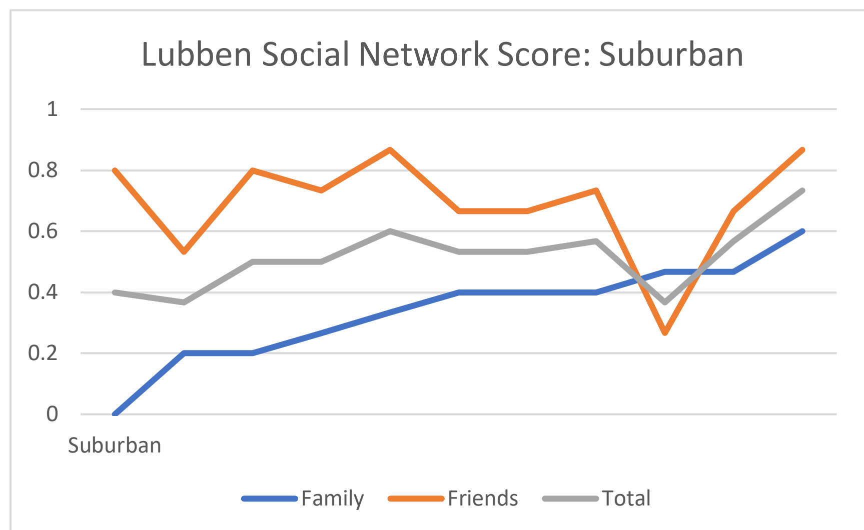
that they were now more aware of car break-ins. “Nobody really gets hurt, but it feels wrong when you don’t know what is happening in your driveway at night. It makes it hard to sleep.”

Suburban residents were most likely to cite having connections to their church as a positive factor when describing their geographic location. Participant S-P5 stated, “I’ve been going to the same church for more than 30 years. Both of my daughters were married there.” Three participants mentioned that they valued having access to a preferred medical provider. “I need to go to dialysis, and the treatment center is close by. They have all of my records” (S-P5). Participant S-P1 stated, “I’ve been going to the same doctor for years. He knows me. If he ever retires, I might move closer to my kids.”

The third theme that occurred among the participants in the suburban area was autonomy. This group was most likely to express a sense of pride and accomplishment for being self-sufficient. Key words included “independence” and “freedom” when used to describe their living situation. Three participants revealed they enjoyed their independence and were happy with their living situation. Participant S-P9 cited, “I worked since I was 13 or 14. My husband was… difficult. He wasn’t an easy man to love sometimes. I raised the kids and then helped with the grandkids, and then I took care of my own mother for a few years before she passed. It is nice to have time for myself finally. I don’t have to answer to anybody.” Participant S-P5, “I’ve gotten comfortable being on my own. Truthfully, I prefer it. I like to read and do my crosswords. Sometimes I eat waffles for dinner. Nobody judges you when you are alone.”

According to the LSNS-6 scores, participants from suburban areas had the highest interactions with friends and the most significant gap between support from family and friends. They were 50% more likely to interact with friends than with family and were the only group to cite non-violent crimes, such as theft and car break-ins, when describing their area.

Figure 7
Lubben Social Network Score: Suburban



Research Question 3: How do older adults living in urban areas describe their lived experience with social isolation?"

In answering RQ3, three themes appeared to describe the experience of social isolation in older adults living in urban areas. The themes were: 1. safety and crime 2. accessibility to resources 3. negative attitude toward their living situation.

The urban area participants were the only group to mention safety and crime as primary elements when describing their location. One participant, U-P5, stated, "Back in the day, I loved the city—never did learn to drive. Now, I'm afraid to take the bus or metro, and taxis have gotten expensive." Several people stated that many of their neighbors had moved away because of jobs or crime in the area, and the only ones left were the ones without a choice.

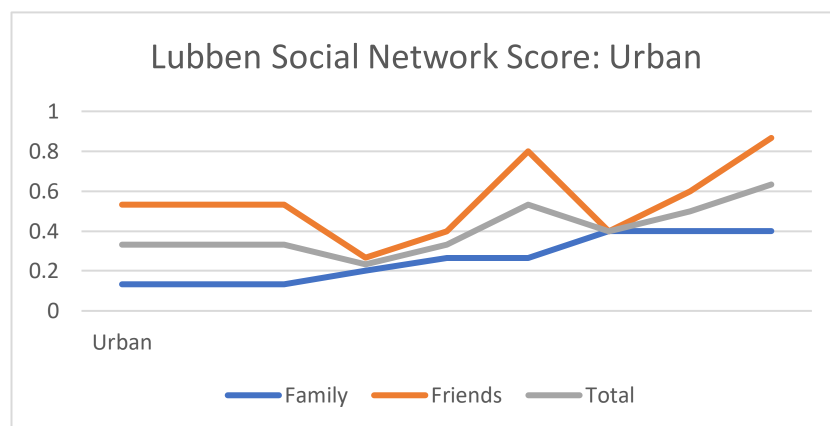
Participants from urban areas were most likely to cite the conveniences of their geographic location. Participant U-P1 said, "I don't drive anymore, but I can walk to the library and the park. Meals on Wheels is delivered to my door. I don't see my friends like I used to but I have what I need anyway." Three participants stated that computers and technology allowed

them to live alone. “My grandson gave me his computer --there is nothing wrong with it; he just got a new one from the school. I get free internet and pay my bills online now. Now that’s something.”

Participants from urban areas were most likely to convey a negative attitude and express regret about their living situation. Two participants mentioned that they would like to move out of the city but could either not afford to leave or would not know where to go. Participant U-P2 stated, “I’ve got some savings but no family to move closer to, so I just stay here. I do wish I had a friend or two, though.” Participant U-P4 acknowledged, “If I could do it again, I would have moved out back when I retired. I’ve never done well with change, and now it’s too late.” Another urban participant (U-P4) stated that she regretted staying in the city after she retired. “…now I am just too old to move, and the neighborhood is in shambles. I used to be proud of where I lived.”

The LSNS-6 scores were the lowest overall for urban areas and most compact between friends and family. The participants from the urban population had the lowest amount of contact with family compared to participants from other geographic locations.

Figure 9
Lubben Social Network Score: Urban



Research Question 4: How do the lived experiences of social isolation differ in older adults living in rural, suburban, and urban areas?

In answering RQ4, three themes emerged to describe how the lived experience of social isolation in older adults differed between those living in rural, suburban, and urban areas. The themes were, 1. Attitude toward geographic location 2. Connection to neighborhood 3. Access to technology. While the overall LSNS-6 scores were very similar between the three geographic areas, the lived experiences were notably different.

Attitudes toward living situations had a significant variance between neighborhoods. None of the participants from rural areas cited any regret or remorse about their area or living situation and were most likely to use words such as “comfortable” and “familiar.” R-S2 stated, “For better or worse, it’s my home.” People in urban areas were most likely to express regret when referring to their living situation. “If I could do it again, I would have moved when I was younger. I can’t even remember why I stayed.”

Rural area participants were the only group, not to mention any crime. People from suburban areas conveyed observations of non-violent crimes, and violent crime was only mentioned by participants from urban areas. Participant U-P3 said, “Sometimes I only leave my apartment to collect my mail downstairs. I don’t leave my building much anymore. I live in a good area, but sometimes it doesn’t feel safe.”

The feeling of connectedness to the neighborhood also varied between the geographic locations. People from rural areas had the most robust attachment to their neighborhoods. Three rural area participants cited that they had been in the same house for over 30 years and that they “could not imagine anyplace different.” One person stated, “I’ve never even considered leaving. I told my kids they would have to carry me out.” Suburban participants cited a deterioration of

their attachment to their neighborhood. S-P4 said, “Sometimes I don’t even recognize my own neighborhood. Everything changed so suddenly, or it seemed sudden anyway.” Suburban area participants were more likely to stay in their current homes because of church or convenient medical facilities. People in urban areas most often cited neighborhood conveniences as a positive aspect but did not convey any emotional attachment to their living area.

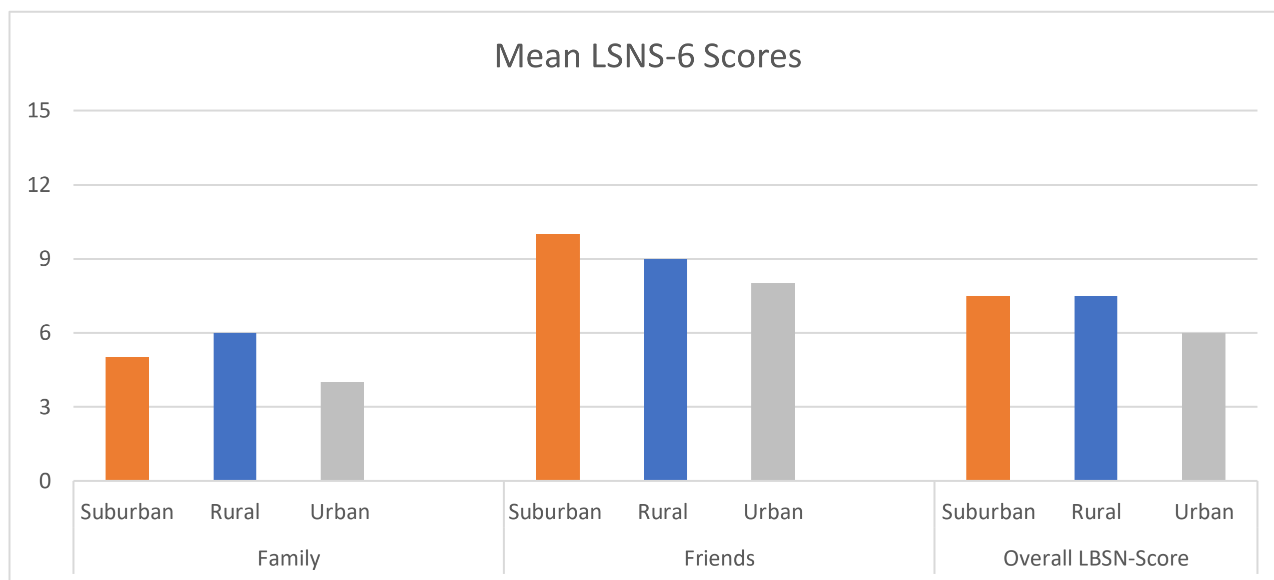
The third theme identified as a difference between the geographic areas was technology. All the participants in the study owned a computer, tablet, or smartphone, but there was significant variance in attitude and usage.

The rural areas were divided amongst themselves. Some people in rural areas expressed a desire for better internet access, while others seemed satisfied to live with limited access. One participant stated, “My sister in Germany gets on the computer every day. I can’t do that because my computer [internet] is slow.” Another person from a rural area said, “I don’t mind [not having internet]; I’d rather be in my garden.”

Participants from urban areas cited that they spend much time on the computer. “During COVID, the church gave some of us computers so we could watch the weekly services and play games to keep ourselves entertained. Now I use WeChat on my phone to talk to my friends.” People from urban areas often viewed computers as necessary for banking and shopping, as opposed to suburban area residents, who more often indicated that they used computers to socialize and stay connected by using Facebook and watching YouTube videos. S - P4 stated, “I don’t know what happens to time when I am on Facebook. I have almost 80 friends now and the hours go by looking at all the pictures and reading up on what everyone is doing.” Another suburban participant cited, “I spend a lot of time on YouTube because I get tired of TV. The new shows aren’t out yet.”

The overall LSNS-6 score between suburban and rural areas was identical (7.5). However, there was a distinction between the interactions with friends and family. Participants from rural areas had higher interactions with family members, whereas participants from suburban areas scored higher on their interactions and support from friends.

Figure 11
Mean LSNS-6 Score by Subcategory



Research Question 5: How are the lived experiences of social isolation similar in older adults living in rural, suburban, and urban areas?"

In answering RQ5, 2 themes emerged to describe how the lived experience of social isolation in older adults was similar between those living in rural, suburban, and urban areas. The themes were 1. decline in social interactions and 3. resilience. The overall LSNS-6 scores were remarkably similar across all three geographic locations, and there was a strong correlation between the themes that transpired as being similar.

More than half of all participants explicitly noted that they experienced an unwanted decline in social interactions as they aged. Three participants cited health issues as having a

significant impact on their living situation. Rural area participant R-P6 stated, "After I had my [hip] surgery, I don't go out much--even without my friends who can drive. It hurts to sit for very long so I can't go to the movies anymore. Urban area residents were most likely to mention a decline in social interaction. They stated that because of the convenience of meal delivery and online shopping, there was no need to go out. U-P4 stated, "The library delivers books for free and picks them up, too." Participant U-P6 stated, "I even do my doctors' visits online when I can." A participant from a suburban area said, "I just don't get invited anywhere. My wife was a social butterfly. Now it's just me. Nobody wants just me."

Finally, there was a shared attitude of resilience among the participants from each location. A participant from a rural area (R-P3) with an average LSNS-6 score said, "Life ain't perfect, you know, but we're blessed to be here." Another participant from a suburban area shared, "My kids threw me a birthday party on Zoom when I turned 80. It was so good to visit with everyone—even my friends and family [from England] turned up. Seeing the faces all smiling and laughing WITHOUT masks was something I didn't think I'd see again. I didn't even miss the cake or presents. Well…maybe the cake [laughs]." An urban area participant (U-P9) stated, "I'm lucky. Nobody in my family lived over the age of 66. I've got one good friend, my health isn't too good, but I still have my mind. For me, that is enough."

COVID-19 was an overarching subject between a decline in social interactions and resilience. Six of the participants mentioned that COVID-19 hurt their social well-being. Participant U-P2 said "I lost a sister, a very dear friend, and a neighbor from this [apartment] building. I don't feel safe going out and still wear my mask." S-P3 noted, "I stopped going to church when they closed. The service is still online, but it's not the same. I volunteered in the kitchen, but that stopped, too. Now I just don't know nobody. I want to go back, but they are

strangers now. They don't remember me." Participant R-P6 stated, "I don't go out like I used to. They don't have a real cure [for COVID], you know? It's still out there, and us old folks are more likely to die." Participant S-P4 had the highest overall LSNS-6 score and stated, "Online, people were calling the coronavirus the 'Boomer Remover.' Well, I'm a Baby Boomer, and I'm still here [chuckles]."

Summary

The data collected and analyzed for this phenomenological study provided insights into the lived experience of social isolation of older adults per geographic location. The demographic information enabled charts to be created to understand the differences more easily between neighborhood types. The transcribed interviews enabled keywords and phrases to be coded and allowed for themes to emerge. A variation of themes was evident concerning each geographic location of suburban, rural, and urban areas; however, some were equally present.

The following chapter will include a summary of the findings, possible implications, and the limitations of the study.

CHAPTER 5: DISCUSSION

Overview

The purpose of this qualitative phenomenological study was to compare the lived experiences of social isolation between older adults living in rural, suburban, and urban areas. After identifying potential participants, the study began with an online survey to collect demographic information. The Lubben Social Network Scale (LSNS-6) was used to catalog the strengths of social relationships that older adults (≥ 65) have with family and friends. The results were input into Excel and evaluated by geographic location. This chapter will summarize the findings followed by a discussion that includes the biblical foundations that support the research. Next, this chapter will frame the study's implications and how it can be used for scientific and community improvement. Finally, the limitations of the study will be recognized, and recommendations for future research will be made.

Summary of Findings

To protect identity, all participants were assigned a unique code. The results from the online portion of the research were input into Excel and separated by geographic location. The recordings from the phone interview were then transcribed, and the data was coded and organized into broader topics. Ten themes emerged from the analysis of the interviews.

Impact of Neighborhood Changes on Social Well-being

Most of the participants from suburban and urban areas revealed changes in the neighborhood, such as an increase in traffic and crime that hurt their willingness to participate in social activities. Several participants from each geographic location cited that some of their favorite stores or restaurants had closed. They felt disconnected from their neighborhood because it seemed “unfamiliar” after many years of living there.

Feeling at Home

A sense of belonging and comfort was highly prevalent in rural communities; Suburban participants were most likely to mention that their church was an important part of their life and community. This theme included positive affirmations about the community and feeling comfortable and safe in the area.

Accessibility to Resources

Resources, such as being able to walk to the library or park, food delivery, and access to the internet, were mostly cited by urban area participants. Suburban area participants noted that having their church and medical facilities close by was highly valued.

Decline in Social Interactions

A decrease in social activity and participation in social engagement was mentioned equally across all geographic locations. Many cited having fewer friends as they aged and that a lack of transportation made it difficult to maintain relationships with friends and family. Many of the participants from each area named COVID-19 as a cause of the decline of their personal relationships. Several participants shared they had lost a loved one due to COVID-19, and many mentioned they were still hesitant to interact without wearing a mask.

Greater Amount of Interaction with Friends than Family

Having more support and interaction from friends than family was evidenced by all except one participant. Many stated that their children and siblings had moved away, and it was now too difficult to travel. Nearly all participants found it more convenient to socialize with friends that lived nearby than with family far away. Three participants stated that they kept in touch with their family via Facebook or WeChat, but if they needed help, they would call a friend.

Technology as an Obstacle

All the participants owned a computer or tablet in addition to a Smartphone. Rural residents were the only ones to state that internet reliability was an obstacle to using the device to connect more often with friends and family. Two suburban residents noted that the cost of internet was becoming unaffordable but also stated that it was necessary. None of the participants cited needing assistance operating any of the devices. Many suburban and urban participants indicated they enjoyed using their computers for games and entertainment. Three said it was their primary form of communication with their grandkids.

Attitudes Toward Geographic Location

Participants from rural areas had the highest instances of stating a positive relationship with their geographic location and frequently used descriptors such as “beautiful” and “peaceful.” Suburban area participants were divided in their attitude about their neighborhood. Several stated they enjoyed the conveniences, and others focused on negative aspects such as increased crime and traffic. Urban area participant had a more negative opinion of their area and used the words “crime” and “downhill” when describing their area.

Resilience and Autonomy

Approximately half of the contributors demonstrated notable resilience when discussing their living situation. They often described overcoming obstacles such as COVID-19, various medical ailments, or challenging life circumstances to live independently. Several participants stated they enjoyed the autonomy of living alone and expressed great pride in being self-reliant. Almost all participants said they would prefer more social interactions and a broader network of friends; none said they would have liked another spouse, living partner, or more prominent family.

Discussion of Findings

Human geography is the study of the relationship between people and their environment. The diversity of themes from this study denotes that older adults often have different relationships with their living area depending on their geographic location. These range from feelings of appreciation of the beauty of an area to feelings of gratitude for amenities to feelings of disappointment and regret. The themes garnered from the interviews were significantly different according to geographic location. However, the data harvested from the online LSNS-6 scores were extraordinarily close between geographic locations. The themes of resilience and autonomy protracted through all three geographic locations. The average social network scores were remarkably similar, and even identical, across the geographic locations; however, the interviews revealed a pronounced number of themes and nuances between the participants' lived experiences.

The average LSNS-6 score for all participants was 14, less than half the potential score of 30. Findings revealed that the average overall LSNS-6 scores were identical (15) between rural and suburban areas, and urban area scores trailed by 20% with an average score of 12. For suburban and urban area participants, there was a gap of 50% between the support of friends and family and a slightly less gap of 33% difference in rural areas. Further analysis of the LSNS-6 scores revealed that, on average, participants from each region had a 44% higher amount of social interaction with friends (5) than family (9). Two participants cited feeling like a "burden" to their children and were reluctant to seek help or initiate a conversation. None of the participants expressed any concern about being a liability to friends.

This data suggests that there is a small amount of variance between the social network scores between geographic living areas. However, the analysis of the interviews uncovered a

more comprehensive understanding of lived experiences. Rural, suburban, and urban regions each had unique themes that emerged when analyzing the data from the recorded interviews. This suggests that, while isolation may be very similar amongst many older adults, their relationship with their living situation can fluctuate. This research implies that quality may be more important than quantity when researching social connections. Participants who cited having few social connections also expressed high resilience and a sense of autonomy. Participants from rural areas with lower-than-average social network scores expressed a high appreciation of the beauty of nature in their community. In contrast, two participants with higher-than-average LSNS-6 scores had negative attitudes toward their neighborhood and expressed some regret about their choices. Urban areas participants cited having the most significant access to resources and the lowest average scores for support from friends and family.

Numerous biblical foundations support the objectives of this study. We were not created to live alone. In the very first book of the bible, we are told that because God loved man, he did not want him to be alone. Research strongly suggests that social isolation negatively affects the mind and body. We were fashioned to care for and support each other through friendship and family connections. God wants us to pray for and love one another. The Bible also tells us to respect our elders and honor older adults. The fifth commandment of the bible is “honor thy father and mother” (Exodus 20:12). The terms “father” and “mother” extend beyond the biological surface of the terms. We are meant to take care of all the people who have nurtured us throughout our lives.

Table 2
Biblical Support for Understanding Social Isolation

Effects of Social Isolation	
People are not meant be alone	Genesis 2:18, Ecclesiastes 4:12,
Importance of Relationships	
We must help each other	Galatians 6:2, Romans 10, Romans 12:5. Proverbs 18:24, Hebrews 13:1-2
We need to love one another	John 15:12-15, John, 13:34
Friendship is important	Proverbs 17:17, Proverbs 27:9, Job 6:14, Job 42:10
Older Adults	
Respect	Proverbs 20:29, Ephesians 6:2-3

Implications

Social isolation has been repeatedly demonstrated to have far-reaching negative repercussions on all persons. The effects often mirror those of loneliness and can affect a person's physical and psychological well-being. The older adult population is especially vulnerable because of their limited options for connecting with others. Exploring social isolation in older adults, in association with geographic location, is relevant because of people's relationship with their neighborhood. Living areas present opportunities for connecting with others and accessing necessary resources, but also pose unique challenges. As a person ages, the relationship that they have with their living area can morph as the area becomes either more familiar and provides a sense of home or more unfamiliar, leaving one feeling ill-equipped to grapple with the changes. The LSNS-6 scores from this study indicate that the level of social isolation is extraordinarily similar between various geographic locations. However, the experiences revealed during the interviews were rather diverse. Rural participants appreciated

their area's beauty, yet sometimes felt disconnected from the digital world. Suburban participants felt a growing sense of disconnection from their area yet appreciated resources, such as being close to their church or medical provider, as a benefit, and participants from urban areas indicated a decline in social interactions because of a sense of fear in their living area.

The older adult community can benefit from this study if churches, libraries, and community centers develop programs that will enable older adults to connect with others. The relationship may be reciprocal as all the organizations stand to benefit from a more robust population of active and vibrant participants. There is an identified need for greater outreach within the community to engage older adults in social activities and support. This includes providing greater access to the internet and more viable options for transportation and activities suited for older adults.

The findings of this study are of value to all members of society because they can be aligned with practical outcomes and used to develop resources that will benefit older adults, their families, and the community at large. As the older adult population continues to grow and evolve, it is important to meet their social needs to decrease the negative outcomes of social isolation. Having a sense of pride and autonomy in living alone was an overarching theme between all three geographic locations, this study also indicates that many older adults do not feel as if they have a choice in where they live as they age. The findings of this study establish that, regardless of location, older adults rely heavily on their community for social support.

Limitations

The most notable limitation of this study is the sample size. According to Pew Research, as of June 2023, there were approximately 14 million older adults (≥ 65) living alone in the United States. Each one has a unique lived experience, and it would be unreasonable to identify

each one separately. The older adult community has an enormous range of income levels, family dynamics, and living situations, which account for their attitude toward their living area and social networking opportunities. Another limitation of this study is the effect of COVID. It is plausible that some intense attitudes about the pandemic may subside, as people are able to distance themselves from the negative effects. An additional limitation is that the study relies heavily on self-reporting. Every effort was made to ensure and convey participant anonymity however, participant input was largely subjective. The final limitation is the time of year that they study was conducted. The interviews were conducted in the winter, which for some areas of the county includes shorter daylight hours and less opportunity to engage in social activities.

Recommendations for Future Research

This research should serve as a catalyst for more investigations on the effects of social isolation on older adults in respect to their living area. Each area has unique benefits and hindrances that both encourage and prohibit social interaction. Future research is highly recommended to address the changing needs of this diverse population. It should include availability of technology and reliable internet, access to reliable transportation, and affordable living opportunities for older adults.

Future research might incorporate a similar study to measure if the implications of social isolation in relationship to geographic location change as we reconcile the effects of COVID. The psychological effects of COVID will mostly likely remain with many people for many years the period of quarantine will not soon be forgotten, but it is possible that the trauma will lessen, and people will have a different perspective. Adults who are currently 55 years of age may have experienced COVID differently than those who are currently ≥65. In 10 years, they will be an older adult with a different perspective. They may appreciate some of the benefits of the

pandemic, such as teleworking, more accessibility to online grocery shopping and having shopping items and food take-out delivered to your car in the parking lot.

Additionally, during COVID, many people who were still in the work force, opted to move to different geographic locations. Rural areas saw the greatest amount of population growth and urban experienced a decline in population. This segment of the population could possibly have a different relationship with their geographic area than those who have lived in the same area for their entire life.

The accessibility of technology was a major theme throughout this study. Adults retiring within the next several years will most likely have become proficient on computers and be very familiar with the internet from using it in the workplace. Internet companies, as well as federal and state government agencies are addressing the shortcomings internet accessibility as they recognize that it is now an essential component of one's livelihood. In recognizing that social isolation is not limited to any one geographic location, the lived experiences should be more closely investigated in future research.

Summary

Social isolation has long been studied in alignment with loneliness. Many, or even most, of the negative outcomes are very similar, but the lived experiences are not the same. Older adults experiencing loneliness, may have different perspectives than those experiencing isolation. Loneliness is a largely subjective internal state. Social isolation, on the other hand, is an objective, quantifiable external state. The date from this research suggests that many older adults in the United States are socially isolated.

The older adult population is not a stagnant entity and is unique on many levels. The sheer population is growing at an unprecedented rate, which mirrors the unmatched evolution of

technology. This was the only generation in history to experience COVID while being ≥ 65 years of age. This generation comes from smaller families and bore fewer children than their predecessors. Living alone is now more common for older adults than in the past because they have fewer family members to rely on and are living longer. While so much has changed, the effects of loneliness and social isolation have remained constant.

Geographic gerontology challenges us to explore the experiences of aging in relation to our geographic location. For many people, their neighborhood is a cornerstone of their identity. It is where they spend most of their time, sleep at night, and call home. As people age, they are more likely to become disengaged from their neighborhood and find it challenging to navigate changes in traffic, retail, coffee, and eating establishments and overall neighborhood dynamics. This research demonstrates a decline in family support for older adults and a need for more robust community and church resources.

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APPENDIX A: RECRUITMENT ANNOUNCEMENT

Social Isolation of Older Adults in Accordance with Geographic Location

Hello,

My name is Jacqueline Rich. I am a student at Liberty University, pursuing a doctoral degree in psychology. The title of my Dissertation is “The Implications of Social Isolation on Older Adults in Accordance with Geographic Living Area.” I am asking for your help to gather data for my research.

I am seeking participants who are over the age of 65 and live alone. If you are interested, please reach out to me for more information.

If selected, you will be asked to fill out a consent form and 2 brief questionnaires, which should not take more than 10 minutes each. Personal information, such as birthdate, driver’s license number, and social security number will not be requested. After that, we will set up a time for a phone interview that will be recorded and transcribed. Your name and identifying information will remain completely confidential.

Once the study is complete, you will have the option of receiving the results.

Please let me know if you have any questions.

Thank you,

Jacqueline Rich

APPENDIX B: SCREENING QUESTIONS

1. Are you aged 65 above?   YES   NO

2. Do you live alone? YES   NO

3. How would you describe your geographic living area?

    1. Rural

    2. Suburban

    3. Urban

APPENDIX C: CONSENT FORM

Title: Implications of Social Isolation on Older Adults in accordance with Geographic living area.

Principle Investigator: Jacqueline Rich, Doctoral Candidate, Liberty University

APPENDIX E: E-MAIL REMINDER

Thank you so much for agreeing to participate in my study for Social Isolation on Older Adults in Accordance with Geographic Living Area.

I will be calling you on *date, time*. Please allow up to one hour for the interview.

I look forward to talking with you soon.

Thank you.

Jacqueline Rich

APPENDIX F: DEMOGRAPHIC INFORMATION

Demographic Information

Name: ______________________________ Zip code: ____________________

1. **Age:** Under 64 65-69 70-74 75-79 80-84 85-89 90+
2. **Gender:** M F
3. **Ethnicity:**
   White Black Native American Hispanic Asian Pacific Islander
4. **Education:**
   a) Less than a high school diploma
   b) High school diploma or equivalent (e.g., GED)
   c) Some college, no degree
   d) Associate's degree (e.g., AA, AS)
   e) Bachelor's degree (ex: BA, BS)
   f) Master's degree (ex: MA, MS, MEd)
   g) Professional degree (ex: MD, DDS)
   h) Doctorate (ex: PhD, EdD)
5. **Annual income:**
   a) Less than $20,000
   b) $21,000 to $34,999
   c) $35,000 to $49,999
   d) $50,000 to $74,999
   e) $75,000 to $99,999
   f) Over $100,000
6. **How many people live in your household full time?** __________
7. **How would you describe your dwelling?**
   a) Apartment
   b) Condominium
   c) Townhouse
   d) Single Family Home
   e) Assisted Living
8. **How would you describe your neighborhood?**
   a) Rural
   b) Suburban
   c) Urban
9. **How long have you lived in your neighborhood?**
   a) Under 1 year
   b) 2-4 years
   c) 5-9 years
   d) 10-19 years
   e) 20 + years

APPENDIX G: LUBBEN SOCIAL ISOLATION INDEX

LUBBEN SOCIAL NETWORK SCALE – 6 REVISED (LSNS-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?

none one two three or four five thru eight nine or more

2. How many relatives do you feel at ease with that you can talk about private matters?

none one two three or four five thru eight nine or more

3. How many relatives do you feel close to such that you could call on them for help?

none one two three or four five thru eight 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?

none one two three or four five thru eight nine or more

5. How many friends do you feel at ease with that you can talk about private matters?

none one two three or four five thru eight nine or more

6. How many friends do you feel close to such that you could call on them for help?

none one two three or four five thru eight nine or more

APPENDIX H: LUBBEN SOCIAL ISOLATION INDEX SCORING CHART

LUBBEN SOCIAL NETWORK SCALE – 6 REVISED (LSNS-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?

0 = **none** 1 = **one** 2 = **two** 3 = **three or four** 4 = **five thru eight** 5 = **nine or more**

2. How many relatives do you feel at ease with that you can talk about private matters?

0 = **none** 1 = **one** 2 = **two** 3 = **three or four** 4 = **five thru eight** 5 = **nine or more**

3. How many relatives do you feel close to such that you could call on them for help?

0 = **none** 1 = **one** 2 = **two** 3 = **three or four** 4 = **five thru eight** 5 = **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?

0 = **none** 1 = **one** 2 = **two** 3 = **three or four** 4 = **five thru eight** 5 = **nine or more**

5. How many friends do you feel at ease with that you can talk about private matters?

0 = none 1 = one 2 = two 3 = three or four 4 = five thru eight 5 = nine or more

6. How many friends do you feel close to such that you could call on them for help?

0 = none 1 = one 2 = two 3 = three or four 4 = five thru eight 5 = nine or more

LSNS-6 total score is an equally weighted sum of these six items. Scores range from 0 to 30

APPENDIX I: SEMI-STRUCTURED INTERVIEW QUESTIONS

1. How would you describe your living situation?

2. How would you describe your geographic location?