

4-10-2024

Elders Helping Elders: The Impact of Stress on the Informal Caregiver

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Walden University

College of Social and Behavioral Health

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Denise Diane Smith

has been found to be complete and satisfactory in all respects,
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the review committee have been made.

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Walden University
2024

Abstract

Elders Helping Elders: The Impact of Stress on the Informal Caregiver

by

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MSW, University of Maryland School of Social Work, 2015

BSW, Coppin State University, 2012

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Social Work

Walden University

May 2024

Abstract

Informal older caregivers who care for other older adults experience stress that can harm them. The purpose of this quantitative study was to determine the relationship between perceived stress and the physical health, quality of life, and coping skills of the informal older caregiver. The stress process model was used as the conceptual framework for this study. Using the Self survey using the Perceived Stress Scale (PSS), World Health Organization Quality of Life BREF (WHQOL-BREF) Scale, and the Brief-COPE Inventory, a total of 80 informal older caregivers were selected as participants. Pearson chi-square and Pearson's r were used to analyze the participant data retrieved from Survey Monkey Audience. The Pearson chi-square showed a statistically significant relationship between perceived stress and physical health. A Pearson's r was conducted to find the relationship between perceived stress and quality of life, and the results indicated there was no statistically significant relationship between perceived stress and quality of life. The relationship between perceived stress and coping skills was analyzed a Pearson's r , and the results showed there was no statistically significant relationship between perceived stress and coping skills. The positive social change implications of this study include the results being used to create clinical interventions within families, individuals, friends, and loved ones. The findings of this study can also help raise awareness of the many roles and responsibilities of informal older caregivers.

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Dedication

This dissertation is dedicated to my mother, Lillie Catherine Barnes. I could always depend on her, and she gave so much of her life to her children. She was an excellent role model, always showing us how to believe in God and the right way to live. Her memory will always be in my heart. Thank you, MOM.

Acknowledgments

I would like to thank my committee: Dr. Debra L. Wilson, committee member, for providing encouragement and motivation and for always being a guiding light. Dr. Thomas A. McLaughlin, my committee member, for providing valuable assistance in helping me complete my dissertation. Dr. Jaegoo Lee, for reviewing my study and providing invaluable assistance in making my study stronger. I would not have written this study without the valuable contributions of my son, Michael Smith. His editing and service were invaluable. My entire family for putting up with me, missing family dinners, and respecting my study and writing time.

But most of all, I would like to thank the Father, Son, and the Holy Spirit for giving me insight and direction to complete this study.

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Chapter 1: Introduction to the Study

In the United States, baby boomers, the generation of people that were born between the years 1946 to 1964, provide much of the care for people with disabilities or chronic diseases (Miyawaki et al., 2020). This generation began to reach the age of 65 years old in 2011, and the last of this age group will become 65 in the year 2030. They are expected to remain in the workforce and retire in their mid-60s (Moon et al., 2017). After retiring at 65, they may be looking forward to relaxing or attending to their illnesses or disabilities, but then the unexpected can happen and a friend, loved one, or a family member can become ill, and suddenly, they must become an informal caregiver (Efi et al., 2017). The reality of enjoying their retirement or attending to their illness and disability has vanished. In India, some people were born into this role because of cultural norms and are expected to take care of their loved ones or family members (Srivastava et al., 2016). In Ecuador, informal caregivers are the sole providers of care to the older population, and stress affects their health, quality of life, and coping skills (Ruisoto et al., 2020).

When someone in their life becomes ill and it is time for an older adult to assume their role as a caregiver, the person may feel their life has been turned upside down and have no other option (Peacock et al., 2017). This may be when a spouse has been diagnosed with an unexpected illness or a friend or loved one may become disabled. Lives once lived in freedom now have the added stress of caring for someone else. It is not known what impact this additional stress has on their physical health, quality of life,

and coping skills. Another unknown is how the informal caregiver perceives the stress they have now acquired.

Informal caregivers are people who care for others, providing continuous help for someone who has a chronic illness or disability, and are unpaid. They. This care could be mental, physical, social, or financial assistance (Khanal & Chalise, 2020). The individuals being cared for can be a family member, spouse, or friend. Informal caregivers can be as young as 18 or as old as 85 (Roth et al., 2015). Informal caregivers may help with the person's activities of daily living (ADL), such as walking, feeding, dressing, and toileting and instrumental activities of daily living (IADL), including complex needs, thinking skills, and organizational skills (Roth et al., 2015). A person 65 years or older may not have the same patience, stamina, or mental ability as when younger. Researchers have found that stress increases with age and is more prominent in women and older adults (Osmanovic-Thunstrom et al., 2015).

I conducted this study to understand the impact perceived stress has on the informal older caregiver's physical health, quality of life, and coping skills. There are limited studies on informal older caregivers who care for older adults and more research is needed to understand perceived stress in the older informal caregiver's life (Roth et al., 2015). This study may inspire other researchers to study this topic. One potential positive social change implication may be to inspire others to study different cultures and ethnic backgrounds to better understand better how they cope with stress. The results of the current study may also be used to create new interventions for caregivers to cope with

stress and policies that will provide the additional resources necessary to cope with the perceived stress of informal caregivers.

In Chapter 1, I discussed the background, problem, purpose, research questions and hypotheses, conceptual framework, nature of the study, definitions, assumptions, scope, and delimitations, limitations, and significance before concluding with a summary of the chapter.

Background

By 2040, baby boomers, or people born between the years 1946 and 1964, will make up 20% of the U.S. population (Moon et al., 2017). Some may have been looking forward to retirement and putting the years of hard work behind them or they may also have illnesses of their own that may need care. Their goal of living a life of luxury and ease may be interrupted by unexpected events, such as a loved one, friend, or family member becoming suddenly ill. Because of this change, they may have to assume the role of the informal older caregiver (Efi et al., 2017). Some may welcome the change as a positive because of their cultural upbringing, and others may accept the role grudgingly. Some informal caregivers will be caregiving for older adults who are approximately 85 years and older (Moon et al., 2017). The newly found role may apply additional stress; however, what is unknown is how they perceive the stress that has been placed on them.

Researchers have studied many aspects of informal caregiving provided by people of different ages, from 18 years old to as old as 85; however, there is little extant research discussing informal older caregivers 65 or older who care for another older person with a chronic illness or disability. Researchers found inconsistencies among the meager studies

because factors, such as depression, mental impairment, and physical health, were not considered (Osmanovic-Thrunstrom et al., 2015).

In the current study, I examined the relationship between the informal older caregiver's perceived stress and its impact on their physical health, quality of living, and coping skills. The caregivers' key characteristics, including age, gender, and race/ethnicity, were factored in to identify their perception of stress (see Pearlin et al., 1990). Using the Pearlin Stress Model as a guide, I sought to understand how primary and secondary stressors impact the perceived stress of the informal elder caregiver (see Pearlin et al., 1990).

Problem Statement

Baby boomers born between 1946 and 1964 will represent a significant portion of the U. S. population by the year 2030 (Miyawaki et al., 2020). Unfortunately, negative consequences may come along with the rise of the aging population: The once robust person may now become frail and weak, and some have developed chronic illnesses, cannot care for themselves, and now need additional help with their everyday needs (Miyawaki et al., 2020).

Roth et al. (2015) defined the characteristics of an informal caregiver as an individual who provides unpaid, continuous assistance with ADL or IADL to an individual with a chronic illness or disability. Informal caregiving is not always a choice, and because of cultural expectations, a family member may be expected to take care of the ill person. Srivastava et al. (2016) studied the role of family caregivers in India who cared for family members who had dementia and found that caregiving was a part of their

upbringing. The researchers concluded that only some family members accepted their new responsibility and often felt burdened and stressed. Pharr et al. (2014) determined that the different expectations of the caregiver involving their culture, norms, and values may harm the caregivers, impacting how they cope with stress, their quality of life, and their cultural experiences.

Research has been conducted on how negative stressors have impacted the physical health of the informal caregiver and revealed resources available to caregivers about the types of stress they may feel, but few interventions on how the caregiver can cope with the stress are available (Dahlrup et al., 2015). While reviewing the literature, I found little research on informal caregivers aged 65 years old or older, with most researchers using an inclusion criterion that accepted participants 50 years old or older. In a study on family support in late life involving caregiving, Grossman and Webb (2016), had the requirement that participants, who were informal caregivers, had to be 50 years old or older.

In the current study, I explored how older adults 65 years old and older who care for an older adult with a chronic illness or disability perceive the additional stress that comes with providing this care. This study also focused on how the stress has impacted the physical health and quality of life of the informal caregiver. The study contributed data to the research that has already been conducted on how the impact of chronic stress affects the older caregiver's physical health, quality of life, and well-being (see Miyawaki et al., 2020). Older caregivers may already have chronic stress, health impairments, and preexisting conditions (Mosquera et al., 2016). Because of the additional stress, the

physical health of the older caregiver may decline even more. The current study findings, combined with other research, may be used to create additional interventions to help informal caregivers cope with stress.

Purpose of the Study

The purpose of this quantitative study was to understand the impact stress has on the older adult informal caregiver (i.e., 65 years old and older) caring for another older adult. This study is unique because previous studies have begun the age criteria for informal caregivers as young as 18 (see Srivastava et al., 2016). The current study addressed the impact stress has on the informal caregiver's health, coping skills, and quality of life. I sought to understand how primary and secondary stress factors impact informal caregivers over 65 years of age (see Pearlin et al., 1990).

Research Questions and Hypotheses

RQ1: What is the relationship between self-perceived stress and the informal caregiver's physical health aged 65 years of age and older?

H_{a1}: There is a statistically significant relationship between self-perceived stress and the informal caregiver's physical health aged 65 years of age and older.

H₀₁: There is no statistically significant relationship between self-perceived stress and the informal caregiver's physical health at age 65 years of age and older.

RQ2: What is the relationship between self-perceived stress and the informal caregiver's quality of life 65 years of age and older?

H_{a2}: There is a statistically significant relationship between self-perceived stress and the informal caregiver's quality of life 65 years of age and older.

H₀₂: There is no statistically significant relationship between self-perceived stress and the informal caregiver's quality of life 65 years of age and older.

RQ3: What is the relationship between self-perceived stress and the coping skills of the informal caregiver 65 years of age and older?

H_{a3}: There is a statistically significant relationship between self-perceived stress and the coping skills of the informal caregiver 65 years of age and older.

H₀₃: There is no statistically significant relationship between self-perceived stress and the coping skills of the informal caregiver 65 years of age and older.

Conceptual Framework of the Study

The stress process model, created by Pearlin et al. (1990), was used as the conceptual framework for this study. The model addresses the background and context of stress, the stressors, the mediators of stress, and the outcomes or manifestation of stress (Pearlin et al., 1990). The stress process model was in direct correlation with the current study involving the impact of stress on the informal caregiver's physical health, coping skills, and quality of life.

Nature of the Study

In this study, I employed a quantitative, cross-sectional, self-survey design and incorporated correlation statistics to measure relationships. The correlational design showed the relationship between stress and the informal caregiver's physical health, quality of life, and coping skills. I designed the survey questions using the Perceived Stress Scale (PSS), World Health Quality of Life BREF (WHQOL-BREF) Scale, and the Brief-COPE Inventory to answer the research questions in the study. The correlational analysis highlighted the relationship between the independent and dependent variables, and the extent stress has on the caregiver. Correlational analysis also had the potential to identify which stress factors may be more prevalent in the informal caregiver.

I used the survey method to collect data for this study. Data were collected from online surveys using a questionnaire containing preexisting standardized scales measuring stress, physical health, and quality of life. I used secondary data from seminal researchers to determine how previous researchers have studied the topic to supplement the conclusions I made after analyzing the data. Participants were recruited through Survey Monkey Audience.

Definitions

Coping: The behavioral, cognitive, and emotional ways to manage stress (Horiuchi et al., 2018).

Informal caregiver: A friend or relative who provides unpaid assistance to someone with a chronic disease or disability (Swartz & Collins, 2019).

Perceived stress: How a person sees life situations as stressful and what they may be going through (Luchesi et al, 2016).

Physical health: A state of physical well-being whereas a person is physically fit to perform their daily activity without restrictions (Rakhimov, 2020).

Quality of life: Perceived ideas regarding life satisfaction, morals, happiness, emotional well-being, and life satisfaction (Thai et.al., 2015).

Assumptions

I assumed the participants would provide accurate, honest, and nonbiased information regarding the services provided to their care recipients. Because of their age (i.e., 65 years old and older), I assumed the participants would be willing to be informal older caregivers regardless of their ethnicity, culture, or gender. Another assumption was that the participants would complete the surveys without help from other family members, friends, or relatives. I also assumed the data collected from seminal researchers were accurate.

Scope and Delimitations

This study was focused on informal caregivers (i.e., 65 years old and older) and the impact of perceived stress from caring for older people with chronic illnesses or disabilities on their physical health, quality of life, and coping. The decision to limit the study's scope to a specific age was made because of the original retirement age of 65 years old. Baby boomers born between 1946 and 1964 can retire with full benefits at the age of 67 (Choi & Schoeni, 2017). The data collected may help with future interventions and policymaking.

The scope of this study was limited to informal older caregivers who were at least 65 years old and care for older adults with chronic illnesses and disabilities. I did not include adults under the age of 65, which may not allow people of younger ages to be used to repeat this study and render similar results. I chose the participants from a convenience sample, which did not allow for a broader research base to provide a better outcome. This study did not consider socioeconomic status, so informal older caregivers' education and income variables were not considered.

Limitations

The following limitations were identified for this study. First, I chose to use convenience sampling, and the sample size was 80 participants. The sample was focused on the older population of informal caregivers aged 65 and older who were asked to self-report the impact perceived stress has on their perceived health, quality of life, and coping skills. Another limitation was that the informal older caregivers' perceived stress related to their physical health, quality of life, and coping skills was explored and not how stress is perceived mentally or spiritually.

Another limitation was that this study was conducted during the global COVID-19 pandemic where individuals who may have been interested in being a participant were unable to because the individuals, they were caring for may have passed away. The correlation method was used instead of causation, so I could not predict the reason for the possible problem of recruiting participants.

Significance

By 2040, baby boomers born between 1946 and 1964 will compose 40% of the U.S. population (Moon et al., 2016). This generation was independent and worked into their late 60s (Moon & Dillsworth-Anderson, 2015). The generation may become stressed because of the physical demands, work balance, and everyday challenges, and they may have developed chronic illnesses or become disabled and need assistance with their physical health (Miyawaki et al., 2020). At the age of 65, they may have decided to retire to live a life of pleasure or take care of their illnesses or disabilities. Then the unforeseen happens: A family member, friend, or relative suddenly becomes ill, and the person who was once retired has become an informal caregiver. The caregiver is forced into a first responder role (Fairchild & Russo, 2019). Osmanovic-Thurnstron et al., 2015) found that perceived stress levels increase as people age.

This study is significant because I explored individuals' physical health, quality of life, and coping skills before and after becoming an informal caregiver. There is little research concerning individuals who are 65 and older informally caring for older adults. By looking at the informal caregiver before and after taking on the caregiving role, the data collected provide information that can be used to help create interventions for learning how to cope with perceived stress during the practice of caregiving. The data collected may help caregivers 65 and older and younger caregivers alike by identifying strengths and challenge areas in the role of caregivers for aging adults. Various age groups may use the results of this study to create more diverse support groups for practice interventions. The findings may also help provide future clinical interventions for

medical and community services regarding the impact of perceived stress on the informal caregiver. This information may be shared within the different agencies and social media platforms that promote informal caregiving.

Summary

Baby boomers who may have hoped to retire after reaching the age of 65 might not be able to because the need has arisen to care for a loved one, friend, or relative who has suddenly become ill. Informal caregivers are unpaid individuals who support ill or disabled people and provide consistent physical or emotional support (Bom et al., 2019). Although there is ample research on caregivers in general, there is little research on informal older caregivers who care for other older adults, their experiences, and how they perceive stress (see Silva et al., 2018). Previous researchers did not explicitly target the 65-year-old and over population and included participants 50 years old and over instead (Grossman & Webb, 2016). According to Osmanovic-Thurnstron et al. (2015), people's ability to tolerate stress lessens as they age. They further concluded that there was a perceived increase in stress in men and women in the age group of 66–97 years old living at home and in institutions. In this study, I explored the relationship stress has on the informal older caregiver while caring for another older adult and how the stress is perceived. In Chapter 2, I will discuss the literature search strategy and conceptual framework, present a literature review related to key variables and concepts, and conclude with a summary.

Chapter 2 Literature Review

The population of the United States is aging significantly, and by 2050, the population aged 65 and above will have increased by 20% (Levi et al., 2018). Many individuals aged 65 and older may have dreamt about the possibility of living a life of ease and carefree living; unfortunately, this is not always the case. Because of unforeseen circumstances, they may have to care for a loved one or friend who has a chronic illness and has become frail, needing additional care. The life that was once planned and dreamt about is now disrupted.

Caregivers who care for a spouse, parent, or someone they are close to makes up approximately 49% of all caregivers (The National Alliance for Caregiving & AARP, 2015). Lack of choice can be considered a risk factor for declining health and can add additional stress (Aloweni et al., 2019). The informal caregiver's perceived stress might affect their physical health, quality of life, and ways of coping. An informal caregiver is defined as a person who cares for another without getting any financial assistance and provides continual assistance with the person's ADL or IADL to a person with a chronic illness or disability (Swartz & Collins, 2019).

In this chapter, I provided a review of the literature on the process of becoming an informal caregiver. This chapter also includes a discussion of the literature related to the care given by informal caregivers to the older population and how an informal older caregiver's role has affected them. The chapter is also focused on the gap and the paucity of literature concerning the informal older caregiver caring for another older person and

the impact of perceived stress on the informal older caregiver's physical health, quality of life, and coping methods.

Literature Search Strategy

I searched for literature related to the topic under study using the keywords *stress, perceived stress, informal caregiving, caregiving, coping, quality of life, stressors, caregiver, baby boomer, older adult, age 65, physical health, health, strain, and burden*. I located literature for this review in search engines and multiple databases: Google Scholar, Eric, Science Direct, Taylor and Francis Online, Journals@OVID, CINAHL Plus with Full Text, PsycINFO, and Cross Ref. The searches yielded literature from seminal and current research published from 1990 to 2021, resulting in 180 peer-reviewed articles. The dates of this range reflect when researchers began to study stress and informal caregiving. The literature search was conducted to find articles associated with the topics of self-perceived stress and its relationship with physical health, quality of life, and informal older caregiver coping.

Conceptual Framework

I used the Pearlin stress model as the conceptual framework because it underpinned the study goals of examining the relationship perceived stress has on the informal older caregiver 65 years old and older on their physical health, quality of life, and coping skills. Pearlin's stress model process has been used in multiple research studies. Pearlin et al. (1990) recognized stressors as the heart of the stress process of which caregiving may be affected by. In the stress model process, Pearlin et al.

distinguished between primary and secondary stressors and how they can impact the informal older caregiver's life.

Literature Review Related to Key Variables and /or Concepts

Informal Caregiving

One in 4 baby boomers provide care for someone in the United States (Miyawaki et al., 2021). Caring for a loved one, neighbor, friend, or spouse can be daunting, especially when it happens unexpectedly when the individual suddenly became chronically ill or disabled. Chalise (2020) defined caregiving as the process of undertaking activities and responsibilities while providing emotional, physical, social, and financial support. Informal caregivers are people who are unpaid and care for family, friends, neighbors, and loved ones who need help with ADLs and IADLs (Horrell et. al., 2015). Swartz and Collins (2019) and Fu et al. (2021) defined informal caregiving as a friend or relative who provides unpaid assistance to someone with a chronic disease or disability.

Although these definitions are worded differently, they all have the common denominators of the care being unpaid, focusing on ADLs and IADLs, and caregivers providing services they were not trained for (Bom et. al., 2019). Over the years, the need for informal caregivers has progressed, and it is a significant health issue that affects millions of people across the United States (Centers for Disease Control and Prevention, 2018). As of 2015, approximately 34.2 million people have provided care for adults 50 or older (Family Caregiver Alliance, 2016). The present number of caregivers in 2020 showed an increase of 21% from 18% in 2015, with informal caregivers providing care

for 53 million people in 2020, including adults and children (AARP & National Alliance for Caregiving, 2020).

The weekly hours that informal caregivers spend caring for someone else varies. Older informal caregivers 75 years old and older spend approximately 34.4 hours per week compared to middle-aged caregivers who spend approximately 21.7 hours per week providing care for their care recipient (National Alliance for Caregiving & AARP, 2015). According to the Centers for Disease Control and Prevention (2018), 1 in 3 (31.3%) caregivers provided care of 20 or more hours each week and over one half (53.8 %) of caregivers have provided care for older adults for more than 24 months. Swartz and Collins (2019) found that the average amount of care is 24.4 hours weekly, and 24% of people have been informal caregivers for more than 5 years.

The estimated value of informal caregivers is not factored into the health care cost of the United States. According to the 2020 survey by AARP, more than 50 million Americans served as unpaid caregivers (Washington, 2021). An estimated value of \$50 billion dollars of services provided by informal caregiving in 2009 has grown substantially to \$470 billion in 2017 (Godin, 2017).

Adults between the ages of 50 and 65 make up one third of informal caregivers (National Alliance & AARP, 2015), and another one third of informal caregivers are between the ages of 60 to 74 years old (World Health Organization, 2021). The average age of an informal caregiver is 49 and 60% are female (Swartz & Collins, 2019) Among male caregivers, the average age is 47.8, and 40% are informal caregivers (Accius, 2017). Younger informal caregivers provide a vast amount of caregiving, and an abundance of

research has been focused on them; however, little research has been done on older informal caregivers (AARP & National Alliance of Caregiving, 2020).

Gender plays a significant role in informal caregiving. Accis (2017) found that 40% of caregivers are male, accounting for approximately 16 million men. Out of necessity, men have taken an active role in informal caregiving for their spouses (Accius, 2017). Lopez-Anuarbe and Kohli (2019) researched the male caregiver's roles as spouses, sons, in-laws, and brothers among various ethnicities and reported that men care about being an informal caregiver and are involved in every aspect of the caregiver role. Their study also involved comparing the roles of females and male caregivers. They found that just like female caregivers, male caregivers experience the same burdens, but the male caregiver is more likely to work outside the home.

On the other hand, an informal female caregiver's role is considered an acceptable family task because of societal norms (Amankwan, 2017). Girls are considered to be more emotional and caring than men, while boys were taught to be dominant and not show emotions (Mott et al., 2019). Many caregivers in Spain are female (i.e., daughters and wives), which is linked to gender roles in the culture (Sharma et al., 2016).

Transitioning to the role of an informal caregiver may not be easy and is perceived differently by different people. Rafnsson et al. (2020) studied the informal caregivers' emotional well-being over 2 years in a population of older adults in England and concluded that the transition to caregiving in later life differed from kinship. The authors found that the well-being of spousal and children caregivers was always compromised at all stages of caregiving during the study.

Sometimes, the transition to the role of caregiver may be perceived as the person having no choice. Pertl et al. (2019) defined caregiver choice as to whether a person believes they had the freedom to decide if they wanted to accept the role of an informal caregiver. In a study of caregiver choice and outcomes among Irish dementia caregivers 50 years old and older, Pertl et al. found that less than a fifth of the caregivers (i.e., 251 spousal dementia caregivers) in their study felt they had a choice on taking the role. The researchers suggested additional studies to be conducted to address the perception and impact of informal caregivers of dementia spouses. According to Swartz and Collins (2019), 50% of informal older caregivers feel that they did not have a choice other than to accept the caregiver role. The caregiver felt that their quality of life had changed because they had less time for family and friends, experienced increased stress, and their overall physical and emotional health was declining. This decision can change the dynamics of the informal caregiver family experience, whether the role of the caregiver is by choice or force.

Using Thorne's interpretive research approach, Peacock et al. (2017) studied how 18 spouses in Alberta, Canada perceived their caregiving experiences while caring for a loved one with multiple chronic illnesses. Several themes emerged in their study, the caregivers felt: (a) they were putting their lives on hold, (b) isolated, and (c) a loss of freedom because they had to make all the decisions. Some participants found the experience rewarding, and the informal caregiver's experience was positive, adding value and giving them a purpose.

Family caregiving provides most of the care for the older population with serious illnesses (Fu et al., 2021). The role of the family caregiver can have a declining impact on physical, mental, social, spiritual, and financial health (Bell et al., 2019). According to Bell et al. (2019), more than 50% of older adults between the ages 85 and 89 years old and 75% of older adults 90 and over are cared for by family members. Fu et al. (2019) researched subjective burdens among informal caregivers of the critically ill in China using Pearlin's stress model theory. The participants in their study were a combination of females (50.9%), family caregivers (53.79%), and spouses who care for someone 12 hours per day. The researchers concluded that informal caregivers of individuals with critical illnesses experience more subjective burdens than other caregivers because of the stress they experienced due to the lengthy care, emotional toll, and financial burden.

In a qualitative study of the distribution of care and perceived gratitude of family caregivers and siblings, Amaro and Miller (2016) interviewed 20 men and women who were primary caregivers of older adults. The age range of caregivers was from 29 to 75 years old, with a mean age of 55. The age of the older adults being cared for ranged from 69 to 95 years old, with a mean age of 85. The care provided included round-the-clock care, hands-on care, and assistance with ADLs. Some participants perceived the importance of collaborating when caring for their parents, resulting in a smooth transition to becoming an informal caregiver. At the same time, other participants in the study did not collaborate before caring for their parents, causing confusion. Amaro and Miller found that when caregivers and parents paid attention to one another's needs, they

experienced increased empathy and humility in some circumstances. The siblings in the study reported that caring for their aging parents was both rewarding and draining.

In some cultures, informal caregiving is ingrained in a person's upbringing and is therefore considered a natural occurrence. Srivastava et al. (2016) researched the impact of caring for a person with dementia in India to measure the impact of caring for people with dementia and the caregiver's quality of life and burden. India is a dominant male society, and men work outside the home, so the caregiving expectation in the culture falls on women because of their caring nature (Srivastava et al., 2016). Compared to women, the male caregivers' quality of life showed less stress because of India's culture. The study's inclusion criteria were that the caregiver had to be 18 years of age, had lived with the care recipient patient for 1 year, and had not been ill during that time. The Zarit Burden Interview and QOL-BREF were used to screen the 24 participants. The results were measured using chi-square and Yates, indicating a significant difference ($p < 0.05$), and a negative correlation between burden and quality of life. The authors concluded that psychotherapy is needed for the caregiver to cope with their caregiving roles, reduce the burden, and improve their quality of life.

Chalise (2020) researched caregiver burden among informal caregivers or rural older people in Nepal. In Nepal, providing for the elderly is expected and part of their culture. The criteria for the participants were that they had to be the primary caregiver and care for the person for at least 6 months. The participant's mean age was 46.6 years, and the care recipient's mean age was 78.49 years. 80% of the care providers were women, and 20% were men. The researchers used the Zarit Burden Interview to measure

the caregivers' burden. They found female caregivers experienced a slightly higher burden than male caregivers. Overall, they found that caregiver burden was low in Nepal. The impact of stress and quality of life will be discussed later in this literature review regarding perceived stress.

Yamaguchi et al. (2016) researched how the culture of Japan influences the care of adults with cancer. 13 caregivers of adult families with cancer were chosen to participate in qualitative descriptive this study. Their ages ranged from their 40s to their 70s, and they had been caregivers from 1 to 10 years. Either in a home or health care setting. The ages of the care recipients were not disclosed. Yamaguchi et al. defined "caring culture as the embodying caregivers' perceptions and caregiving practices, acknowledging the unique role of culture in shaping behavior" (p. 395). The interviews conducted by the researchers gave a glimpse into the culture and mindset of the participants. They found that the participants perceived caring for their loved ones as love and a repayment of how they had taken care of them. In the Japanese culture, unspoken social norms urged and gave them no choice but to care for their loved ones who had fallen ill. They were to take over the role because of their status and gender, especially the women. (Yamaguchi et al., 2016). They also found that some caregivers perceived themselves as the only person who could provide care for the care recipient. The research found conflicting remarks from the different caregivers but that all knew they were expected to be the primary caregiver when told to do so. In some societal cultures women are expected to adopt the women the role of family caregiver (Sharma et, al., 2016). In the United States, many family members do not expect their family members to take on

the role of a caregiver and are astonished when asked to do so because they value their autonomy and individuality.

Stress and Perceived Stress

People react to stress in the various situations they may find themselves in.

Perceived stress happens when a person demonstrates a feeling of helplessness to control a stressful situation or deal with an emotional response (Chandelktar & Shetty, 2019).

Perceived stress can be a hazard to a person's immune system (Gratão et al., 2019) and can affect the informal caregiver's physical health, quality of life, and coping skills.

Caregiver stress can derive from several sources such as financial, physical, and emotional demands (Mthembu et al., 2016). The theory of caregiver stress suggests that stressful life events have an additive effect on perceived stress, over, and above the effects of caregiver burden (Tsai, 2003). The second assumption of the theory is that perceptions determine how a caregiver responds to his or her environment and perceived stress (Tsai, 2003). Mariotti (2015) believed that stress is inescapable in health and the way a person expects a stressor and controls it mainly defines their response. Pearlin et al. (1990) described caregiver stress as a combination of circumstances, experiences, and resources that are different among caregivers and, consequently, impact their health and behavior. Pearlin et al. stress model is the foundation of this study. Pearlin et al. stress process model is used frequently to study stress among informal caregivers and their families. The model is used to emphasize the fundamental role of informal caregivers in the stress process, factors that mediate stressors involving caregiving, and the impact on informal caregivers (Losada-Baltar, 2017). As mentioned, the model makes a difference

between primary and secondary stressors, which are at the center of the stress process model that involves caregiving (Pearlin et al., 1990). According to Losada-Baltar (2017). Pearlin et al. identified stressors as life events, extreme stress, crisis, and traumas.

This literature review will use seminal and current studies to add to the research questions of this study. The sentinel resources in this section emphasizes the stress process model's importance, the recognition of stress, and the importance of research in elderly informal caregivers.

Perceived Stress and Physical Health

Caregiver health significantly impacts a large part of our population, including the caregivers themselves and the care recipients (Grady & Rosenbaum, 2015). Bom et al. (2019) researched the impact of informal caregiving on older adults regarding the health of different types of caregivers. The researcher defined informal caregivers as someone caring for a person in need and directed their definition toward an old or older adult. Six hundred sixty-one articles were selected, and 15 met the complete criteria. The criteria included in the articles had to be focused on informal caregiving to the elderly and older family adults. The article focused on the estimated health impact of informal caregiving on the caregiver. All the selected articles were published between 2009 and 2017 and used European, Asian, and Australian data. The study did not give the ages of the informal caregiver or care recipient but gave the results of their study. The articles found that female and married caregivers experience adverse health effects when providing intensive care to a care recipient. Depending on how stress was measured, they would

receive a negative or positive response from the informal caregiver self-assessment. They concluded that the research indicated a causal negative effect on the caregiver's health.

Luchesi et al. (2016) researched factors relating to how the elderly population perceived stress, including socio-demographic, care characteristics, cognitive and health status, and burden related to stress. Three hundred forty-one elderly informal caregivers participated in the study, with a mean age of 69.6. The criteria were: (a) 60 years or older, (b) registered in primary care in Sao Carlos/Brazil, and (c) had to live in the same residence with an older person (60 >).

The care recipient needed dependent care in at least one ADL and IADL and was assessed by the Katz Index (Katz et al., 1963) and the Lawton and Brody's Scale (Lawton & Brody, 1969). The Perceived Stress Scale was used to measure the interviews to determine how informal caregivers perceived their circumstances in stressful situations. The study's outcome resulted in a mean score of PSS-14 of 18.5 ± 9.9 . Regarding health, the participants reported self-reported pain, difficulty sleeping, poor/very poor self-rated health, and perceived stress was not vast.

Aloweni et al. (2019) researched the types of caregiver reactions experienced by older spouse's adults. The researchers used the Modified Caregiver Reaction Assessment (mCRA) to reveal the negative and positive sides of informal caregiving. The (mCRA) is a self-report assessment tool to measure caregivers' perceived stress in their caregiving role. They used a paired sample (75 dyads, 150 informal caregivers), a mixed-method survey design, and collected data from spouse caregivers (≥ 55 years old). The study was done in Singapore; there were four types of caregiver reactions: (a) HPLN (high-positive,

low-negative), (b) LPHN (low-positive, high-negative), (c) HPHN (high positive, high-negative), and (d) LPLN (low-positive, low-negative). They determined that the perceived stress points out the difference in HPLN and LPHN reactions. The study showed caregivers' HLPN reaction had less perceived stress than HPHN caregivers. HLPN perceived stress caregivers reported a lower anxiety mean difference of .04 score, which was small and may not be meaningful. They suggested more research needs to be done because this was the first study conducted using the mCRA since there were no other studies to compare this research.

Being a caregiver for an extended period may affect the physical health of an informal caregiver. Kim et al. (2015) researched the physical impairments of informal caregivers with relatives who had cancer for 6 years. The study aimed to see how caregiving affects someone over some time. The research began when the person first became an informal caregiver at the end of the study. The data were gathered from 1,517 self-reports of spousal caregivers regarding the relationship between the care recipient, sex, education, and finances. The mean age of the participants was 55.02, and the care recipient's age was not given. They used subjective caregiving and cancer severity to assess caregiver stress. Subjective caregiving was measured using the Pearlin Stress Scale. The outcome was that the mean response defined higher caregiving stress, which showed a higher level of perceived caregiver stress. The subscale outcome was good internal consistency ($\alpha = .79$; Kim et al., 2015). They suggested that a spouse's long-term care affects the informal caregiver, and stress management interventions should be incorporated into the care process.

Potier et al. (2018) researched health and frailty among older spousal caregivers in Belgium. They emphasized how older spouses were their spouses' primary caregivers and home support for home support. The study was conducted from March 15 to May 2016. The study criteria were that all participants had to be 70 years or older. Eighty-two community-dwelling spousal caregivers were recruited for the study, and the median age for both the caregiver and care recipients was 80 and 81 years. Participants were assessed at home using several instruments, including the Zarit Burden and Geriatric Depression Scale. Many of the caregivers were elderly and were taking care of older adults. The researchers found that some caregivers were frail before taking on the caregiver role. After 16 months, one caregiver in three had presented as worsening frailty. They found that caregivers' burden remained stable over the 16 months of research. This research reflects on the caregiver's physical health before beginning the role and how poor health may add additional stress.

Pope et al. (2017) researched adverse health outcomes and the relationship between informal personal self-care, perceived stress, and other health variables. The criteria to participate was (a) had to be a caregiver for someone 50 years and older with a chronic illness or disability, (b) provide 10 hours a week care, (c) had to provide care for at least 6 months, and (d) be willing to participate in an online survey. One hundred six adult informal caregivers completed the internet and paper surveys with a mean age of 58.01. The participants completed the Medical Outcomes Study Short-Form 36-item Survey. The Perceived Stress and Self-Care Practice Scales were used to measure the data. The research question prevalent in this study was the relationship between

perceived stress and self-care among caregivers, which is related to the informal caregiver's physical health. The Perceived Stress was measured on a 10-point Perceived Stress Scale used to measure global stress (Cohen et al., 1983). The scale ranges from 0 (*never*) to 4 (*very often*) and is self-reported by the participants. Descriptive statistics Pearson's correlation showed perceived stress; the mean was 21.49, which meant participants reported a slight elevation of stress, physical functioning was 65.28, and role limitations due to physical health (46.64). The association between health and perceived health variables was significant ($r = +.20, p < .001$). They concluded that perceived stress and health problems were common, and the relationship between personal self-care was inversely related to perceived stress.

Saimaldaher Wazqar (2019) studied the relationships between caregiving stress, mental health, and physical health in family caregivers of adult patients with cancer in Jeddah, Saudi Arabia. The researchers recruited participants from a University Teaching Hospital that provided cancer and palliative care. One hundred sixty family caregivers were selected as participants for the study. The following criteria were used for the selection: (a) must provide direct care and support for adult patients with cancer, (b) primary caregiver of the family member with cancer, (c) male or female 18 years or older, (d) speak English or Arabic fluently, and (f) agree to participate in the study (Saimandaher & Wazqar, 2019). They excluded family caregivers with a history of neurological or extreme mental illness and family members of pediatric patients with cancer. The participant's ages ranged from 18 to 60 and above, with a mean age of 35.4. They did not give the ages of the care recipients.

The researchers collected data using a self-administered questionnaire, the Modified Caregiver Strain Index (MCSI), the Duke Health Profile, and sociodemographic. The Duke Health Profile in the Arabic version with subscales ranging from 0.62 to 0.66 was used in this study. The researcher conducted a pilot study with 10 family members who did not participate in this study. The pilot study was done to see if participants could complete the questionnaire within 15 minutes. They analyzed data using SPSS Version 22 using descriptive and inferential statistics and correlation. The researchers found correlations between stress and the family caregiver's mental and physical health. There was a significant amount of negative correlation between caregiver stress and mental ($r = -0.264, p < .001$) and health physical health ($r = -0.392, p < 0.001$). They found that family caregivers with high amounts of stress have the worst mental and physical stress. The mean caregiver stress score measured by MCSI was 9.01 ($SD = 5.65$), with scores ranging from 0 to 26.

The researchers concluded that family caregivers with the highest stress scores reported significantly worse physical and mental health. The data analysis showed that nearly half of the family caregivers experienced moderate to severe levels of caregiving stress. They found that stress can disrupt the caregiving performance of family caregivers (Saimaldher & Wazqar, 2019).

Miyawaki et al. (2019) researched the prevalence of informal caregivers and compared their health to non-caregivers. The Behavioral Risk Factor Surveillance System (2015-2017) results for 44 states, the District of Columbia, and Puerto Rico were used for the research. The sample size of participants was 109, 268. The participant's ages ranged

from 18 years and older. The mean age for caregivers was 59.3, and noncaregivers 59.8. The participants were non-Hispanic White (74%), employed (52%), and female (62%). The care recipients' age was not given. Caregivers were found to have provided more than 20 hours of care per week and were primarily women. Over half had been caregivers for at least two years and assisted with personal care.

The data collected was self-reported. Respondents rated their general health and chronic health conditions as a part of the research. The researchers looked at chronic health conditions such as heart problems (angina, stroke, myocardial infarction), arthritis, current asthma, diabetes, cancer, and chronic obstructive pulmonary disease. They found male caregivers had a higher prevalence of fair or poor health compared to non-caregivers of the same age (aPR = 1.17; 95% confidence level [CI], 1.06-1.29; $p = .74$). Female caregivers and female noncaregivers had the exact prevalence reporting fair or poor health (aPR = 0.98, $p = .74$). They also found that caregivers probably had at least one chronic health condition than non-givers (aPR = 1.39; 95% CI, 1.07-1.13; $p < .001$).

They found that caregivers had more chronic health conditions, which is a public health priority. Other researchers have studied caregiver stress and found caregiver stress and strain directly proportion to poorer caregiver health rather than the time devoted to caregiving (Podgorski, 2018).

The research articles showed how perceived stress affects the physical health of the informal caregiver who cares for an older adult. The studies help to show the need for additional studies of 65 and older age by showing the disproportionate number of studies

on caregivers of younger ages. The relationship between perceived stress and physical health was shown in each article, no matter the age group.

Perceived Stress and Quality of Life

The quality of life of an informal caregiver is defined as perceived ideas regarding life satisfaction, morals, happiness, emotional well-being, and life satisfaction (Thai et al., 2016). The World Health Organization (WHO; 1998) defined *quality* of life as how people perceive themselves in their lives in context to their belief systems and culture in which they live and the “relations to their goals, expectations, standards, and concerns” (p.3). WHO (1998) also stated that quality of life is complicated by a person's physical health, mental state, beliefs, social relationships, and the importance of their surroundings. Previous studies have shown that caregiver burden is negatively related to an informal caregiver and affects HRQOL (Klietz et al., 2019).

There are few or no nursing homes in Africa for older adults (Farobni & Olaogun, 2017). According to tradition, family members assist older adults who are ill with their ADLs and IADLS. Those who care for older adults experience burdens ranging from poor health, financial difficulties, isolation, and psychological disturbances that affect their quality of life. Farobni and Olaogun (2017) researched the prevalence of caregiver's burden with health-related quality of life (HRQOL) among caregivers of older adults. They wanted to evaluate the predictive effect of the burden and socioeconomic factors of HRQOL.

The participants selected were 325 older adults with chronic illnesses in Osun State, Nigeria. The participants were selected using purposive sampling. The age of the

caregivers ranged from 19 to 70, with a mean age of 47.9. The age of the care recipient was not given. The criteria used for participation selection were (a) the participant had to be 18 years or older, (b) assisted the older adult with most ADLs (caregiver tasks), (c) lived within Osun State, and (d) oriented to time and space.

The researchers used several instruments to collect data for their research. The instruments were the KATZ IADL, Zarit Burden Interview, and Short Form (SF-36) Health Survey. Collected data were analyzed using Stata (Version 12). The data collected was examined using Pearson correlation. The results showed a significant correlation between caregiver burden and seven domains of the HRQOL: General health ($r = 0.342$, $p = 0.000$); Emotional well-being ($r = 0.222$, $p = 0.000$); Physical activities ($r = 0.459$, $p = 0.000$); Bodily pain ($r = -0.518$, $p = 0.002$); Social functioning ($r = -0.618$, $p = 0.001$); Role limitation due to emotional wellbeing ($r = -0.530$, $p = 0.000$); Energy fatigue ($r = -0.509$, $p = 0.003$); and Role limitation due to physical function ($r = 0.459$, $p = 0.000$). The analysis also revealed a correlation between caregiver burden and physical component score ($r = -0.604$, $p = 0.01$) and mental component score ($r = 0.059$, $p = 0.001$).

The research findings concluded that caring for older adults with chronic illnesses severely burdens the caregiver. The findings also showed that caregivers experienced poor HRQOL because of the negative effect of the caregiving burden on their HRQOL (Faronbi & Olaogun, 2017). The study's conclusion shows that stress harms the caregiver's life.

A meta-analysis study was conducted by Contreras et al. (2020) to research the factors related to the quality of life of people with dementia. Their study aim was two-fold: (a) quantify the confirmation of factors associated with the quality and (b) investigate the moderating factors that may impact the strength of the relationship between possible predictive factors and the informal caregiver quality of life. Twenty studies yielding 6,177 participants were used for the study from different countries. The mean age of the caregivers was 55 and older. The care recipient's age was not given. The study's outcome showed that correlations with informal caregivers' quality of life (effect size) were significant for depression and significantly moderate caregiver subjective burden. They concluded that informal caregiving depression, subjective burden, and care recipients with dementia neuropsychiatric symptoms might play a vital role in maintaining the quality of life of caregivers, no matter the social role and the economic circumstances.

Informal caregivers of people suffering from neurological diseases were studied by (Oliveria et al. 2018). The study aimed to explore the perceptions of elderly informal caregivers who care for older people with neurological diseases (dementia and strokes). Seventy-five participants' mean age was 69.8, and the care recipient age was not reported. Findings of the study were (a) caregivers with a high total score in burden (≥ 29) had a higher chance of low quality of life than those with average and low burden scores (OR = 11.43; CI = 3.16-37.7) and (b) informal caregivers who scored high for items that were for role-related stress had a higher chance of low quality of life scores. The researcher

concluded that the informal elderly caregiver's quality of life is negatively impacted by the burden of caring for an older person.

A qualitative study was conducted by Oliveria et al. (2019) researching the quality of life from the perspectives of informal caregivers of people with dementia. The research was in Nottinghamshire, the United Kingdom, with 19 participants in several focused groups. The age of the participants ranged from 60 to 81 providing for the care recipients at home. The outcomes from the focus group subthemes were (a) daily conflicts ($n = 111$), (b) a sense of caregiving, burden, and responsibility, and (c) living a restricted life ($n = 102$). The participants expressed extreme stress concerning the daily conflicts and felt hopeless, frustrated, and sad, significantly impacting their quality of life. The participants felt stressed because they could not receive access to the recipient's records and needed clarification on their role as caregivers. They expressed the need to maintain their social life and continued connection to friends. Isolation and loneliness were a large part of what they missed. They found that the most problems impacting the older family caregiver's quality of life were the daily conflicts. The findings of this study agreed with previous studies concerning older informal caregivers and diseases. They suggested that this study can be used for future studies because of the limited research.

Thai et al. (2015) conducted qualitative research studying the quality of life of Chinese informal caregivers whose care recipients were older adults with late-life disabilities, illnesses, dementia, frailty/nonspecific decline, and heart disease/stroke. The mean age of the caregivers was 54 ($n = 42$), and the care recipient was 75+. The interviewees were asked to rate their quality of care and reflect on their time when they

began caregiving and the past month. The findings showed that 52% of the caregivers provided care with at least one ADL, 69% with one IADL, and 40% provided both in community-dwelling. The quality-of-life health declined in the areas of less time for self (social and financial) physical and emotional illness of the care recipient. The interviewees expressed different perspectives ranging from feeling stress to family duty. The researchers concluded that informal caregivers adopt a considerable burden when caring for older adults in the community. They suggested that more support is needed to help them with their caregiver roles.

Starr et al. (2021) studied anxiety, depression, quality of life, caregiver burden, and perceptions of caregiver-centered communications among Black and White hospice family caregivers.

The research was conducted in the Midwestern and Northeastern sections of the United States. They chose the secondary analysis of baseline data from 2 random clinical studies. There were seven hundred twenty-two Black and White participants aged 18 and over. The care-recipient ages were not given.

The following instruments were selected for measurement: the Generalized Anxiety Disorder -7(GAD-7), Patient Health Questionnaire (PHQ-9), Caregiver Quality of Life Index Revised (CQLI-R), Zarit Burden Interview (ZBI-7), and Caregiver-Centered Communication Questionnaire (CCCQ). The results showed differences between Black and White caregivers and socioeconomic variables in the chosen demographic areas. Nearly one-third of hospice family caregivers reported moderate to severe anxiety (32.1%) and moderate to severe depressive symptoms (32.0%). The

findings showed that White caregivers reported lower QOL than Black caregivers ($p = 0.04$), especially in emotions ($p = 0.02$) and social ($p = 0.0005$) domains. Multiple regression analyses controlling caregiver and patient factors found no racial differences in depression, anxiety, QOL, caregiver burden, or caregiver-centered hospice communications perceptions. The researcher concluded that Black and White hospice family caregivers were impacted by high anxiety, depression, burden, and perceptions of hospice communication. They suggested that future research is needed in studying the researched areas.

There is little known about the quality of life of the caregiving of older adults age 65+ care for older adults who are chronically ill and disabled.

Perceived Stress and Coping Skills

In 2015, Thailand was recognized as an aged society, and the number of people aged 60 years and older reached 10.3 million or 15.8% of the country's total population (Gray et al., 2016). Gray et al. (2016) researched the strength, stress, and positive and negative impacts on caregivers for older adults in Thailand. Older adults in Thailand depend on their family and community for care (Gray et al., 2016). A quantitative study in September 2011 was conducted in Kanchanaburi, Thailand, consisting of 284 participants who explored the sociodemographic characteristics of primary caregivers and their perceived physical and mental health.

As a follow-up, Gray et al. (2016) conducted a qualitative study comprising 17 primary caregiver families purposively selected based on gender and kinship to care recipients. They conducted interviews approximately 1 year after the original quantitative

study (May 2011). The researchers studied the strengths and stressed the positive and negative impacts on caregivers for older adults. The participant's ages ranged from 31 to 78, with a mean age of 55. The participants provided assistant activities related to ADLs such as bathing eating, dressing, transferring and toileting; the IADL's they aided were preparing meals, doing housework/laundry, traveling, and taking medicine. All participants were Buddhist.

Like other quantitative studies, the qualitative study underscored the powerful impact of religious coping methods. They concluded that Thai caregivers for older adults report negative impacts, including emotional stress, financial struggles, and worry about lack of knowledge. The study concluded that the adult children in the study understood their roles as caregivers.

The researchers used a cross-sectional design for their study. Participants were chosen from the area of Osun, Nigeria. The recruitment was done consecutively from a list from the Obafemi Awolowo University Teaching Hospital, Ile-Ife, and the researchers followed up with the (a) caregivers of older adults (60 years and above) with chronic illnesses and a resident in Osun State; (b) 18 years and above; (c) oriented to time, person, and place; and (4) assisted the older adult with ADLs and IADLs (caregiving tasks). A total of 325 caregivers were selected to participate in the study. Their ages ranged from 19 to 70, with a mean age of 47.79. Most caregivers were women, and more than half lived with their parents. The ages of the older adults ranged from 60 to 103, with a mean age of 76.08, and were 54.2% male.

The researchers used several instruments for data collection: (a) checklist, (b) Katz Index of Independence in Activities of Daily Living, (c) Zarit Burden Interview, and (d) Brief COPE Scale. The ZBI and Brief COPE were translated into the Yoruba language. The back-to-back translated version yielded a Cronbach alpha (α) of ZBI (0.75), Brief Cope Scale (0.83), domains, emotional focus (0.74), problem focus (0.64), and dysfunctional (0.69). Correlation analysis was conducted on the relationship between the variables in the study. The results found that caregiver burden was inversely related to emotion-focused coping ($r = -0.58$), problem-focused coping ($r = -0.70$), dysfunctional coping ($r = -0.43$), and total coping ($r = -0.58$). The caregiver's burden was consistently significantly predicted in all domains of coping, and the overall coping was ($p < 0.01$). Religion predicted only emotional coping ($p < 0.01$).

The study results revealed that caregivers experience a large amount of burden. Their findings support previous studies on caregiver burden and caring for an older adult with chronic disease is a chronically stressful process. The results also showed that caregivers find different ways of coping with easing the adverse effects of the burden associated with caregiving (Faronbi, 2018).

Myhre et al. (2017) researched the coping experiences of spouses of persons with Dementia. Their study was part of an original study of the Norwegian Cognitive Behavioral Therapy for Early Dementia. The interviews were conducted in Spring 2015. The study explored the participants' everyday lives for 6-12 months after the intervention. Six participants were chosen from the original study of 100. Their ages ranged from 55 to 75+ years. Random sampling was chosen for recruitment. The criteria selected to

participate were the spouse of the patient with Dementia who lived with them and was a previous participant in the intervention program.

The study's design was descriptive exploratory with qualitative semi-structured in-depth interviews (Myhre et al., 2017). The researchers adopted the central theme from the interviews, "An everyday search for meaning," which referred to the stress experienced by the caregivers and their everyday coping strategies. The meaning also referred to how the caregivers managed the changes, challenges, and stress they experienced daily.

The researchers concluded that the caregivers had gained increased awareness of coping strategies after experiencing the 6-12 months after the intervention. They felt the study is relevant to clinical practice, focusing on improving coping strategies that may reduce caregiver stress and the necessity of long-term nursing home care.

Coping and anxiety of caregivers of dependent older adults' relatives were researched by Perez-Cruz et al. (2019). Their study aimed to analyze the relationship between coping and anxiety in caregivers of dependent older adults. A cross-sectional study was conducted in the province of Jaen (Andalusia, Spain) from July to September 2015. The 185 participants were chosen by convenience sampling. The criteria they had to meet to participate were: (a) primary caregivers (those who took care of and delivered the most significant amount of care), (b) not receiving any monetary payment, (c) caring for a relative 65 years and older, and (d) care recipient was dependent in at least one ADL. The average age of the participants was 58, and the oldest care recipient was 75.

The main measurements were anxiety (Hamilton Scale), Coping (Brief COPE), subjective burden (Caregiver Strain Index), objective burden, and sex of the caregiver. Caregiver subjective burden was measured using the Spanish version of Robinson's Caregiver Strain Index by Lopez Alonso and Moral Serrano. The results of the bivariate analysis showed anxiety was positively associated with the coping strategies of self-distraction ($r = 0.16$; $p = 0.031$) and denial ($r = 0.21$; $p = 0.002$), with the sex of the caregiver ($r = 0.18$; $p = 0.01$) and the subjective burden ($r = 0.30$; $p = 0.000$), and acceptance ($r = -0.15$; $p = 0.024$) negatively.

The researchers made the following conclusions: (a) coping strategies used mainly by caregivers of dependent older adults' relatives are acceptance, active coping, and the use of emotional support; (b) planning, acceptance, and humor coping strategies are protective factors for anxiety; and (c) self-distraction, venting, denial, and self-blame strategies may be factors for anxiety. They concluded that additional studies are needed to explore the relationship between coping and anxiety to expand the evidence.

Kazemi et al. (2021) researched the relationship between the severity of the burden of care and coping strategies among Iranian caregivers of older stroke patients. A total of 110 caregivers were selected for their study using convenience sampling. The criteria to be a participant were (a) a willingness to participate, (b) 18 years or older, (c) able to communicate, (d) have at least a primary education, (e) the principal caregiver for 1 month, (f) not being paid, and (g) have a family relationship with the older patient. The care recipients were (a) older patients who had a previous stroke, (b) 60 years and older, (c) who had been diagnosed with a stroke, and (d) who had a family caregiver. The mean

age of the participants was 32.09 ± 8.80 years. The mean age of care recipients was 69.91 ± 10.50 years old.

Data was collected using the Zarit Burden Interview to measure caregiver burden and Lazarus coping strategies questionnaires focused on coping with a stressful situation. The participants completed a self-assessment questionnaire. Data was collected from December 2017 to May 2018. Pearson correlation showed a significant positive correlation between caregiver burden and emotional-focused strategies, including escaping ($r = 0.245, p = 0.010$) and distancing ($r = 0.204, p = 0.032$). The results of the independent t-test showed male caregivers used the positive reappraisal strategy ($t(110) = 2.76; p = 0.007$) and accepting responsibility ($t(110) = 2.26; p = 0.0260$) significantly more than females (Kazemi et al., 2021). They concluded that caregivers with the highest burden of care used more negative coping strategies, such as escape avoidance and distancing.

Coppetti et al. (2019) researched the relationship between informal caregiver skills, burden, stress, and coping of family caregivers of people with cancer in Brazil. One hundred thirty-two family caregivers were recruited for the study from 18 to 76 (mean $n = 48.68$), and no age was provided for the care recipients. Data was collected by self-reported questionnaires and measured using the Caring Ability Inventory, Zarit Burden Interview, and the PSS, all in the Brazilian version. They found that the relationship between caring ability and perceived stress showed a statistically significant and negative correlation between total caring ability and dimensions of knowledge ($p = 0.02$) and courage ($p = 0.02$). The results indicated that the higher the caregivers

perceived stress, the lesser the total caregiving ability, knowledge, and caring. They concluded that the level of caring ability correlates with the levels of stress and burden and the strategies used by families.

Siqueria et al. (2020) researched the caring ability of urban and rural caregivers of cancer patients in Brazil. They selected 222 caregivers (163 urban, 59 rural) to participate in the study. The participant's ages ranged from 48 to 76. The criteria to participate were that the caregiver had to be 18 years and older, live in the home, maybe a family member, and have no specific time of care. The data was collected from April 2017 to May 2018. The researchers used a questionnaire of sociodemographic characterizing the caregiver and care provided. They also used the Caring Ability Inventory (CAI), the Burden Interview, the PSS, and the Brief Cope for data collection. The results showed a negative and moderate correlation in rural areas between caring ability and stress found in rural caregivers. The relationship between the caring ability and overburden was statistically correlated in urban caregivers in the interpersonal relationship and perception of self-efficacy factor. They concluded that urban caregivers had greater intensity of overburden and coping focused on the problem concerning caregiving ability (Siquerira et al., 2020).

Triana and Sudjarmiko (2021) used the stress process theory to investigate the role of religious coping as a moderating variable between stressors and depression. The researchers selected 50 caregivers of people with schizophrenia in Indonesia. The participants were recruited from Komunitas Peduli Skizofrenia Indonesia (Indonesian Schizophrenia Care Community, 30 members) and Soeharto Heerdjan Hospital, Jakarta, Indonesia (20 daycare participants). They were recruited using purposive sampling.

Caregivers in the age group of 60-69 were the largest group. They completed a self-administered questionnaire for data collection from August to October 2018.

The study results showed the significant role of religious coping as a moderating variable in reducing the impact of stressors on the caregiver's depression (Triana & Sudjtmiko, 2021). They concluded that caregivers' duties could harm the caregiver's health. The caregiver process suggests that primary stressors can impact secondary stressors, causing depression. The subjective aspects of primary and secondary stressors were more dominant than other stressors.

Each research article showed how perceived stress impacts the informal caregiver coping skills. The age of caregivers ranges from 19 to 85 or more. I found a paucity amount of research with the criteria of the informal caregiver being 65 and older, prompting the need for additional research in this area.

Summary

Baby boomers aged 65 and older are living longer and may be retiring and looking forward to a time of vacationing or attending to their health. However, unfortunately, a loved one, friend, or relative has become ill, and they are thrust into the informal caregiver role unexpectedly. In many ways, informal caregiving has been defined but with one common denominator: unpaid care to a person who has a chronic disease or is disabled and needs additional help with ADLs or IADLs. The role can be accepted voluntarily, cultural expectations, or a role someone has acquired. Throughout the research process, informal caregivers, no matter what age, face some form of perceived stress impacting their physical health, quality of life, or coping skills. In most

societies, females are expected to assume the primary caregiver role, whereas men are sometimes considered secondary informal caregivers because of some work outside the home (Srivastava et al., 2016).

Whether the informal caregiving role is by an individual or family, it can be a daunting experience. Because of some informal caregivers' frailty of age and the additional tasks they encounter can severely impact their physical health, quality of life, and coping skills. The research shows a gap in the caregiving literature where a paucity of information addresses the informal caregiver 65 and older who cares for another older adult with a chronic illness or disability. This research study will focus on stress's impact on the informal elderly caregiver 65 and older while caring for another elderly adult. The study will focus on the relationship that perceived stress has on their physical health, quality of life, and coping skills. A conceptual framework was developed on Pearlin et al. (1990) stress process model. The stress process model showed how informal caregivers perceive stress and its impact on their physical health, quality of life, and coping skills.

In Chapter 3, I will address the research design rationale and design, the methods, data collection and analysis, instruments, the independent and dependent variables, internal and external threats, and ethical procedures.

Chapter 3: Research Method

I conducted this quantitative study to understand the impact perceived stress has on the informal older caregiver (i.e., 65 years old and older) while caring for another older adult with a chronic illness or disability, specifically their health, coping skills, and quality of life. I sought to understand how primary and secondary stress factors impact informal caregivers (see Pearlin et al., 1990). The study is unique because the participants had to be 65 years old and older. In contrast, other studies have included informal caregivers as young as 18 years of age caring for an older adult who is chronically ill or disabled (see Srivastava et al., 2016).

In Chapter 3, I describe the research design, rationale, methodology, instrumentation, operationalization of constructs, and data analysis plan. Threats to validity (i.e., internal, external, and construct) and ethical considerations are also discussed. Chapter 3 ends with a summary.

Research Design and Rationale

In this study, I used a quantitative, correlational, cross-sectional survey design. According to Cohen and Manion (1980), the quantitative method is defined as social research that engages empirical methods and statements. The quantitative method allowed me to measure and quantify the data, be objective, and evaluate outcomes using statistical analysis and results that could be summarized and compared (see Bhandari, 2021). The research design I chose was correlational, incorporating nonexperimental research that promotes prediction and aims to help explain the relationship among variables (see Seeram, 2019). The correlational research design allowed me to collect

data in one period. I used the survey to collect data to align with the cross-sectional design (see Roger, 2014).

Methodology

Population

The target population in this study was male and female informal older caregivers aged 65 and older who care for friends, relatives, and/or loved ones with chronic illnesses and/or disabilities.

Sampling and Procedures

I used the convenience sampling strategy for participant selection. A convenience sample is a nonprobability sampling where participants meet specific criteria, and the strategy is often used in quantitative exploratory and descriptive studies (Etikan et al., 2016). I recruited participants from Survey Monkey. Participants had to meet the following inclusion criteria: (a) must be 65 years or older, (b) must have been an informal older caregiver for at least 3 months, (c) must assist an older person (i.e., 60 years or older) with one or more ADL or IDAL, and (d) willing to answer questions regarding their caregiver experience. I excluded anyone who did not meet the inclusion criteria for the study.

Sample Size

To determine the minimum sample size for this study, I calculated a power analysis using the G*Power 3.1.9.7 software, which is used for statistical testing in the fields of social, behavioral, and biomedical sciences (see Faul et al., 2009). I performed the testing with the test family option of exact and the statistical test correlation: bivariate

normal model. The input parameter was two tails with the correlation ρ_{H1} as 0.5. The α error probability was 0.05 and power was $(1 - \beta \text{ err prob})$.80, which is acceptable (see Faul et al., 2009). The correlation ρ_{H0} was 0. The output of the test critical r was .0367278. The actual power was calculated as .8103534, and the total minimum sample size was calculated at 29.

Procedures for Recruitment

I followed the regulations specified by the Walden University Institutional Review Board (IRB) throughout the study. Participant recruitment began after receiving approval to conduct the study from the Walden University IRB (Approval No. 04-05-22-0742117). I wrote the informed consent form to advise participants of their confidential rights, anonymity, and the purpose of the study. The informed consent form explained to each participant that they could withdraw from the study at any time without penalty and described their confidential rights. When clicking on the study link in SurveyMonkey, the informed consent form appeared, and the participant was given the option to accept or reject participation in the study. SurveyMonkey, created in 1999, is used to create and house online surveys, polls, and quizzes (SurveyMonkey. (n.d.). The online tool can be used to collect data for a targeted audience in research. Survey Monkey ensures that college IRB academic and ethical standards are met and provides various services to help researchers enter vital information to achieve valuable data (SurveyMonkey, n.d.). Upon completion of the study, participants may contact me using my contact information provided should they desire a copy of the study's outcome. Participants were able to complete the forms online, providing comfort as well as privacy.

Data Collection

I used SurveyMonkey to create surveys targeting the independent variable of perceived stress and the dependent variables of physical health, quality of life, and coping skills. The surveys were emailed to each participant. I then followed up with everyone who was chosen to participate and had not completed the survey by either email or a phone call. I purchased SurveyMonkey's student plan, which allowed me to create multiple surveys, download survey results into SPSS Version 27, and create custom charts and reports. After receiving approval to conduct the study from Walden University IRB, I gathered data from participants using the online SurveyMonkey surveys that were developed using the research questions as a guide.

Demographic Questionnaire

I designed a demographic questionnaire to collect data from informal older caregivers of chronically ill and disabled older adults. The questionnaire was easy to use and could be completed in a short time. The questionnaire gathered data about the participants' age, gender, relationship of the participant care recipient (i.e., family member, friend, or loved one), duration of caregiving, and ethnicity.

Instruments

PSS

The PSS is a self-reported survey questionnaire created and designed to measure an individual's perception of stress and how unpredictable, uncontrollable, or overloaded the individual perceives their life to be (Sheldon Cohen et al., 1983). The instrument consists of 14 items and was based on an individual's perception of their reaction to

stressors for 1 month. The questions are general and can fit any scenario to assess perceived stress in people (Cohen et al., 1983). The survey questions are measured on a Likert Scale from 0-4, with 0 = *never*, 1 = *almost never*, 2 = *sometimes*, 3 = *fairly often*, and 4 = *very often*. The scores are interpreted from very low health concern to very high health concern (Cohen et al., 1983). In this study, I asked each participant to take the PSS to report how they perceive stress as an informal caregiver. The outcome of the PSS may show the relationship stress has on informal caregiver's physical health while caring for a person who is chronically ill or disabled (Cohen et al., 1983).

The PSS has been used and validated in numerous studies of cross-cultural validation and has repeatedly shown a high internal validity (Cronbach's alpha > 0.70) and good reliability (Rho > .70; Leung et al., 2010; Mirumar & Griffiths, 2008). The psychometric properties of the Swedish PSS-10 had good internal reliability (i.e., a Cronbach's alpha of 0.85 for ages 18–79 and 0.80 for ages 55–79) and construct validity with anxiety ($r = .068$), depression ($r = 0.57$), and mental/physical health exhaustion ($r = .071$; Nordin & Nordin, 2013).

Aloweni et al. (2019) used the PSS as a measurement tool when researching spousal caregivers' different caregiving reactions. The PSS's internal consistency reliability, factorial validity, and hypothesis validity have been reported as good (Lee, 2012). The Cronbach alpha ranged from 0.75 to 0.89 (Lee, 2012), showing good reliability (Alwonei et al., 2019).

The PSS allowed me to measure how perceived stress impacts the informal older caregiver's physical health. The PSS is free to use for research with the permission of Sheldon Cohen. I obtained permission to use the PSS in this study.

WHOQOL-BREF Survey Questionnaire

The WHOQOL- BREF is a self-administered, indexed, survey questionnaire comprising 26 questions asking participants how they feel about their quality of life, health, and other life circumstances. The survey questionnaire has four domains of quality of life that assess (a) physical health, (b) psychological health, (c) social relations, and (d) environment, with two questions that measure overall quality of life and general health (Skevington et al., 2004). The questions are measured on a 5-point Likert interval scale ranging from 1-5 with 1 = *very poor*, 2 = *poor*, 3 = *neither good nor bad*, 4 = *good*, and 5 = *very good*. Each question was designed and tested to show the intensity, capacity, frequency, and evaluation, and one was attached to each question (Skevington et al., 2004).

Skevington et al. (2004) reported that the WHOOL-BREF has good to excellent psychometric properties of reliability and performs well in the preliminary test of validity. Skevington et al. conducted a rather large study involving two countries worldwide ($N = 11,830$) and measured that the WHOOL-BREF's internal consistency using Cronbach's α . The researchers found that Cronbach's total sample values were acceptable at ($< .07$) for Domains 1, 2, and 4 (i.e., physical health = 0.82, psychological = 0.82, environment = 0.80, and marginal for social relations = 0.80). The WHOQOL-BREF scores showed good discriminant validity, content validity, internal consistency,

and test-retest reliability (The WHOQOL Group, 1998). According to the WHOQOL Group (1998), the instrument can be used for professional health assessment and efficacy evaluation.

Srivastava et al. (2016) used the WHOQOL-BREF Hindi Version to measure the informal caregiver's quality of life while caring for dementia patients. They found that the WHOQOL-BREF resulted in having good discriminant, content, and re-test validity and that test-retest reliability was suitable for all four domains (Cronbach's alpha 0.66 to 0.84).

The WHOQOL-BREF survey questionnaire can be used for clinical and research studies. I used the WHOQOL-BREF to measure how participants' perceived stress was affecting their quality of life. After receiving Walden University IRB approval, I obtained permission from the WHO to reproduce the WHOQOL-BREF publication according to their specified requirements.

The Brief COPE Inventory

The Brief COPE Inventory is an indexed scale comprised of 28 survey questions measured on a Likert Scale ranging from 1–4, with 1 = *I have not been doing this all the time*, 2 = *I have been doing this a little bit*, 3 = *I have been doing this a medium amount*, and 4 = *I have been doing this a lot*. The scale, designed by C.S. Carver in 1997, is an abbreviated version of the original of the COPE Inventory. The scale assesses a broad range of adults' coping responses to diseases and has 14 dimensions and two items. The 14 dimensions are self-distraction, active coping, denial, substance use, emotional support, instrumental support, behavioral disengagement, venting, positive reframing,

planning, humor, acceptance, religion, and self-blame. The scale allows the researcher to acquire important information quickly (Yusoff et al., 2010).

The Brief COPE Inventory's original purpose was to examine the individual and community levels to understand the needs and support of a family or families (Carver, 1997). The questions asked in the survey questionnaire were to measure how individuals found their lives unpredictable, uncontrollable, or overloaded (Cohen et al., 1983).

In a study of Malaysian women with breast cancer, Yusoff et al. (2010) found the Cope Inventory Scale to be a reliable and valid instrument based on its acceptable internal consistency and ability to detect changes (indicated by the mean differences and the effect size values). Meanwhile, the intraclass correlation coefficient (ICC) values were found to range from a low value to a high value (< 0.00 to 1.00). Domains, such as active coping (0.44), positive reframing (< 0.00), humor (0.32), religion (0.45), using emotional support (0.33), using instrumental support (0.36), self-distraction (0.50), and substance use (0.03), showed poor ICC values, suggesting a poor agreement as compared to acceptance (0.99), denial (0.97), venting (0.92), behavioral disengagement (1.00) and self-blame (0.94), which showed excellent agreement. The Cronbach alpha values ranged from 0.25 to 1.00, and the test-retest ICC ranged from 0.05 to 1.00.

In this study, I used the Brief COPE Inventory to see how perceived stress impacts the lives of informal older caregivers. Some informal older caregivers experience some or all the dimensions mentioned above while caring for their loved ones, family, or friends.

Operationalization

I used a quantitative cross-sectional study design to explore the relationship between the independent variable of perceived stress and the dependent variables of physical health, quality of life, and coping skills.

Dependent Variables

The dependent variables of physical health, quality of life, and coping skills were extracted from the study's three research questions. The dependent variable of physical health was measured by the PSS of each participant. Participants were asked to respond to the first research question on how stress has impacted their physical health over the past 3 months on a scale of 0–4: 0 = *never*, 1 = *almost never*, 2 = *sometimes*, 3 = *fairly often*, and 4 = *very often*; Aloweni et al., 2019). The participants were asked to complete a self-administered survey to describe.

The WHOQOL-BREF Survey measured the participants' quality of life while caring for an older adult with a chronic illness or disability. Participants were asked to respond to the question on their quality of life over the last three months on a scale from 1-5 (*1=very poor, 2=poor, 3=neither good or bad, 4=good, and 5=very good*) (Skevington et al., 2004). They were asked to respond to a survey about whether being a caregiver has interrupted their lives and the stress they may have experienced. The survey was self-administered.

The Brief Cope Scale was used in measuring how the participants perceive stress while caring for another older adult who has a chronic illness or disability. Participants were asked to respond to questions regarding coping skills over the last three months.

The response will be measured on a scale ranging from 1-4, (*1=I have not been doing this all the time, 2= I have been doing this a little bit, 3=I have been doing this a medium amount, and 4=I have been doing this a lot.* The participants were asked to complete a self-administered survey responding to questions asking how stress has impacted their coping skills.

Independent Variable

The independent variable, perceived stress, is the only independent variable in my study, and I sought to understand how stress impacts the relationship with the three dependent variables mentioned. Participants will be asked to respond to a self-administered survey using the Likert scale ranging from 0-4 (*0= never, 1= almost never, 2= sometimes, 3= fairly often, and 4= very often*). The higher the score, the higher the perceived stress the participant may feel (Aloweni et al., 2019). Participants were asked to respond to a self-administered survey regarding the question.

Demographic Variables

Age

In my study, the participants were 65 years and older, and the care recipient's age will be 60 years and older. The information provided will be self-administered.

Gender

In my study, the gender of the participants was recognized as to how they viewed their gender: male, female, or other.

Ethnicity

The participants' race was recognized by the participant's self-reported responses to the questionnaire.

Data Analysis

Analysis Software

Data collected from SurveyMonkey were entered into SPSS (Version 27). Data collection was analyzed by using a correlational design. Pearson's correlation design was used to find the linear relationship between the continuous independent variable perceived stress and continuous dependent variables physical health, quality of life, and coping skills (Freeman & Young 2019). Pearson's correlation coefficient r takes the values of -1 and +1 negative and positive associations. The value 0 will show no linear association of the variables. If Pearson's r does not support the data, an alternate data analysis can be used such as Chi-Square.

Research Questions and Hypothesis

The conceptual framework of this study helped to develop the research questions/hypotheses for my study. The following research questions /hypothesis will serve as the basis for my study:

RQ1: What is the relationship between self-perceived stress and the informal caregiver physical health 65 years of age or older?

H_{a1} : There is a statistically significant relationship between self-perceived stress and the informal caregiver physical health 65 years of age or older.

H₀₁: There is no statistically significant relationship between self-perceived stress and the informal caregiver physical health 65 years of age or older.

RQ2: What is the statistically significant relationship between self-perceived stress and the informal caregiver quality of life 65 years of age or older?

H_{a2}: There is a statistically significant relationship between self-perceived stress and the informal caregiver quality of life 65 years of age or older.

H₀₂: There is no statistically significant relationship between self-perceived stress and the informal caregiver and the quality of life 65 years of age or older.

RQ3: What is the relationship between self-perceived stress and the coping skills of the informal caregiver?

H_{a3}: There is a statistically significant relationship between self-perceived stress and the coping skills of the informal caregiver.

H₀₃: There is no statistically significant relationship between self-perceived stress and the coping skills of the informal caregiver.

Threats to Internal and External Validity

Validity is the extent to which a concept is accurately measured in quantitative studies (Thatcher, 2010). There are several internal threats to the validity of this study that will be addressed. The first internal threat may address the self-administered surveys taken by participants who may not feel comfortable and give untruthful responses. The informed consent at the beginning of the survey advised the participants about my study's

confidentiality, and their information will be locked in a secure place. Another internal threat may be because of the current COVID-19 pandemic; people will be taking the survey at home without my in-person assistance because of COVID-19 guidelines. Because of this, the autonomy of the participant who is taking the survey may be threatened. There may be other people in their environment trying to oppose their opinion on the participant who is taking the survey.

My study's external validity may be because the sample population is geared toward older adults (age 65 years or older). The sample will not represent the entire population but will be geared toward the minimum amount needed to conduct my study. This may be viewed as external validity and looked upon as bias. External validity shows whether the study outcomes are transferable to other groups (Thatcher, 2010).

The threats to my study construct validity will be if my operational variables definitions do not match the instrument's actual measurement. To avoid the threat of construct validity, every variable in my study will use evidence-based gold standard measurement instruments with good field testing of reliability and validity psychometrics. I will be using the PSS, WHOQOL-BREF Survey Questionnaire, and the Brief-Cope scales as measuring tools.

Ethical Procedures

Upon receiving approval from IRB # 04-05-22-0742117, I began to conduct my research involving older adults, a vulnerable population. The participant was able to decide to be a part of my study by signing the informed consent agreement, which would

allow them to reject or participate in my study. The participant will be advised that no compensation will be given for participation.

SurveyMonkey was used to gather information from the participants who respond to the surveys created on the site. SurveyMonkey's use will also store all data confidentially, and anonymity assuring the participant is protected. The participant was given my email address and phone number if needed clarification of any questions, concerns, or to ask for the research results. The participant was told that participation in my study is strictly by volunteering. The participant was advised they will have the option of withdrawing from my study at any time if they may feel uncomfortable without penalty. When working with human subjects, the researcher must minimize harm, risk, maximize benefits, respect human dignity, privacy, and autonomy (Shamoo & Resnik, 2009).

Summary

In Chapter 3, I discussed the projected research design and rationale, sampling methods, procedures for recruitment, and data collection and analysis. The instruments used in the study were discussed in detail. I discussed the independent and dependent variables; research questions and hypothesis were restated. The internal and external threats, and ethical procedures were discussed according to the Walden University Institutional Review Board protecting the confidentiality of potential participants.

In Chapter 4, I discussed data collection, the time frame used to complete the research, population, and sampling methods. I will report statistical analysis findings, using tables and figures to illustrate outcomes.

Chapter 4: Results

In this quantitative cross-sectional study, I gathered data on the impact of perceived stress on the informal older caregiver (i.e., 65 and over) who cares for older adults (i.e., 60 and over) with chronic illnesses or disabilities and specifically on these caregivers' physical health, quality of life, and coping skills. The study is unique because the criteria for the age range being researched was different the younger-aged caregivers that some previous studies used (see Srivastava et al., 2016). In this study, I focused on the participants' physical health, quality of life, and coping skills 1 month before they became an informal caregiver.

I designed the research questions to address the impact perceived stress (i.e., the independent variable) had on the dependent variables of physical health, quality of life, and coping skills. The research questions for this study are:

RQ1: What is the relationship between self-perceived stress and the informal caregiver physical health for caregivers 65 years of age or older?

RQ2: What is the relationship between self-perceived stress and the informal caregiver quality of life for caregivers 65 years of age or older?

RQ3: What is the relationship between self-perceived stress and the coping skills of the informal caregiver for caregivers 65 years of age or older?

In this study, the PSS, the WHOQL-BREF, and the Brief COPE Inventory were used to measure how perceived stress impacted the informal older caregiver.

In Chapter 4, I describe the data collection process and results of the three instruments used to address the three research questions. All statistical tests and outcomes were analyzed using SPSS 28.

Data Collection

There was a change in the data collection methods used during the initial field work of this study due to an error in the demographic survey. The first attempt at data collection incorporated a survey tool measuring age range in increments in of 10 years and yielded 33 participants. Due to this, 10 respondents could not be included because they did not meet the criteria requirements. Because the age increments were in the range of 10 years, the prospective participants between ages 50–70 (43.5%) could not be used in the study. The age range of 70–90 represented 10 participants (56.52 %). I needed more participants for my data analysis to be effective. Original data were collected from respondents between April 2022 and February 8, 2023. These data were not used for the study.

I resumed field sampling with a new method after receiving approval from Walden University IRB to use Survey Monkey Audience to collect additional data for the study. The participants' ages in the demographic survey were changed to 5-year increments instead of 10, and the ages ranged from 50 to 100 years of age. I also changed the err of probability to 0.05 from 0.03, which enlarged the minimum sample size to 84. Using Survey Monkey Audience, I emailed all surveys to each participant. I downloaded the survey results into SPSS Version 28, replacing the older SPSS Version 27. Survey Monkey Audience yielded 86 participants, meeting the minimum statistical power

requirement of 84 participants. Data collection from the Survey Monkey Audience took place on February 9, 2023.

Demographics

The demographic population of this study was informal older caregivers aged 65 and over. The demographic data collected included gender, age, relationship to the caregiver, and duration of care. The sample of the participants was $N = 84$). There were no participants who did not answer all the questions in the surveys. The demographic characteristics of gender showed an overwhelming number of participants were female ($n = 63$; 75.0%) compared to male participants ($n = 21$; 25.0%) The age ranges of participants were of 65–70 ($n = 67$; 79.8%), 71–75 ($n =$ nine; 10.7%), 76–80 ($n =$ two; 2.4%), 81–85 ($n =$ one; 1.2%), 86–90 ($n =$ one; 1.2%) 91–95 ($n =$ one; 1.2%), and 96–100 ($n =$ three; 3.6%) The ethnicity of the participants were diverse, with 49 White/Caucasian participants (58.3%), eight African American/Black participants (9.5%), 13 Asian participants (15.5%), one Native American/Alaska Native participant (1.2%), seven Hispanic participants (8.3%), and six other participants (7.1%). The data showed that most caregivers who completed the surveys were the spouse of the older adults ($n = 30$; 35.7%). Adult children ($n = 22$; 26.2%) made up the second highest group, followed by a friend ($n = 12$; 14.3%) and other participants that did not wish to tell who they were caregivers for ($n = 20$; 23.8%). The duration of care ranged from 0–6 months ($n = 16$; 19.0%), 6–12 months ($n = 26$; 31.0%), 12 months to 2 years ($n = 17$; 20.2%), 2–5 years ($n = 10$; 11.9%), and 5 years or more ($n = 15$; 17.9%).

Descriptive Statistics for Independent and Dependent Variables

The descriptive statistics for the independent variable of perceived stress and the dependent variables of physical health, quality of life, and coping skills were calculated. The independent variable of perceived stress had a mean of 42.375, a standard deviation of 8.36031, a minimum 14.00 and a maximum of 65, with a range of 51. The dependent variable of physical health had a mean of 2.3750, a standard deviation of .97273, a minimum of 1.00 and a maximum of 5, with a range of 4. The dependent variable of quality of life had a mean of 2.5125, a standard deviation of 1.0187, a minimum of 1 and maximum of 5, with a range of 4. The dependent variable of coping skills had a mean of 2.5625, a standard deviation of .93921, a minimum of 1 and maximum of 5, with a range of 4. The means and standard deviations of the dependent variables were similar, and their ranges were the same.

External Validity

The population studied was informal older caregivers aged 65 and over who cared for another older adult 60 and over with a chronic disease or illness. I chose the study participants using the convenience sample strategy, which may be considered biased in the selection process (Nikolopoulou, 2022). The minimum number of participants ($n= 84$) is a small portion of the population, and the study can be replicated.

Data Cleanup and Assumptions

The collected data were downloaded from the Survey Monkey Excel spreadsheet into SPSS Version 28. I tested the normal distribution for the continuous variables of physical health, quality of life, and coping skills. I used the Kolmogorov-Smirnova and

Shapiro-Wilk tests to check all three continuous variables for normality. The Kolmogorov-Smirnova and Shapiro-Wilk are tests used to determine the distribution of a single group that differs significantly from a normal distribution (George & Mallery, 2022). The test outcome showed that the quality of life was the only continuous variable normally distributed. Table 3 shows the outcome of both the Kolmogorov-Smirnova and Shapiro-Wilk tests. The Kolmogorov-Smirnov and the Shapiro-Wilk test for physical health showed the p value $\leq .001$. The dependent variable of coping skills, according to Kolmogorov-Smirnov was $p = .099$ and Shapiro-Wilks was $p = .017$ (see Table 1). The determining factor was the use of the Shapiro-Wilk test for all three continuous variables. Figures 1-3 show the normal Q-Q plots for the test of normality for physical health, quality of life, and coping skills.

Table 1

Test of Normality for Physical Health, Quality of Life, and Coping Skills

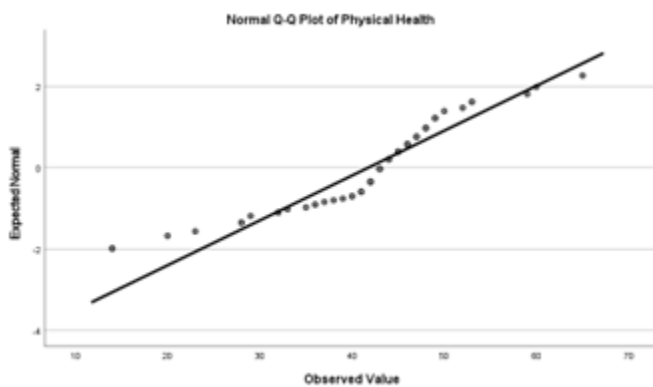
Variable	Kolmogorov-Smirnov ^a			Shapiro--Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Physical health	.217	84	<.001	.883	84	<.001
Quality of life	.052	84	.200*	.986	84	.491
Coping Skills	.089	84	.099	.963	84	.017

*. This is a lower bound of the true significance.

a. Lilliefors significance correction.

Figure 1

Normal Q-Q Plot of Physical Health

**Figure 2**

Normal Q-Q Plot of Quality of Life

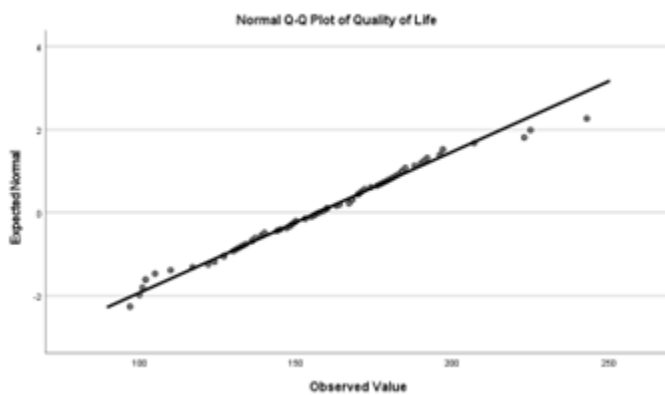
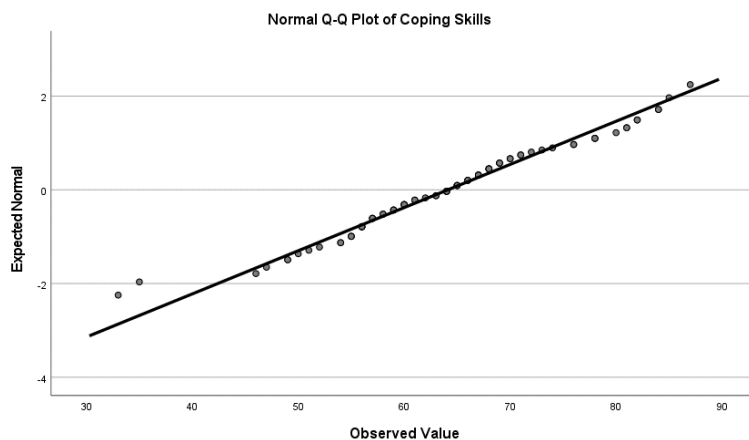
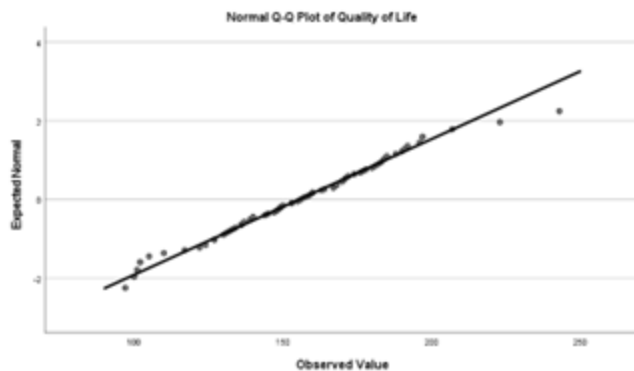
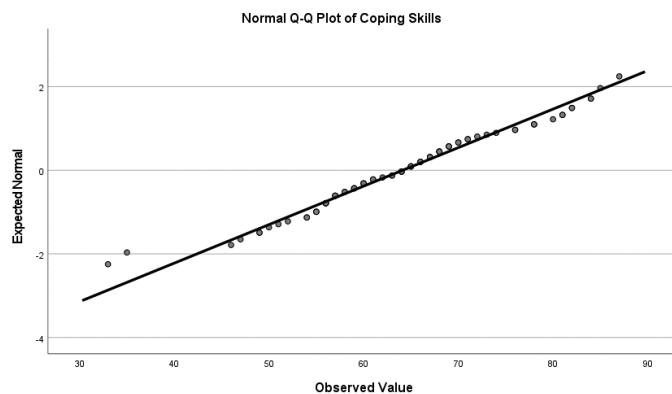


Figure 3*Normal Q-Q Plot of Coping Skills*

Because only one continuous variable (i.e., quality of life) had a normal distribution (Shapiro-Wilk test = .491), I removed several outliers to see if physical health and coping skills would become normally distributed. The data showed multiple outliers in physical health and coping skills caused the data not to be normally distributed. After I removed Outliers 35, 14, 80, and 31, the quality of life and coping skills variables were normally distributed according to Shapiro-Wilk and Kolmogorov-Smirnova tests. The quality-of-life variable had a p value = .561 and coping skills variable had a p value = .230, which enabled me to use Pearson r correlation (see Table 2). Pearson r is a parametric correlation test used when two quantitative variables are normally distributed and provides data about the strength of the relationship between the two (Warner, 2013). Q-Q plots for quality of life and coping skills are exhibited in Figures 4 and 5. After the Outliers 35, 14, 80, and 31 were removed, the continuous dependent variable of physical health still was not normally distributed, $p < .001$. The number of participants was reduced to 80 after I removed the outliers.

Figure 4*Normal Q-Q Plot of Quality of Life***Figure 5***Normal Q-Q Plot of Coping Skills***Table 2***Test of Normality Normal Distribution: Quality of Life and Coping Skills*

Variable	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Physical health	.217	80	<.001	.891	84	<.001
Quality of life	.042	80	.200*	.986	84	.561
Coping skills	.064	80	.200*	.980	84	.230

*. This is a lower bound of the true significance.

a. Lilliefors significance correction.

The continuous variable physical health still needed to be normally distributed; therefore, I used a logarithmic transformation (LG10) for physical health to see if the

variable would be normally distributed. Logarithmic transformations are sometimes used to reduce the impact of outliers and make the distributions nearly normally distributed (Warner, 2013). After this test, the continuous variable physical health was still not normally distributed. The LG10 showed the Kolmogorov-Smirnova and the Shapiro-Wilk $p = <.001$ (see Table 3). Therefore, it was necessary to use a nonparametric test to test the hypotheses. Physical health the continuous variable was changed from an ordinal variable to a categorical variable. Changing the ordinal variable of physical health to a categorical variable allowed a Pearson's chi-square test to be used. The Pearson's chi-square can be used to test a hypothesis about one or more categorical variables; the sample population was randomly selected, and there will be a minimum of five observations expected in each group (Turney, 2022). Pearson's chi-square goodness of fit was used to test the frequency to see whether the frequency distribution of the categorical variable is different from the expectations (see Turney, 2022). Figure 6 shows the normal Q-Q plot for the LG10 for physical health.

Table 3

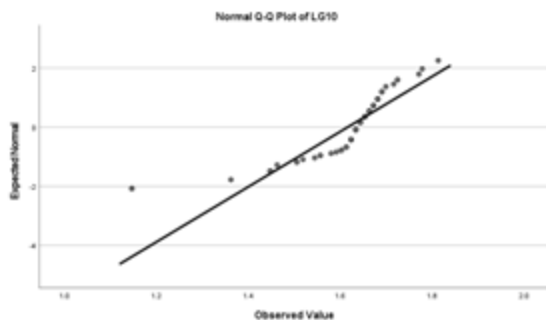
LG10 Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistics	<i>df</i>	Sig.	Statistics	<i>df</i>	Sig.
LG10	.262	80	<.001	.757	80	<.001

^a. Lilliefors Significance Correction

Figure 6

LG10 Normality Test



After the removal of the outliers the demographic characteristics of gender still showed an overwhelming number of participants were female $n= 58$ (72.5%), male participants $n= 21$ (26.3%), and preferred not to answer the gender specification question 1(1.3%). The age range of 65-70 was $n= 65$ (81.3%), 71-75 $n= 8$ (10.0%), 76-80 $n= 2$ (2.5%), 81-85 $n= 1$ (1.3%), 86-90 $n= 1$ (1.3%) 91-95 $n= 1$ (1.3%), and 96-100 $n= 2$ (2.5%) The ethnicity of the participants were diverse, White/Caucasian $n= 46$ (57.5%), African American/Black $n= 8$ (10.0%), Asian $n= 12$ (15.05), Native American/Alaska Native $n= 1$ (1.3%), Hispanic $n= 7$ (8.8%) and other 6 (7.5%). The data showed that most caregivers who completed the surveys were the spouse of the older adults $n= 29$ (36.31%). The adult children 22 $n= 8$ (27.5%) was the second highest, followed by friend $n= 10$ (12.5%) and other participants that did not wish to tell who they were caregivers for was $n= 19$ (23.8%). The duration of care ranges from 0-6 months $n= 14$ (17.5%), 6-12 months $n= 25$ (31.3%), 12 months to 2 years $n= 17$ (21.3%), 2-5 years $n= 10$ (12.5%) and 5 years or more $n= 14$ (17.5%). The data collected shows most

participants have cared for someone with a with a disability chronic illness was 6-12 months.

Results

The study was comprised of three research questions for this study. The research questions have the same independent variable perceived stress, and three dependent variables, physical health, quality of life, and coping skills. Each research question had an instrument to measure how perceived stress impacts the informal elder caregiver aged 65 who cares for another older adult 60 years or older. The Perceived Stress Scale was to measure the dependent variable of physical health. The WHOQOL BREF Scale was used to measure the dependent variable quality of life. The Brief Cope Inventory Scale was used to measure the impact of perceived stress on the dependent variable coping skills. Table 4 shows descriptive statistics for the three instruments, Perceived Stress Scale, Quality of Life Scale, and the Brief Cope Scale.

Table 4

Descriptive Statistics: Perceived Stress Scale (Perceive Stress, Quality of Life, and Brief Cope Scale

	<i>N</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>
Physical health	80	14.00	65.00	42.4375	8.36031
Quality of life	80	97.00	243.00	155.4875	29.00851
Coping skills	80	33	87.00	64.1125	10.85928

Before each research question, the participants were asked how they perceived their physical health, quality of life, and coping skills were 1 month before they became informal caregivers. The question asked allowed the participants to reflect on how their

lives have changed, if any, since becoming informal elderly caregivers. This was used as a baseline for the data analysis for each dependent variable.

The ordinal level survey question that asked the participants how they perceived their health was one month before becoming a caregiver showed 28 (35.0%) perceived their health to be very good, 28 (35.0%) perceived their health as good, 16 (20.0%) perceived their health was excellent, 6 (7.5%) fair and 2 (2.5%) as poor. The outcomes show that 90% of the participants perceived their physical health as being very good, good or excellent. Whereas a small number (10%) perceived their physical health was either fair or poor.

Research Question 1

RQ1: What is the relationship between self-perceived stress and the informal caregiver physical health for caregivers 65 years of age or older?

H_{a1}: There is a statistically significant relationship between self-perceived stress and the informal caregiver physical health for caregivers 65 of age or older.

H₀₁: There is no statistically significant relationship between self-perceived stress and the informal caregiver physical health for caregivers 65 of age or older.

To measure the perceived stress's impact on the informal older caregivers' lives, I used the PSS adopted by Cohen et al.1983. The purpose of the scale was to determine how people perceive and endure stress over a period. Cohen et al. 1983 designed the scale to measure how unpredictable, uncontrollable, or stressful people felt (see Table 5).

The participants' scores evaluated the perceived stress levels and health concerns descriptive statistics for physical health. The scoring range began with identifying how each was related to the person's perceived stress level and health concerns. The higher the score, the higher the participant's perceived stress level and health concerns.

Table 6 exhibits the frequency of how each participant scored according to the scale after taking the self-assessment survey, Perceived Stress Scale. The outcome showed two participants (2.5%) perceived stress was average, and Health Concerns were very low. Seventy-eight participants (97.5%) were rated Much Higher than Average, and Health Concerns Level was Very High.

The score for the 1-month survey question had a total of 2 (2.5%), which was rated poor. The score for the 1-month survey calculated the number of participants, 78 (97.5%), and was rated very good and good at 35.0% (28), followed by excellent at 16%, (16) fair at 6% (6) initially. After the survey was taken, the survey was scored using the PSS designed by Cohen et al.1983. The participants' Perceived Stress Levels were scored as average 2 (2.5%) with Very Low Health Concerns. Most participants rated Much Higher than average with Very High Health Concerns 78 (97.5%). The PSS scoring indicates the perceived stress's impact on the informal elderly caregiver increased and has a negative effect on most of their physical health (See Table 10).

Table 5*Cohen's Perceived Test Scoring*

Total Score	Perceived Stress Levels	Health Concerns Level
0-7	Much Lower than Average	Very Low
8-11	Slightly Higher than Average	Low
12-15	Average	Average
16-20	Slightly Higher Average	High
21 and over	Much Higher than Average	Very High

Note: From A global measure of perceived stress, *Journal of Health and Social Behavior*, 24, 386-396. by Cohen, S., Karamack, T., & Mermelstein, R. (1983).

Table 6*Physical Health Scoring After Taking the Survey*

Scoring	<i>F</i>	%	Health Concern Level
Average	2	2.5	Average
Slightly higher than average	0	0%	High
Much higher than average	78	97.5%	Very high
Total	80	100%	

Note. 12-15 = average, 16-20 slightly higher than average, 21 and over = much higher than average.

A Pearson's Chi-Square test was performed to measure perceived stress's impact on the informal caregiver's physical health. The test was Pearson's Chi-Square goodness of fit which will determine whether a categorial variable will follow a hypothesized distribution (Turney, 2022); The output is the descriptive statistics for the categorial variable physical health with a mean of 2.9500, and a standard deviation of .31422. The minimum is 1, and the maximum is 3, with a range of 2. The value of n=80 is the number of participants.

The frequencies of the Pearson's Chi-Square test showed the observed $N=2$, the expected=40 and the residual is-38.0. The observed $n=78$ with an expected $n=40$ and a residual of 38. The observed frequency is what you actually observed whereas the expected frequency is what is expected based on the null hypothesis (Turney, 2022).

The Chi-Square test statistic of the dependent variable results was 72.200^a. The degree of freedom was 1 and $p < .001$. The p value is less than the $p < .05$ and therefore we can reject the null hypothesis. There is a statistically significant relationship between self-perceived stress and the informal caregiver physical health for caregivers 65 of age or older.

Research Question 2

RQ2: What is the relationship between self-perceived stress and the informal caregiver quality of life for caregivers 65 years of age or older?

H_{a1} : There is a statistically significant relationship between self-perceived stress and the informal caregiver quality of life for caregivers 65 of age or older.

H_{01} : There is no statistically significant relationship between self-perceived stress and the informal caregiver quality of life for caregivers 65 of age or older.

To address the second research question, I used the WHOQOL-BREF Survey to display the impact perceived stress had on the informal elderly caregiver aged 65 caring for another elderly adult (aged 60 and over). The purpose of the scale was to determine how people perceive and endure stress over a period.

The question was asked how the participants perceived their quality of life was 1 month before they became a caregiver. A vast number of participants perceived their quality of life as very good 29 (36.3%), good 24 (30.0) and as excellent 13(16.3%). There was a small number of participants who perceived their quality of life as fair 12 (2), and poor 2 (2.5%).

The WHOQOL BREF Survey is a combination of 26 questions. The first two questions of the survey reflect the overall quality of life and the general health of the participants. The remaining 24 questions are divided into four domains physical health, psychological, social relationships, and environment. The scoring of the domains is based on the original WHOQOL Survey which consisted of 100 questions. The mean scores for each domain are multiplied by 4 so that they are comparable to the original survey of 100 questions. The higher the mean score the more satisfied the participant is with their quality of life. The mean scores are scaled in a positive direction. The scoring values are <45 low quality of life, 46 to 65 is a moderate quality of life, and >65 is a relatively high quality of life (Abd El Latif et al., 2016). The descriptive statistics for the four domains are exhibited in Table 7. According to the descriptive statistics the participants perceived their lives as having a moderate quality of life.

Table 7

Quality of Life Descriptive Statistics of the Four Domains

	<i>N</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>
QOL physical	80	16.00	80.00	48.5714	9.38204
QOL psychological	80	26.67	74.67	47.9333	10.01355
QOL social relationships	80	16.00	80.00	47.933	10.01355
QOL environment	80	25.14	80.00	53.1714	11.22565

The outcome of the first question regarding the participant's overall quality of life, 35 (43.8%) perceived their life as good, 11 (3.8%) perceived their life as very good, 18 (22.5%) perceived their life as neither both poor or good, 11 (13.8%) perceived their life as poor, and 5 (6.3%) perceived their life as very poor (See Table 8). The total amount of participants that perceived their overall quality of life as favorable was 46 (57.6%). The survey question one month before becoming a caregiver showed that the participants perceived their quality of life as very good 29 (36.3%), good 24 (30.0%), and excellent 13 (16.3 %), totaling 66 (82.6%). There was a significant difference in response to both questions answered by the participants. The outcome of the survey questions from the WHQOL Survey suggests that the informal elderly caregiver may be acquiring more stress while taking care of the older adult 60 years and older at that time.

Table 8

Quality of Life Participants Ratings

	Frequency	Percent	Valid percent	Cumulative percent
Valid Very poor	5	6.3	6.3	6.3
Poor	11	13.8	13.8	20.0
Neither poor nor good	18	22.5	22.5	42.5
Good	35	43.8	43.8	86.3
Very good	11	13.8	13.8	100.0
Total	80	100.0	100.0	

The participants responded to their general health on the WHOQOL BREF Survey question as neither satisfied nor dissatisfied 28 (35.0%), satisfied 28 (35.0%), dissatisfied 26 (20%), very satisfied 5 (6.3%), and 3 (3.8%) very dissatisfied. 3 (41.3 %) of the participants responded to being satisfied or very satisfied with how they perceived their health. The remaining (49) 51.7% of the participants were neither satisfied nor

dissatisfied, very dissatisfied, or satisfied, which might suggest that the informal elderly caregiver appeared unhappy in their caregiving role when the survey was taken (See Table 9).

Table 9

Quality of Life Participants General Health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very dissatisfied	3	3.8	3.8	3.8
	Dissatisfied	16	20.0	20.0	23.8
	Neither satisfied nor dissatisfied	28	35.0	35.0	58.8
	Satisfied	28	35.0	35.0	93.8
	Very satisfied	5	6.3	6.3	100.0
	Total	80	100.0	100.0	

According to the descriptive statistics in Tables 10–13, the participants perceived their lives as having a moderate amount of perceived regarding quality of life. Each domain scored in the moderate range according to the WHOQOL BREF Survey scoring rating. The scores ranged between 46 to 65, which reflects a moderate amount of stress on their quality of life. The four individual domains, physical health 54 (67.5%), psychological 47 (58.8%), social relations 48 (60.0%), and environment 50 (62.5%) reflect the same outcome each exhibited a moderate range. The participants perceived they experienced a moderate amount of perceived stress when measured with the WHOQOL BREF Survey.

Table 10*Quality of Life Physical Health Domain 1*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Low	23	28.7	28.7	28.7
	Moderate	54	67.5	67.5	96.3
	Relatively high	3	3.8	3.8	100.0
	Total	80	100.0	100.0	

Table 11*Quality of Life Psychological Domain 2*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Low	27	33.8	33.8	33.8
	Moderate	47	58.8	58.8	92.5
	Relatively high	6	7.5	7.5	100.00
	Total	80	100	100	

Table 12*Quality of Life Social Relationships Domain 3*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Low	22	27.5	27.5	27.5
	Moderate	48	60.0	60.0	87.5
	Relatively high	10	12.5	12.5	100.00
	Total	80	100.0	100.0	

Table 13*Quality of Life Environment Domain 4*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Low	19	23.8	23.8	23.8
	Moderate	50	62.5	62.5	86.3
	Relatively high	11	13.8	13.8	100.0
	Total	80	100.0	100.0	

The Pearson r correlation test was conducted to determine if there is a statistically significant relationship between self-perceived stress and the informal caregiver quality of life for caregivers 65 years of age or older. The Pearson r -test output showed a weak positive correlation of .170. According to Turney (2022), a positive Pearson r correlation is when one variable changes, and the other changes in the same direction. The correlation is weak because the strength is between 0 and .3 (Turney, 2022). The $p = .133$ is more than .05; therefore, the null hypothesis is accepted but would be considered insignificant as the study showed no statistically significant relationship between self-perceived stress and the informal caregiver quality of life for caregivers 65 years of age or older.

Research Question 3

RQ3: What is the relationship between self-perceived stress and the coping skills of the informal caregiver for caregivers 65 years of age or older?

H_{a3} : There is a statistically significant relationship between self-perceived stress and the coping skills of the informal caregiver. for caregivers 65 years of age or older.

H_{03} : There is no statistically significant relationship between self-perceived stress and the coping skills of the informal caregiver for caregivers 65 years of age or older.

Before each participant took the Brief Cope Survey, they were asked how their coping skills were 1 month before becoming an informal elderly caregiver. Table 14 shows the response to the question answered by the participants. About one third of the

participants perceived their coping skills as good 31 (38.8%), 26 (32.5%) perceived their coping skills as good, excellent, and fair perceived by participants as 11 (13.8%), and poor 1 (1.3%).

Table 14

Coping Skills 1-Month Before Becoming a Caregiver

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Excellent	11	13.8	13.8	13.8
	Very good	26	32.5	32.5	46.3
	Good	31	38.8	38.8	85.0
	Fair	11	13.8	13.8	98.8
	Poor	1	1.3	1.3	100.0
	Total	80	100.0	100.0	

The Brief Coping Survey is comprised of 28 questions with 14 subscales. It is a self-reported used to measure the coping response to stress Carver, 1997. Each question is scored on a Likert scale (1) I haven't been doing this at all; (2) I've been doing this a little bit; (3) I've been doing this a medium amount; (4) I've been doing this a lot. The self-assessed survey questionnaire measures stress when people cope with a stressful life event (Carver, 1997). Carver (1987) did not provide a scale to measure stress and permitted the researcher to use the rankings according to their study. The three coping styles chosen for this study are Problem-Focused, Emotion-Focused, and Avoidant-Focused. The measure adopted was for each coping style, Problem-Focused Coping, Emotion-Focused Coping, Avoidant-Focused Coping. Each coping style measurement had to be calculated separately using the questions designed by Poulus et al. (2020). Questions from each subscale were used to make up the three coping styles. The

descriptive statistics of the three coping styles were used to determine the minimum and maximum number of participants for each coping style (see Table 15).

Table 15

Coping Skills Descriptive Statistics

		Problem focused	Emotion focused	Avoidant focused
N	Valid	80	80	80
	Missing	0	0	0
	<i>M</i>	19.3875	27.9500	16.8375
	<i>SD</i>	4.01735	5.13588	4.11679
	Minimum	9.00	13.00	8.00
	Maximum	32.00	38.00	8.00

The Problem-Focused Coping style is derived from questions (2, 7,10, 12, 14,17, 23, and 25) involving active coping, the use of informal support, planning, and positive reframing from the Brief Cope Scale Inventory (Buchanan & Hegarty,2021). Buchanan and Hegarty (2021) view high scores as the psychological strength of the participant. The Problem-Focused Coping style exhibited a minimum of 9.00 and a maximum of 32.00. The range was 23. I averaged each question of the Problem-Focused Coping style to get the numbers for the frequency and percentages of the selection, not at all, a little bit, a medium amount, and a lot. Most of the participants, 38 (47.5%), perceived stress as a little bit, 24 (30.0%) perceived stress as a medium amount, and 10 (12.5%) perceived stress as a lot. According to Buchanan and Hegarty, informal caregivers experience a little bit of stress. The input of the frequency and percentage output is exhibited in Table 16.

Table 16*Coping Skills: Problem-Focused Coping*

	Frequency	Percent	Valid percent	Cumulative percent
Not at all	8	10	10	10
A little bit	38	47.5	47.5	57.5
A medium amount	24	30.0	30.0	87.5
A lot	10	12.5	12.5	100.00
Total	80	100.00	100.00	

The Emotional Focused Coping style is from the questions (5, 9, 13, 15, 18, 20, 21, 22, 24, 26, 27, 28) characterized by venting, use of emotional support, humor, acceptance, self-blame, and religion (Buchanan & Hegarty, 2021). The Emotion-Focused Coping style minimum was 13.00, and the maximum was 38.00. The range was 25. Frequencies and percentages from the minimum of 13 to the to the maximum of 38. I averaged each question of the Emotion -Focused Coping style to get the numbers for the frequency and percentages of the selection, not at all, a little bit, a medium amount, and a lot. Most of the participants perceived stress as a little bit 33 (41.3%), a medium amount 19 (23.8%), 19 not at all, and 9 (11.1%) a lot. In Emotion-Focused Coping, a high score indicated coping strategies were aimed at regulating emotions associated with stressful situations (Buchanan & Hegarty, 2021). The high score of as little bit 33 (41.3%) showed the informal caregiver regulating their stressful situations. The input of the frequencies and percentages averages is exhibited in Table 17.

Table 17*Coping Skills: Emotion-Focused Coping*

	Frequency	Percent	Valid percent	Cumulative percent
Not at all	19	23.8	23.8	23.8
A little bit	33	41.3	41.3	65.1
A medium amount	19	23.8	23.8	88.9
A lot	9	11.1	11.1	100.00
Total	80	100.00	100.00	

The Avoidant-Focused Coping style questions (1, 3, 4, 6, 8, 11, 16, 19) are characterized by self-distraction, denial, substance use, and behavioral disengagement. According to Buchanan (2021), a low score indicates that participants are adapting to coping. The Avoidant-Focused Coping style minimum was 8.00, and the maximum was 26. The range was 18. I averaged each question of the Avoidant-Focused Coping style to obtain the numbers for the frequency and percentages of the selection, not at all, a little bit, a medium amount, and a lot. Most of the participants perceived stress as a little bit, 34 (42.5%), not at all, 23 (28.7%), 16 (20.0%), a medium amount, and 7 (8.8%) a lot. The low 7 (8.8) score shows that very few people adapt to Avoidant-Focusing Coping. The input of the frequency and percentage output is displayed in Table 18.

Table 18*Coping Skills: Avoidant Problem Focused*

	Frequency	Percent	Valid percent	Cumulative percent
Not at all	23	28.7	28.7	28.7
A little bit	34	42.5	42.5	71.2
A medium amount	16	20.0	20	91.2
A lot	7	8.8	8.8	100.00
Total	80	100.00	100.00	

After taking the self-assessed survey The Brief Cope, the outcome showed most participants experience a little bit of perceived stress.

The Pearson r correlation test was conducted to determine if there is a statistically significant relationship between self-perceived stress and the informal caregiver coping skills for caregivers 65 years of age or older. The Pearson r -test output showed a significantly weak positive correlation of .112. As mentioned before Turney (2022) defines a positive Pearson r correlation as when one variable changes, and the other changes in the same direction. The correlation is weak because the strength is between 0 and .3 (Turney, 2022). The p -value= .324 is more than .05; therefore, the null hypothesis is accepted. This was insignificant as no statistically significant relationship between self-perceived stress and the informal caregiver coping skills for the informal caregiver 65 years of age or older was found. The results of the Brief Cope Inventory if in direct correlation with the Pearson r test outcome.

Summary

In this study, 80 informal elderly caregivers were selected using Survey Monkey Audience to find the relationship between self-perceived stress and their physical health, quality of life, and coping skills. Three instruments, the PSS, WHOQOL BREF Survey, and Brief Coping Inventory, were used to measure each participant's perceived stress. Before taking the surveys, participants were asked how they perceived their physical health, quality of life, and coping skills. 90% of the participants answered favorably (see Table 7). The first research question, the PSS and Chi-Square test, were used to measure the impact of perceived stress on their physical health. The PSS and the Chi-Square test

revealed a statistically significant relationship between perceived stress and the informal caregiver's physical health for caregivers 65 or older. The results of the test showed that the physical health of perceived stress was harmful to the informal caregivers 65 and older who care for other older adults 60 years and older (See Table 9 and Table 12),

The second research question, perceived stress, was measured by the WHOQOL BREF Survey, which had 26 questions. This question asks about the informal caregiver's self-perceived overall quality of life, including physical health, and the relationship to self-perceived stress levels. Before taking the survey, the participants were asked how they perceived their quality of life one month before becoming a caregiver. 41.3 % of the participants answered favorably (see Table 15). The survey had four domains regarding the caregiver's physical, psychological, and social relationships and environment. The outcome of the WHOQOL BREF Survey showed that the informal elderly caregiver stress level was moderate in all four domains (see tables 17-20). The statistical significance of the relationship and quality of life of the informal caregiver was tested by Pearson r correlation. The test outcome showed no statistically significant relationship between perceived stress and the relationship between perceived stress and informal caregivers' quality of life for caregivers 65 or older. The participants mostly answered that they experienced a little bit of perceived stress on the self-assessed WHOQOL BREF Survey questions. There was a slight difference in the WHOQOL and Pearson's r correlation outcome.

The Brief Cope Inventory and Pearson's r were used to measure perceived stress and statistical significance of the relationship between the variable coping skills and the

informal elderly caregiver. Before answering the survey, each participant was asked how their coping was one month before becoming a caregiver. 85.1% of the informal elderly caregivers responded favorably. The Brief Cope Inventory consists of 28 questions with three domains Problem-Focused, Emotion-Focused, and Avoidant-Focused. Carver (1987) did not have a scale to rate the domains, and I created a scale using the averages of each domain and frequencies. Though the Brief Cope Inventory outcomes each showed a little bit of perceived stress had on the informal elderly caregiver's life (see Tables 24, 26, and 28), the results were insignificant as Pearson's r correlation showed no statistically significant relationship between self-perceived stress and the informal caregiver coping skills for the informal caregiver 65 years or older. The Brief Cope Inventory and Pearson's r correlation were similar in their findings. In Chapter 5, I discussed the interpretations of the research findings, limitations, social implications, and future recommendations.

Chapter 5: Discussion, Conclusions, and Recommendations

Interpretation of the Findings

In The literature review, I found that perceived stress can harm the informal older caregiver's physical health, quality of life, and coping skills. Most researchers have studied many aspects of informal caregiving provided by people of different ages, from 18 to as old as 85. The purpose of this quantitative study was to address the gap in current research related to the paucity of literature regarding informal caregivers aged 65 and over who care for another older adult. I sought to understand the relationship between the perceived stress of the informal older caregiver aged 65 and over and their physical health, quality of life, and coping skills while caring for another older adult.

In this quantitative, cross-sectional, self-survey study, I incorporated correlation statistics to measure relationships. Three research questions with corresponding hypotheses were designed using the independent variable of perceived stress and the dependent variables of physical health, quality of life, and coping skills to measure the amount of perceived stress of informal older caregivers and test the hypotheses.

Perceived Stress and Physical Health

Research Question 1 was focused on the relationship between perceived stress and the informal older caregivers' physical health. I found that the measurement of perceived stress 1 month before participants took the PSS indicated that most participants reported their physical health as favorable, suggesting that the participants were satisfied with their physical health when asked. One month after taking the PSS, the data suggested informal caregivers perceived their stress as much higher than average, and

their health concerns were very high. The results were the opposite of the earlier PSS measurement, suggesting that when the survey was taken, the informal elderly caregiver perceived their caregiver roles as stressful. The results also indicate that while the person was taking the survey, they could think about their caregiving role. The ethnicity of the participants was diverse, which may be the cause of the differences in the answers. Several studies in India and Brazil have examined informal caregivers caring for the older population and found statistically significant stress-related differences in perceptions of stress and the perceived physical effects of caregiving (Coppetti et al., 2019; Srivastava et al., 2016). In these cultures, the male is dominant in their society, and the caregiver's expectation falls on women because of their caring nature. Overall, all studies reviewed indicated that the ethnicities of informal caregivers may play a vital role in their responses to the surveys.

To measure if there was a statistically significant relationship between perceived stress and informal older caregivers' physical health, I used Pearson's chi-square. The results indicated there was a statistically significant relationship between perceived stress and physical health. This outcome was the same as other studies that suggested that adverse health outcomes and the relationship between informal self-care showed participants a small elevation of perceived stress (see Pope et al., 2017).

Perceived Stress and Quality of Life

The second research question focused on the relationship between perceived stress and the quality of life of the informal older caregiver. I used the WHOQOL-BREF Survey to measure the perceived stress related to quality of life. Before taking the

WHQOL-BREF Survey, participants rated their quality of life as favorable 1 month before. After taking the WHQOL-BREF, the survey results indicated that the participants viewed perceived stress moderately in all four domains: physical health, psychological, social relationships, and environment. The difference in the results shows that the participants may only have perceived their roles after taking the survey, which may indicate that the participants took their caregiver roles in stride, not looking at being a caregiver as a role but as a way of life. The ethnicities of the participants may have again played a part in the responses because the survey was in the English language only, and the traditions of the participants' cultures may have varied.

To determine if there was a significant relationship between quality of life and coping skills, I used Pearson's *r*. The findings showed no statistically significant difference between perceived stress and quality of life, and though not statistically significant, the results did indicate that the informal caregiver experienced moderate stress in physical health, psychological, social relations, and the environment. The results suggest that the informal caregiver may have been experiencing conflicting perceptions when responding to how they perceive stress 1 month before taking on the caregiver role.

This study had participants from diverse ethnic groups taking the self-assessed surveys. Every culture has its traditions and beliefs and because of this, the quality of life may differ because of the cultural norms of the informal older caregivers. The difference in the ethnic groups may have affected the data collected for this study. Some caregivers believe they must care for their ill loved ones and feel they are paying them back for the

care they gave them (Yamaguchi et al., 2016). In some cultures, when older adults become ill and it is time to assume their role as a caregiver, they may feel their lives have been turned upside down and have no other option (Peacock et al., 2017). In Africa, there are few nursing homes, and according to tradition, family members assist older adults with the care recipient's daily needs. According to Farboni and Olaogun (2017), informal caregivers who attend to older adults experience burdens from poor health, financial difficulties, isolation, and psychological disturbances that affect their quality of life. Lack of choice can be a risk factor for declining health (Aloweni et al., 2019). These studies suggested that stress adversely affects the caregiver's quality of life. The current study results indicate that stress may be perceived differently because of the different cultures and traditions.

Perceived Stress and Coping Skills

The third research question focused on the relationship between the independent variable of perceived stress and the dependent variable of coping skills. I used the Brief COPE Inventory to measure the perceived stress for coping skills. Before taking the Brief COPE Inventory, the participants viewed their perceived stress as favorable 1 month before becoming an informal older caregiver. The results of the Brief COPE Inventory indicated that the participants perceived their stress level related to coping skills as having little stress in all three domains: problem-focused coping, emotion-focused coping, and avoidant-focused coping. This may indicate that the participants are adapting to coping. The small amount of stress may have been that the person may have felt stress while taking the survey. The difference in the results may reflect the cultural norms of the

participants. This study had a diverse population of participants from several ethnic groups. As mentioned, people of different ethnic groups have different traditions and values, which may have affected their answers of the survey questions.

To test the relationship between perceived stress and coping skills, I used Pearson's r and found there was no statistically significant relationship between perceived stress and coping skills. The outcome was the opposite in other studies, and they indicated a statistically significant relationship. For instance, Farboni (2018) used the Brief COPE Inventory to study stress in Osun State, Nigeria and reported that emotion-focused coping, dysfunctional-focused coping, and problem coping were consistently significant in all domains researched.

Limitations of the Study

As with all studies, there were limitations in the current study. The inclusion criteria for this study targeted informal caregivers aged 65 and over caring for another older adult. Anyone who was under the age of 65 was excluded. I chose participants using convenience sampling instead of random sampling, which may have yielded more participants. The study did not include additional variables, such as socioeconomic factors, mental and spiritual health, and education. There was no specification of diseases and chronic illnesses of the care recipient in this study. I collected data from participants in the United States only.

The study was a self-assessed survey with multiple questions to answer for each survey, which may have led to a lack of understanding for some participants. There may have been some confusion in answering the questions because the wording was only in

English. The data collected showed that participants of multiple ethnicities took part in this study. I should have provided the survey questions in different languages to accommodate people of different ethnicities. This change may produce different results in the surveys the participants took.

Recommendations for Further Study

This study addressed the gap in the literature regarding informal older caregivers caring for another older adult. I sought to determine the relationship between perceived stress and the physical health, quality of life, and coping skills of informal older caregivers 65 and older. Previous studies have researched informal caregivers caring for one another while recommending additional research on how informal caregivers perceive stress (Bom et al., 2019). As mentioned before, Oliveria et al. (2019) researched informal caregivers in the United Kingdom with care recipients with dementia who perceived caring for another person as unfavorable. The researchers agreed with previous studies, suggesting that more research is needed for older informal caregivers caring for another person with dementia.

The study limitations present opportunities for future research. For example, changing the recruitment age for participants to 60 years old and older may allow for more participants to be recruited for future research. Changing the sampling method from convenience to random selection may be more feasible for future research. The different methods of recruitment of participants may gain a larger population for the researcher to choose from. The selection of the participants will not just allow for participants to be chosen from readily available people but may give the research a different perspective.

Gender plays a significant role in informal caregiving. Women made up a majority of the participants in the current study. Mott et al. (2019) suggested that women are more emotional and caring, while men were taught to be dominant and not show emotions. Accis (2017) stated that men take an active role in caregiving for their spouses out of necessity. Due to the limited amount of research, more studies must be conducted the male and female caregivers' relationship with perceived stress in response to their physical health, quality of life, and coping skills.

Although this study mentioned the ethnicity of the participants, the results did not give any indication of how each ethnic group perceived stress. Because the study population was composed of diverse ethnic populations, future research surveys should be translated into different languages. Future research studies may also be conducted on a specific ethnic group to see how they are perceived within their culture. Additional future studies could include adding different variables to this study's framework, including region and socioeconomic status. Future researchers could also enrich this study by incorporating the care recipient's viewpoint and comparing it to the informal caregiver's perception of stress.

Pharr (2014) suggested that the different expectations of informal caregivers involve their norms, customs, and values and that these expectations may harm the caregiver's coping with stress, quality of life, and cultural experiences. In future studies using this research, expanding the understanding of how informal caregivers of other nationalities perceived stress would be invaluable. The exploration of the cultural norms

and values of the participants would further enhance results that could be used in future clinical practices.

Another recommendation is that this study be conducted in the future using mixed methods, which would allow for both interviews and focus groups for data collection. The mixture may enrich the findings because it would have a more humanistic view of the topic and would allow interviewers to ask open-ended questions about the participants' experiences as caregivers.

Implications for Social Change

Walden University (n.d., para.1) defined social change as “A deliberate process of creating and applying ideas and actions to promote the worth, dignity, and development of individuals, communities, organizations, cultures, and societies. Positive social change improves human and social conditions” . As a positive social change initiative, I conducted this study to understand the impact of perceived stress on the informal caregiver's physical health, quality of life, and coping skills. The results of this study forecast the need for additional research targeting formal caregivers aged 65 and older and their perceptions of the impact of stress on their physical health, quality of life, and coping skills.

The study outcomes using the PSS suggest that self-perceived stress was dominant in physical health, indicating how social change is viewed and the impact on the physical health of the informal caregiver. This study's outcomes reflect the need for additional resources and policies around perceived stress and physical health. The PSS outcome indicated that informal caregivers had very high health concerns and showed a

significant relationship between perceived stress and physical health. This study's results may promote social change by being used to recommend policies to educate informal caregivers on reducing or eliminating perceived stress. This study may direct the development of policies for the informal caregiver to receive education in both the community and at home. The policies can be created at the local, state, and federal government levels, targeting informal caregivers' education, training, and needs.

The need for all levels of stress to be eliminated is of great importance to society. The results of this study can be used to create clinical interventions focusing on ways to support and train the older informal caregivers in their roles (i.e., caregiver workshops, life support training). The study's outcomes justify the need for positive social change to effectively address the perceived stress in informal caregivers' lives. This study may inspire other researchers to further study how perceived stress impacts the informal elderly caregiver.

Conclusion

Today, people live longer because of advances in medical science, and the need for informal elderly caregivers has increased. Because of this, many aging people might face unexpected responsibilities as informal older caregivers. As discussed in the literature review, according to Osmanovic-Thunström et al., (2015), the more a person increases in age, the less they can tolerate stress.

I conducted this study to determine the relationship between perceived stress and the physical health, quality of life, and coping skills of the informal caregiver aged 65 and older who cared for another older adult (i.e., 60 years and older). The findings of this

study contribute data to the literature on how the impact of chronic stress affects the older caregiver's physical health, quality of life, and well-being (see Miyawaki et al., 2020).

This study also adds to the existing literature regarding how informal caregivers 65 and over who care for another older adult with chronic illness and disabilities perceive stress.

The results of this study do not reflect how all informal older caregivers perceive stress, but the results highlight a need for future research on the topic.

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Appendix A: Survey

Demographic**What is your current age?**

- (1) 65-70
- (2) 71-75
- (3) 76-80
- (4) 81-85
- (5) 86-90
- (6) 91-95
- (7) 96-100

What is your gender?

- (1) Male
- (2) Female
- (3) Prefer not to answer

Which of the following best describes your race or ethnicity?

- (1) White/Caucasian
- (2) African American/Black
- (3) Asian
- (4) Native American/Alaska Native
- (5) Hispanic
- (6) Other

Relationship to the Caregiver

- (1) Spouse
- (2) Adult Children
- (3) Friend

Duration of Care

- (1) 0-6 months
- (2) 6- 12 months
- (3) 12 months -2 years
- (4) 2-5 years
- (5) 5 years or more

Question 1: What is the relationship between self-perceived stress and the informal caregiver physical health?

1. Would you say your physical health one month before becoming a caregiver:
!1) Excellent

(2) Good

(3) Very good

(4) Fair

(5) Poor

Perceived Stress (Perceived Stress Scale-Cohen S., Karmarck T., Mermelstein R. (1983)

This questionnaire asks how you may feel about the stress you encounter being a caregiver. If you are unsure about which response to give to a question, the first response you think of is often the best. Please read each question, assess your feelings, and select the best option on the scale after each question.

Q1 In the last month, how often have you been upset because of something that happened unexpectedly?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q2 In the last month, how often have you felt that you were unable to control important things in your life?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q3 In the last month, how often have you felt nervous and “stressed”?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q4 In the last month, how often have you dealt successfully with irritating life hassles?

- Never

- Almost never
- Sometimes
- Fairly often
- Very Often

Q5 In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q6 In the last month, how often have you felt confident about your ability to handle your personal problems?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q7 In the last month, how often have you felt that things were going your way?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q8 In the last month, how often have you found that you could not cope with all things that you had to do?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q9 In the last month, how often have you been able to control irritations in your life?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q10 In the last month, how often have you felt that you were on top of things?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q11 In the last month, how often have you been angered because of things that happened that were outside of your control?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q12 In the last month, how often have you found yourself thinking about things that you have to accomplish?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q13 In the last month, how often have you been able to control the way you spend your time?

- Never
- Almost never
- Sometimes
- Fairly often
- Very Often

Q14 In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

- Never

- Almost never
- Sometimes
- Fairly often
- Very Often

Quality of Life

Question 2: What is the statistically significant relationship between self-perceived stress and the informal caregiver quality of life?

1. Would you say your quality of life one month before becoming a caregiver:

- (1) Excellent
- (2) Good
- (3) Very good
- (4) Fair
- (5) Poor

Quality of Life (WHOQOL-BREF The Who Group 1998)

This questionnaire asks how you feel about your quality of life, health, or other areas of your life. Please answer all the questions and choose the most appropriate answer. If you are unsure about which response to give to a question, the first response you think of is often the best. Please read each question, assess your feelings, and select the best option on the scale after each question.

1. How would you rate your quality of life?

- Very poor
- Poor
- Neither poor nor good
- Good
- Very Good

2. How satisfied are you with your health?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied

- Satisfied
- Very satisfied

The following questions ask about how much you have experienced certain things in the last two weeks.

3. To what extent do you feel that physical pain prevents you from doing what you need to do?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

4. How much do you need any medical equipment to function in your daily life?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

5. How much do you enjoy life?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

6. To what extent do you feel your life to be meaningful?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

7. How well are you able to communicate?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

8. How safe do you feel in your daily life?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

9. How healthy is your physical environment?

- Not at all
- A little
- A moderate amount

- Very much
- An extreme amount

10. Do you have enough energy for everyday life?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

11. Are you able to accept your bodily appearance?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

12. Have you enough money to meet your needs?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

13. How available to you is the information that you need in your day-to-day life?

- Not at all

- A little
- A moderate amount
- Very much
- An extreme amount

14. To what extent do you have the opportunity for leisure activities?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

15. How well are you able to get around?

- Not at all
- A little
- A moderate amount
- Very much
- An extreme amount

The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the last two weeks?

16. How satisfied are you with your sleep?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied

- Very satisfied

17. How satisfied are you with your ability to perform your daily living activities?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

18, How satisfied are you with your capacity for work?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

19. How satisfied are you with yourself?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

20. How satisfied are you with your personal relationships?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

21. How satisfied are you with your sex life?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

22. How satisfied are with the support you get from your friends?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

23. How satisfied are you with the conditions of your living place?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

24. How satisfied are you with your access to health services?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

25. How satisfied are you with your mode of transportation?

- Very dissatisfied
- Dissatisfied
- Neither satisfied or dissatisfied
- Satisfied
- Very satisfied

The following question refers to how often you have felt or experienced certain things in the last two weeks?

26. How often do you have negative feelings such as blue mood, despair, anxiety, or depression?

- Never
- Seldom
- Quite Often
- Very Often
- Always

Question 3: What is the relationship between self-perceived stress and the coping skills of the informal caregiver?

Perceived Stress Coping

1. Would you say your coping skills one month before becoming a caregiver:

- !1) Excellent
- (2) Good
- (3) Very good
- (4) Fair
- (5) Poor

Coping Strategies (Brief COPE-Carver C. S., 1997)

These items deal with ways you've been coping with the stress in your life since you have become a caregiver. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

Q1 I've been turning to work or other activities to take my mind off things.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q2 I've been concentrating my efforts on doing something about the situation I'm in.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

- Q3 I've been saying to myself "this isn't real".
- I haven't been doing this at all.
 - I've been doing this a little bit
 - I've been doing this a medium amount
 - I've been doing this a lot
- Q4 I've been using alcohol or other drugs to make myself feel better.
- I haven't been doing this at all.
 - I've been doing this a little bit
 - I've been doing this a medium amount
 - I've been doing this a lot
- Q5 I've been getting emotional support from others.
- I haven't been doing this at all.
 - I've been doing this a little bit
 - I've been doing this a medium amount
 - I've been doing this a lot
- Q6 I've been giving up trying to deal with it.
- I haven't been doing this at all.
 - I've been doing this a little bit
 - I've been doing this a medium amount
 - I've been doing this a lot
- Q7 I've been taking action to try to make the situation better.
- I haven't been doing this at all.
 - I've been doing this a little bit
 - I've been doing this a medium amount
 - I've been doing this a lot
- Q8 I've been refusing to believe that it has happened.
- I haven't been doing this at all.
 - I've been doing this a little bit
 - I've been doing this a medium amount
 - I've been doing this a lot
- Q9 I've been saying things to let my unpleasant feelings escape.
- I haven't been doing this at all.
 - I've been doing this a little bit
 - I've been doing this a medium amount
 - I've been doing this a lot
- Q10 I've been getting help and advice from other people.
- I haven't been doing this at all.
 - I've been doing this a little bit
 - I've been doing this a medium amount

- I've been doing this a lot

Q11 I've been using alcohol or other drugs to help me get through it.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q12 I've been trying to see it in a different light, to make it seem more positive.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q13 I've been criticizing myself.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q14 I've been trying to come up with a strategy about what to do.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q15 I've been getting comfort and understanding from someone.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q16 I've been giving up the attempt to cope.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q17 I've been looking for something good in what is happening.

- I haven't been doing this at all.
- I've been doing this a little bit

- I've been doing this a medium amount
- I've been doing this a lot

Q18 I've been making jokes about it.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q19 I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q20 I've been accepting the reality of the fact that it has happened.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q21 I've been expressing my negative feelings.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q22 I've been trying to find comfort in my religion or spiritual beliefs.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q23 I've been trying to get advice or help from other people about what to do.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q24 I've been learning to live with it.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q25 I've been thinking hard about what steps to take.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q26 I've been blaming myself for things that happened.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q27 I've been praying or meditating.

- I haven't been doing this at all.
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

Q28 I've been making fun of the situation.

- I haven't been doing this at all.
- I've been doing this a little bit

- I've been doing this a medium amount
- I've been doing this a lot

Appendix B: Authorization to Use WHOQOL-BREF

Dear Ms. Smith,

Thank you for submitting the online form and for your interest in World Health Organization (WHO) Quality of Life materials.

On behalf of WHO, we are pleased to authorize your request to reproduce, reprint and/or translate WHOQOL tools and instruments as detailed in the form below, subject to the terms and conditions of the non-exclusive licence below.

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We thank you for your interest in WHO published materials.

Kind regards,

WHO Permissions team

Appendix C: Perceive Stress Scale Permission

PERMISSION FOR USE OF THE PERCEIVED STRESS SCALE

I apologize for this automated reply. Thank you for your interest in our work.

PERMISSION FOR USE BY STUDENTS AND NONPROFIT ORGANIZATIONS:

If you are a student, a teacher, or are otherwise using the Perceived Stress Scale (PSS) without making a profit on its use, you have my permission to use the PSS in your work. Note that this is the only approval letter you will get. I will not be sending a follow-up letter or email specifically authorizing you (by name) to use the scale.

PERMISSION "FOR PROFIT" USE: If you wish to use the PSS for a purpose other than teaching or not for profit research, or you plan on charging clients for use of the scale, you will need to see the next page: "Instructions for permission for profit related use of the Perceived Stress Scale".

QUESTIONS ABOUT THE SCALE: Information concerning the PSS can be found at <https://vwww.cmu.edu/dietrich/psvchology/stress-immunitv-disease-lab/index.html> (click on scales on the front page). Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales. Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

TRANSLATIONS: The website (see URL above) also includes copies of translations of the PSS into multiple languages. These translations were done by other investigators, not by our lab, and we take no responsibility for their psychometric properties. If you translate the scale and would like to have the translation posted on our website, please send us a copy of the scale with information regarding its validation, and references to relevant publications. If resources are available to us, we will do our best to post it so others may access it.

Good luck with your work.

A handwritten signature in black ink on a light blue background. The signature is cursive and appears to read "Sheldon Cohen".

Sheldon Cohen
Robert E. Doheäy
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Appendix D: Permission to Use the Brief COPE Inventory

Brief COPE

The items below are an abbreviated version of the COPE Inventory. We have used it in research with breast cancer patients, with a community sample recovering from Hurricane Andrew, and with other samples as well. The citation for the article reporting the development of the Brief COPE, which includes information about factor structure and internal reliability from the hurricane sample is below. The Brief COPE has also been translated into several other languages, which have been published separately by other researchers (see below).

We created the shorter item set partly because earlier patient samples became impatient at responding to [the full instrument](#) (both because of the length and redundancy of the full instrument and because of the overall time burden of the assessment protocol). In choosing which items to retain for this version (which has only 2 items per scale), we were guided by strong loadings from previous factor analyses, and by item clarity and meaningfulness to the patients in a previous study. In creating the reduced item set, we also "tuned" some of the scales somewhat (largely because some of the original scales had dual focuses) and omitted scales that had not appeared to be important among breast cancer patients. In this way the positive reinterpretation and growth scale became positive reframing (no growth); focus on and venting of emotions became venting (focusing was too tied to the experiencing of the emotion, and we decided it was venting we were really interested in); mental disengagement became self-distraction (with a slight expansion of mentioned means of self-distraction). We also added one scale that was not

part of the original inventory--a 2-item measure of self-blame--because this response has been important in some earlier work.

You are welcome to use all scales of the Brief COPE, or to choose selected scales for use. Feel free as well to adapt the language for whatever time scale you are interested in.

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