

Facilitators, Barriers, and Challenges to Health and Wellness Coaching  
for Caregivers of Older Adults Aged 65+

By

Cynthia Chafin, M.Ed., MCHES®

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Dissertation Committee:

Chandra Story, Ph.D., MCHES®

Deborah Lee, PhD, RN, NBC-HWC

Angela Bowman, Ph.D.

I would like to dedicate this dissertation to my family, friends, and loved ones who each, in their own way, have supported my work and reminded me many times that I can do hard things.

“You’ve always had the power my dear. You just had to learn it for yourself.” Glinda,  
Wizard of Oz

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## **ABSTRACT**

A University of Michigan National Poll on Aging (2022) found that more than half of adults aged 50–80 (54%) stated that they have helped an adult aged 65 or older with health, personal, or other care-related tasks in the past two years. The National Alliance for Caregiving (NAC) and AARP (2020) note in a recent report that family caregivers are often in poor health with 23% finding it hard to take care of their own health and another 23% indicating that caregiving has made their health worse.

Research is limited on caregivers of adults ages 65 and older and receptivity to health and wellness coaching. The purpose of this study was to examine receptivity of this population to health and wellness coaching as a strategy for promoting healthy lifestyle behaviors and reducing chronic disease. The Social Cognitive Theory and the Transtheoretical Model were used as frameworks for the study. Facilitators, barriers, and challenges to receiving health coaching were examined as they relate to caregiver receptivity through a descriptive study which will add to the limited body of literature in this area.

An 88-question survey was developed that included questions from the American Medical Association (AMA) Caregiver Self-Assessment Questionnaire (2009) and the Centers for Disease Control and Prevention (2019) “Healthy Days Measures.” A total of 202 participant surveys were used for data analyses. Participants were recruited through social media, electronic listservs, and other electronic communications, as well as through targeted outreach to organizations having contact with caregivers.

Study findings indicate that facilitators to caregivers participating in health and wellness coaching: motivation, virtual coaching, health insurance coverage, and caregiver support. Barriers and challenges were identified as lack of time, lack of financial resources or cost, and physical environment (including isolation), caregiver health, and lack of awareness of health and wellness coaching. Findings also indicate that having fair or poor health was a significant predictor of receptivity to health and wellness coaching. There were statistically significant differences in facilitators, barriers, and challenges based on income, region of residence (south) and health status. There was a statistically significant difference in receptivity based on barriers and challenges and a marginally significant difference based on facilitators.

Health and wellness coaching is an emerging field demonstrating positive outcomes and which may be an effective strategy to facilitate improved health outcomes for caregivers, a generally unhealthy population. By understanding and addressing facilitators, barriers, and challenges to health and wellness coaching for this population, this group may be more effectively reached and opportunities to participate in a promising strategy for improved health behaviors and outcomes.

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## CHAPTER ONE: INTRODUCTION

Health and wellness coaching is an emerging field which has only recently been well-documented in the literature, yet one that creates opportunities for positive lifestyle change at the individual and population health level.

The American Psychological Association (2011) states that caregivers operate as extensions of the healthcare system and may perform medical and therapeutic tasks as well as ensure the care recipients adherence to medical directives and regimens. These tasks may not be possible if the caregiver develops health problems and has poor health, which may put the health of the care recipient at risk. As healthcare costs and utilization continue to rise (American Psychological Association, 2011), caregivers have an important role in the care of individuals needing care who may be increasingly dependent on unpaid family or informal caregivers for their health and well-being.

The American Academy of Family Physicians (2023) notes that multiple research studies indicate caregivers have an increased risk for alcohol, tobacco, and drug abuse, anxiety disorders, cancer, diabetes, heart disease, high blood pressure, high cholesterol, heartburn, infection, obesity, and pain (muscles, joints, headaches) (American Academy of Family Physicians, 2023). The National Alliance for Caregiving and AARP research found that family caregivers are in worse health compared to the previous five years (National Alliance for Caregiving and AARP, 2020). Twenty-one percent of caregivers reported fair or poor health, 23% indicated that they find it hard to take care of their own health, and 23% indicated caregiving has made their health worse. The recent COVID-

19 pandemic has only exacerbated poor caregiver health Beach et al., 2022; Gallagher & Wetherall, 2020; Strzelecki et al., 2022).

Health and wellness coaches have an opportunity to reach this growing population who are often at risk of being unhealthy. Research focusing on health and wellness coaching for unpaid caregivers of older adults, ages 65 or older, is limited and is the focus of this research. Few studies identify variables that influence caregiver receptivity to receiving health and wellness coaching for those who care for adults ages 65 and older. For health and wellness coaches to effectively engage this population, there is a need to understand factors associated with receptivity to health and wellness coaching. This may be accomplished by examining facilitators, barriers, and challenges to health and wellness coaching for this unique group.

The evolution of health and wellness coaching as an emerging field and specific to receptivity to coaching by unpaid caregivers of older adults ages 65 and older has been explored as an opportunity to support improved health and well-being for this growing and frequently disproportionately unhealthy population. Theoretical frameworks and theories underlying this research have been identified and will be presented. A literature review has been conducted in three categories: health and wellness coaching, caregivers, and health and wellness coaching for caregivers.

### **Health and Wellness Coaching – Overview**

Health and wellness coaching is becoming more prominent in the literature as an emerging field with origins in sports, business, and psychology (Hayes & Kalmakis, 2007). Olsen (2014), as part of a concept analysis, cites the value of coaching in athletic

success which has been documented by Carter and Bloom (2009) and others in the literature. Expanding the concept of coaching to other areas, including health, is a strategy which has been documented more frequently in the literature since 2000 (Olsen, 2014). Olsen reports that a literature search of a variety of computerized databases revealed only one article referencing the concept of health coaching prior to 1970, when it was briefly recommended as part of a geriatric examination by Crampton (1950). From that point forward, there was no mention of health and wellness coaching in the literature until the year 2000, with multiple articles on health coaching published between 2000-2006. Significant increases occurred in later years.

Health and wellness coaching has experienced multiple definitions in the literature over the years, changing as the field continues to evolve. The definition of health and wellness coaching given by the National Board for Health and Wellness Coaching (NB-HWC) (2023), which sets the standards for the health and wellness coaching industry includes this definition on its website (2023): “Health and wellness coaches partner with clients looking to enhance their well-being through self-directed lasting changes, aligned with their values. In the course of their work, health and wellness coaches display unconditional positive regard for their clients and a belief in their ability to change, honoring the fact that each client is an expert on their own life while ensuring that all interactions are respectful and non-judgmental. Successful coaching takes place when coaches apply clearly defined knowledge and skills such as psychology, motivational interviewing, and effective communication strategies such as active listening, so that clients mobilize internal strengths and external resources for sustainable change.”

The term health and wellness coaching will be used throughout this paper as the focus of the research goes beyond physical health, unless specifically citing a study that was limited to health and/or wellness coaching. The evolving field of health and wellness coaching including multiple definitions that have appeared in the literature over the years and lack of standardization of the field will be discussed as part of a literature review, along with discussion of efforts to operationalize how health and wellness coaching is defined and to standardize the field.

### **Health and Wellness Coaching for Caregivers – Overview**

Just as with health and wellness coaching, there are multiple definitions of caregivers throughout the literature with a lack of consensus in how informal caregivers are defined in national surveys (Kent et al., 2016). With some definitions being broad and others more restrictive, research is influenced by who is eligible to participate based on a given definition for a specific research study. The American Psychological Association (APA) (2020) suggests that to most accurately identify informal caregivers, it may be helpful to measure caregiving status objectively (e.g., “During the last 12 months have you, yourself, given personal care for a period of one month or more to a family member or friend because of a physical or medical condition, illness or disability?”) and subjectively (e.g., “Are you currently or have you been in the last year a caregiver for a family member or friend?”).

This research has used the APA’s objective definition of a caregiver for participation in this research project. “Caregiver” for purposes of this study is defined as “An adult age 18 or older who in the last 12 months has personally, themselves, given

personal care (e.g., hygiene, chores, errands, providing financial support) for a period of one month or more to an older adult (age 65 or older) because of a physical or medical condition, illness or disability.”

While using this more restrictive definition which is still somewhat broad (i.e., some studies require a minimum number of hours of care, or that the caregiver be considered the primary care provider) and might yield a smaller sample size as noted by the APA, a higher threshold is set by using this objective definition and will eliminate those who may be doing little actual hands-on caregiving, which is important for this particular research study.

Caregivers make up a large portion of society. The National Alliance for Caregiving (NAC) and AARP (2020) note in a recent report that family caregivers now include more than one in five Americans, that the number of caregivers is increasing, and that they are often in poor health with 23% finding it hard to take care of their own health and another 23% indicating that caregiving has made their health worse. A University of Michigan National Poll on Aging (2022) found that more than half of adults aged 50–80 (54%) said they have helped an adult aged 65 or older with health, personal, or other care-related tasks in the past two years. Given these findings, this population is one that may benefit from health and wellness coaching yet there is limited research on caregivers and health and wellness coaching (Alpajora et al., 2021; Ferré-Grau et al., 2021; Lin et al., 2020; Oliveira et al., 2019; Riegel et al., 2020; Smith et al., 2022; Williamson et al., 2014) but none were identified specific to caregivers of older adults ages 65 and older.

### *Caregivers Excluded from this Research*

Caregivers are a diverse group with some providing care for individuals outside of the older adult demographic. There are opportunities for research that extend beyond the focus of this research of caregivers of older adults aged 65 and older. Adults below the age of 65 with conditions requiring a caregiver such as cancer (Smith et al., 2022) where multiple physical, psychological, and emotional challenges exist but where favorable outcomes have been demonstrated, is another example of caregivers excluded from this research and noted later in review of literature. Another example is caregivers of those with heart failure, where one study (Riegel et al., 2019) with outcomes expected in 2024 is also later discussed.

Caregivers for children with disabilities may be another population for further study and is noted in the literature as an emerging practice (Ogourtsova et al, 2019). Overall, there is an insufficient to limited level of evidence regarding the effectiveness of health and wellness coaching approaches for this population. Health and wellness coaching for parents of children with medical complexity (CMC) is another population which might be studied. Sprecher et al. (2022) conducted research in this this population and concluded that health coaching was associated with a decrease in emergency department use but not in changes in activation, patient experience, or health-related quality of life, but noted that more research is needed in this area to determine whether health coaching is an effective modality for improving care for children with medical complexity.

There are many caregivers outside of those caring for older adults aged 65 and older that are not included in the current study, but which present additional future research opportunities.

### **Purpose of Study**

The purpose of this study was to examine caregiver receptivity to health and wellness coaching as a strategy for promoting healthy lifestyle behaviors and reducing chronic disease for caregivers of older adults, those ages 65 and older. The Social Cognitive Theory and the Transtheoretical Model were used as theoretical and conceptual frameworks for the study. Facilitators, barriers, and challenges to receiving health coaching were examined as they relate to caregiver receptivity through a descriptive study which will add to the limited body of literature in this area. Receptivity to health and wellness coaching may be related to facilitators, barriers and challenges experienced by an individual.

Receptivity is defined as “able or willing to receive especially ideas” (Merriam-Webster, n.d.). or similarly, “willing to listen to and accept new ideas and suggestions (Cambridge University Press and Assessment, n.d.) In reviewing the health and wellness coaching literature, the word “receptivity” is used in multiple contexts, though is not frequently defined. Keller et al. (2023) in their work examining receptivity to mobile health interventions define receptivity as “conditions under which individuals are able to receive, process, and use support,” a definition that has been used in the area of receptivity research which is still in its infancy. They note that detecting and predicting states of receptivity is important because it can close the gap between intended use and

actual use of mobile health interventions and by making support relevant at opportune moments, vulnerable individuals will likely build positive attitudes towards mobile health interventions.

It makes sense that the concept of receptivity might apply similarly to any intervention including health and wellness coaching. The words “willing” and “accept” or “receive” are noted in multiple dictionary (Cambridge Dictionary, n.d.; Merriam-Webster Dictionary, n.d.) definitions of “receptivity” as well as the more scientific definition of Keller et al. (2023) who note that there may be conditions that support receptivity. For purposes of this research, facilitators, barriers and challenges are examples of conditions that might impact an individual’s willingness to work with a health and wellness coach and ability to receive health and wellness coaching, or in other words, their receptivity to working with a health and wellness coach to receive health and wellness coaching.

### **Research Questions**

The following research questions were addressed through this study for caregivers of older adults aged 65 or older:

1. What are the facilitators, barriers, and challenges to receiving health and wellness coaching for caregivers?
2. Is there a relationship between caregiver health status and receptivity of health and wellness coaching?
3. Is there a relationship between facilitators, challenges, and barriers and receptivity to health and wellness coaching?

4. Do facilitators, barriers and challenges to receiving health and wellness coaching differ by sex, age, race, ethnicity, income, employment, area of residence, or health status?

### **Hypotheses**

It is anticipated that findings will support earlier limited studies of caregivers and health and wellness coaching. Hypotheses for this study include:

- 1 a. Facilitators to health and wellness coaching will include availability of remote or virtual coaching and caregiver support.
- 1 b. Barriers and challenges to health and wellness coaching will include lack of time and physical environment (isolation).
2. It is predicted that people with “fair” or “poor” self-reported health will be less receptive to health and wellness coaching than those with “excellent” or “very good” health.
- 3 a. As the number of facilitators increases, so does the receptivity to health and wellness coaching.
- 3 b. As the number of barriers and challenges increase, receptivity to health and wellness coaching will decrease.
- 4 a. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by sex.

- 4 b. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by age.
- 4 c. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by race.
- 4 d. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by ethnicity.
- 4 e. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by income.
- 4 f. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by employment.
- 4 g. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by geographic residence.
- 4 h. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by health status.

### **Problem Statement**

Research focused on health and wellness coaching and caregivers is limited, with most research conducted on patients or those receiving care and not the caregiver. There are a limited number of studies that focus on the caregiver (Alpajora et al.,2021; Ferré-Grau et al., 2021; Lin et al., 2020; Oliveira et al., 2019; Riegel et al.,2019; Smith et al., 2022; Williamson et al., 2014) though there were no studies identified specific to caregivers of adults aged 65 and older and health and wellness coaching. There are also

no identified studies with a primary focus on facilitators, barriers, and challenges to health and wellness coaching for this population, though there is secondary discussion as part of studies with other areas of focus. It remains challenging to compare and contrast studies given the limited published research in the literature on this topic. There are, however, studies with relevant findings that can be discussed and are included in the Review of Literature section of this paper.

Given the lack of literature specific to this population and receptivity to health and wellness coaching, there are opportunities for further exploration. Studies found in the literature on caregivers and health and wellness coaching with different populations and areas of focus may contribute to a better understanding of the research questions addressed in the current study.

### **Significance of Study**

The current research focuses on caregivers of older adults ages 65 and older and health and wellness coaching, a population and topic which when studied together, is currently limited in the published literature. Specifically, there is a lack of research that focuses on facilitators, barriers and challenges to health coaching that might exist for this population. There is also not adequate research to compare and contrast with other studies as there are no consistencies with the target population, diagnosis or health condition of the care recipient, and modality of health and wellness coaching represented in the literature, leaving other gaps. This study will fill a gap in the literature and will offer health and wellness coaches, caregivers of older adults ages 65 and older, and health care providers insight on facilitators, barriers, and challenges to health and wellness coaching

for caregivers of older adults ages 65 and older. This insight may be helpful in designing outreach strategies for improved engagement of the older adult caregiver population so that they can address their own needs while caring for others.

## CHAPTER TWO: REVIEW OF LITERATURE

### Introduction

This chapter presents a review of the relevant literature regarding health and wellness coaching, caregivers, and health and wellness coaching for caregivers. Social Cognitive Theory (Bandura, 1986) and the Transtheoretical Model (Prochaska & DiClemente, 1982) will also be briefly discussed as both form the theoretical framework for the current study.

In the review of health and wellness coaching, a history of how the field has evolved over a period of decades, including discussion of the multiple definitions of health and wellness coaching, will be discussed. Lack of standardization and progress towards addressing efforts to standardize the field will be discussed, along with a review of research that focuses on health and wellness coaching and chronic disease, which represents most current research will be discussed. Facilitators, barriers, and challenges, to health and wellness coaching identified in these studies will be noted.

In the review of caregivers, an overview of caregivers in the literature ranging from studies published decades ago to current research will be discussed along with caregiver health which may ultimately impact not only the caregiver, but the health of the care recipient as well. Caregiver health is examined in the current study as a barrier or challenge to health and wellness coaching. Variables impacting caregiver health such as race, ethnicity, and geographic residence will be discussed, as well as studies documenting the impact of COVID-19 on caregiver health.

A review of studies specific to health and wellness coaching for caregivers will be discussed. While studies are limited which focus on health and wellness coaching and the caregiver, particularly those who provide care for older adults aged 65 and older, there are caregiver studies that have been identified and will be discussed. These studies did not directly address facilitators, barriers and challenges to health and wellness coaching for this population but are often noted in the studies and will be included in the discussion.

### **Conceptual or Theoretical Framework**

The theoretical frameworks used for this study were Social Cognitive Theory (SCT) (Bandura, 1986) and the Transtheoretical Model (Prochaska & DiClemente, 1982). The constructs within these models are demonstrated in studies on the topic of health and wellness coaching and are embedded in current definitions. Bandura's (1986) Social Cognitive Theory states that people learn from their own experiences and observing those of others. Personal experiences, behavior, and environment are the three major components of social cognitive theory (Bandura, 1986). Prochaska and DiClemente's (1982) Transtheoretical Model, sometimes referred to as the Stages of Change Model describes the process of behavior change and accounts for an individual's readiness to make and sustain behavior changes with 5 stages of change – pre-contemplation, contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1982). This theory was first used in tobacco cessation interventions. The current study was grounded in both theories.

### *Social Cognitive Theory*

Bandura's (1986) Social Cognitive Theory identifies four determinants of behavior: self-efficacy, outcome expectations, goals, and socio-structural factors. It is based on the belief that behavior results from continuous interactions among environment (e.g., social support, access to needed resources), individual factors (e.g., prior experience, age, gender), and the behavior itself (e.g., competence with behavior, outcomes achieved by accomplishing the behavior). Successful efforts to change behavior are contingent upon identifying facilitators, barriers, and challenges in each of these three areas.

Social cognitive theory purports that while environment can alter an individual's behavior, people can alter their environments to achieve desired outcomes (Bandura, 1986). Throughout the limited research on caregivers and health coaching, environment is a noted barrier to receiving health coaching (e.g., isolation in caring for a loved one in the home, environment that lacks support for caregiver self-care). Social cognitive theory can be used to better understand how to reach caregivers with health coaching interventions to facilitate health behavior change.

One of the key constructs of social cognitive theory is reciprocal determinism (Bandura, 1986). This construct is the central concept of social cognitive theory and refers to the dynamic and reciprocal interaction of people. Individuals have learned experiences through multiple contexts including their environment, social settings, and behavior which contribute towards achievement of goals. The main principle of this construct is that people seek to exert control over important events in their lives by

having a sense of agency which is impacted by self-efficacy, outcome expectations, goals, and self-evaluation. This construct is relevant to health and wellness coaching which is goal-focused and promotes self-efficacy, involves outcome expectations, goal setting, and self-evaluation.

In addition to reciprocal determinism, Social Cognitive Theory has four other constructs: Behavioral capability, reinforcements, expectations, and self-efficacy (Bandura, 1986). Behavioral capability refers to a person's ability to perform a behavior using their knowledge and skills (a person must know what to do and how to do it). Reinforcements are responses to a person's behavior that affect the likelihood of continuing or discontinuing the behavior and can be positive or negative, and direct or indirect. Expectations are anticipated consequences a person has of their behavior and come largely from previous experience. People may anticipate the consequences of their actions before engaging in a behavior which may influence whether they complete the behavior successfully. Self-efficacy is a person's self-confidence that they can successfully perform a behavior and is influenced by a person's own capabilities as well as other individual and environmental factors known as barriers, challenges, and facilitators.

### ***Transtheoretical Model***

The Transtheoretical Model, sometimes referred to as the "Stages of Change Model," describes the process of behavior change through 5 stages: precontemplation, contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1982). Initially developed for use with individuals for tobacco cessation, this model emphasizes

recognition of an individual's readiness for change. Depending on the stage the patient/client is in, the health coach may use different strategies. For example, in the precontemplation phase, the client states "I am not willing to start an exercise program at this time," requiring a different strategy from the preparation phase, "I am going to start thinking of safe places to walk," or the maintenance phase, "I need to continue walking at least 3 times a week").

To move through the stages of change, individuals apply multiple processes. Ten processes have been identified and vary in relevance during varying stages of change (Prochaska & DiClemente, 1982). These stages may be seen in the health and wellness coaching process as patients or clients experience self-discovery and are guided to self-reflect.

1. Consciousness Raising - Increasing awareness about the healthy behavior.
2. Dramatic Relief - Emotional arousal about the health behavior, whether positive or negative arousal.
3. Self-Reevaluation - Self reappraisal to realize the healthy behavior is part of who they want to be.
4. Environmental Reevaluation - Social reappraisal to realize how their unhealthy behavior affects others.
5. Social Liberation - Environmental opportunities that exist to show society is supportive of the healthy behavior.
6. Self-Liberation - Commitment to change behavior based on the belief that achievement of the healthy behavior is possible.

7. Helping Relationships - Finding supportive relationships that encourage the desired change.
8. Counter-Conditioning - Substituting healthy behaviors and thoughts for unhealthy behaviors and thoughts.
9. Reinforcement Management - Rewarding the positive behavior and reducing the rewards that come from negative behavior.
10. Stimulus Control - Re-engineering the environment to have reminders and cues that support and encourage the healthy behavior and remove those that encourage the unhealthy behavior.

It is noted that the Stages of Change model is a model and not a theory. Other theories and constructs might be applied to the model as appropriate depending on the stage an individual is in and where they might be most beneficial and effective. The model is relevant and useful to address many health behaviors. In examining barriers, challenges, and facilitators for caregivers receiving health coaching, the Stages of Change model is important to consider as interventions are developed depending on the individual's readiness for change, as well as at the individual level with health and wellness coaches working with patients or clients.

## **Review of Research**

### ***History of Health and Wellness Coaching***

**Health and Wellness Coaching Defined.** In reviewing the literature, defining health and wellness coaching proved to be challenging, with multiple definitions

appearing in published work as the field has evolved and become more prominent in the literature (Olsen, 2014).

“Health coaching” is noted throughout the literature, as is “wellness coaching,” in addition to the two terms combined as “health and wellness coaching.” There is evidence in the literature that health coaching and health and wellness coaching are considered different (Huffman, 2016), though sometimes seem to be used interchangeably. Health coaching is more clinical, focused on patients with chronic disease, and with a nurse most commonly administering the coaching. The Health Coaching Institute (n.d.) separates the terms into health coaching and wellness coaching, with wellness coaching encompassing multiple domains (i.e., physical, mental, emotional, and spiritual), and health coaching specific to physical health and/or managing chronic conditions and diseases. The National Board for Health and Wellness Coaching (NB-HWC) as an international, well-known, and respected certifying body in the field is inclusive of both terms and represents coaches -and patients or clients- in fields of healthcare, employee wellness, government, and private practice (2023).

Because the field is an evolving field and as noted above, there have been variations in definitions of health and wellness coaching. Palmer et al. (2003) defined health and wellness coaching as “the practice of health education and health promotion within a coaching context, with a goal of enhancing the wellbeing of individuals and to facilitate achievement of health-related goals.” Similarly, Butterworth, et al. (2006) cite coaching as “a service in which providers facilitate participants in changing lifestyle-related behaviors for improved health and quality of life, or establishing and attaining

health promoting goals,” a definition introduced by van Ryn and Heaney (1997). In this study, motivational interviewing-based health coaching (Miller & Rollnick, 2013) was incorporated into 3-month health and wellness coaching sessions for 276 employees of a medical center who self-selected into either the control group or the coaching sessions. Butterworth’s emphasis on the differences in motivational interviewing-based health coaching and the “information model” (i.e., health education) is reflective of the choice of definition used to describe health and wellness coaching.

Another study by Butterworth et al. (2007) again uses the Van Ryn and Heaney (1997) definition as the context for their research noting limitations of earlier definitions of health coaching (Palmer, 2003) that emphasize health education. Chapman et al. (2007) describe health and wellness coaching in the context of worksite health promotion as “the personal coaching process applied to issues of health, health management, and wellness,” and though their definition does not include specific mention of goals or goal setting like that of earlier researchers, goals and goal setting are acknowledged in their discussion and they noted that their working definition provides flexibility in application of coaching technologies to the needs of working and health plan populations.

Olsen (2014) proposes an operational definition that “health coaching is a goal-oriented, client-centered partnership that is health-focused and occurs through a process of client enlightenment and empowerment,” another definition similar to that of the earlier research cited in that goals are included in the definition, though this definition also puts the emphasis on the client-centered process unlike some of the earlier definitions.

With each definition there are similarities as well as differences, and there is a lack of consistency. Commonalities in these definitions include health education (passive receipt of advice), which is one part of health and wellness coaching, goals or goal setting, and a health and wellness emphasis. Differences include more emphasis on health education being the focus of the coaching process with earlier definitions of health and wellness coaching, and a more patient- or client-centered process (self-discovery and active learning) in the later definitions.

The varying definitions of health and wellness coaching have likely made it challenging for the public to understand what a health and wellness coach is and the role of a coach. Because health and wellness coaches are not required to be licensed or certified, anyone can call themselves a health and wellness coach. The numerous definitions also have likely contributed towards delays in developing and implementing a national certification process which culminated when the first National Board for Health and Wellness Coaching (NB-HWC) exam was given in 2017 (National Board for Health and Wellness Coaching, 2023). In addition, it is difficult to build a robust research knowledge base when there is no consistent definition of health and wellness coaching among studies, making it challenging to assess effectiveness of coaching interventions in bringing about behavior change and health outcomes.

Wolver et al. (2013) conducted a systematic review of the operational definitions of health and wellness coaching published in medical peer-reviewed literature. There were eight hundred abstracts identified through PubMed with 284 full-text articles that were included in the study. While there have been disparities in the operationalization of

health and wellness coaching over time, Wolever et al. (2013) observed that there was an emerging consensus with several common themes specific to health and wellness coaching.

Themes commonly noted in the systematic review included that of health and wellness coaching being a patient-centered process, based on behavior change theory, includes patient-directed goal setting, self-discovery, and health education, accountability, and using processes, techniques, and skills such as Motivational Interviewing and communication strategies. Those themes were incorporated into an operational definition of health coaching from Wolever et al. (2013), which is stated as “A patient-centered approach wherein patients at least partially determine their goals, use self-discovery or active learning processes together with content education to work toward their goals, and self-monitor behaviors to increase accountability, all within the context of an interpersonal relationship with a coach. The coach is a healthcare professional trained in behavior change theory, motivational strategies, and communication techniques, which are used to assist patients to develop intrinsic motivation and obtain skills to create sustainable change for improved health and well-being” (Wolever et al., 2013). The health and wellness coach may be a valuable tool to assist individuals in creating lasting behavior change for better health and wellness.

With Wolever et al.’s efforts to operationalize a working definition for health and wellness coaching, the definitions of health and wellness coaching have evolved to be more consistent. With this comprehensive and systematic review, a foundation has been established for defining health and wellness coaching that is consistent, broadly accepted,

and can be used in future studies and practice. As an example, the definition of health and wellness coaching given by the National Board for Health and Wellness Coaching (NB-HWC), which sets the standards for the health and wellness coaching industry includes components of the operationalized Wolever et al. (2013) definition.

The NB-HWC definition cited on the website (2023) is: “Health and wellness coaches partner with clients looking to enhance their well-being through self-directed lasting changes, aligned with their values. In the course of their work, health and wellness coaches display unconditional positive regard for their clients and a belief in their ability to change, honoring the fact that each client is an expert on their own life while ensuring that all interactions are respectful and non-judgmental. Successful coaching takes place when coaches apply clearly defined knowledge and skills such as psychology, motivational interviewing and effective communication strategies such as active listening, so that clients mobilize internal strengths and external resources for sustainable change.” This definition is greatly expanded from that of earlier definitions of health and wellness coaching which placed more emphasis on health education (passive receipt of advice) and were much less patient- or client-focused (self-discovery and active learning) with the coach as the “expert” and leading the process.

Operationalizing a definition of health and wellness coaching supports the standardization of health and wellness coaching as a profession and facilitates research that can more accurately assess the effectiveness of a given approach or strategy for eliciting changes in health behaviors, health outcomes and associated costs. This

evolution towards a standard definition also supports better understanding by other professionals and laypersons as to what health and wellness coaching is and is not.

**Health and Wellness Coaching and Standardization of the Field.** Much work is needed in the area of standardization of the health and wellness coaching field including definitions, competencies, and job and task analysis. Standardization of the field with national standards provides a clear, consistent, and standardized definition of health and wellness coaching and uniformity in accepted practice standards (Jordan et al., 2015). By standardizing the field there, minimal benchmarks are set for education, training, and knowledge and skills assessment of those seeking to become professional health and wellness coaches. This is even more important as there has been a rapid growth of individuals and training programs using the term “health and/or wellness coach” (Jordan et al., 2015).

As noted above, efforts have already been made to operationalize a definition for health and wellness coaching. The NB-HWC (2023) has provided a job task analysis, though not a competency framework for health and wellness coaches. The job task analysis was the first step towards developing the NBC-HWC credential and was completed by 60 health and wellness coaching subject matter experts in 2014. This analysis of a health and wellness coach’s role and required knowledge and skills was validated by more than 1,300 practicing health & wellness coaches. The job task analysis became an important part of developing criteria to evaluate health and wellness coaching professional training programs and later in 2015, for approving these training programs with the addition of faculty and practical skills assessment standards.

Singh et al. (2022) have suggested a competency framework based on a systematic review of the literature to evaluate the competencies of healthcare professionals who engage in health coaching patients with chronic conditions. They have identified nine key competencies specific to the practice of health coaching interchangeable amongst identified health professional groups, though the professionals did not include public health practitioners, health educators, or others who at times work in clinical settings and may function in a health and wellness coaching role and may be credentialed professionals. Perlman's et al. (2020) work, similar to that of other published studies, states that there is inadequate clarity among healthcare professionals in understanding the definition, roles, and types of coaching. In their published primer, health and wellness concepts and history are presented and types of coaching are compared, including health and wellness coaching and health coaching.

Jordan et al. (2015) discuss certification in their article on national training and certification standards and how it relates to standardization. It was noted that the general public is often confused about what certification means. Without standardization of the field, there have been numerous organizations offering "certifications" in the absence of national standards, which may not always best serve individuals seeking health and wellness coaching.

Another step towards standardization is a professional certification. The National Board for Health and Wellness Coaching (2023) offered its first certification exam in 2017. This certification may be held by individuals such as physicians, nurses, or other medical professionals who have the clinical expertise and credentials to function in a

more clinical setting with patients who are high risk or have complicated conditions and diseases similar to that described by Huffman (2016), while others who may hold the certification may be non-clinical, providing coaching outside of a clinical setting with emphasis on areas of wellness that go beyond physical health. Much work is needed in the area of standardization of the field including definitions, competencies, and job and task analysis.

**Health and Wellness Coaching and Chronic Disease.** Prior to 1970 there was only one article referencing the concept of health coaching found in the literature (Crampton, 1950), which was focused on the essentials of a geriatric medical examination for ages 50 and older. From that point forward, there were no articles published on health coaching in the literature until 2000, with multiple articles on health coaching published between 2000-2006, and a dramatic increase in later years.

Most current research on health coaching centers around health and wellness coaching as an intervention for chronic disease management. According to the Centers for Disease Control and Prevention (2022), six in 10 adults in the United States have a chronic disease, such as diabetes, heart disease, or obesity and four in 10 have two or more conditions. Therefore, it is not unexpected to see a large portion of health and wellness coaching research dedicated to coaching for individuals with chronic disease. Tobacco use, poor nutrition, lack of physical activity, and excessive alcohol use are cited as key lifestyle risks for chronic disease (Centers for Disease Control and Prevention, 2022). Each of these areas can be addressed through behavior change and are the primary focus of much of the health and wellness coaching research in the literature.

It is noted that there may be health disparities based on socioeconomic status which should be considered with health and wellness coaching strategies and interventions. Kim et al.'s (2023) recent research of the general population spread across three age groups - children, young and middle-aged adults, and older adults - confirmed socioeconomic disparities in respondent's self-reported poor health across all age and race/ethnicity groups using four nationally representative datasets. Results suggest a critical need for action to address pervasive health disparities by socioeconomic status. Other studies suggest more subtle differences in disparities due to socioeconomic status. The Blue Cross Blue Shield (2020) study of its insured population found that household income was associated with smaller differences in caregiver health, but race and ethnicity were stronger determinants. For low-income communities, the BCBS Health Index difference between low-income and middle- or high- income communities and the benchmark population was only slightly higher.

The Blue Cross Blue Shield (2020) Index differences based on race and ethnicity were more pronounced with the health impact of caregiving being larger in communities with a greater Black population, and to a lesser degree to those communities with a greater Hispanic population, as compared to communities with a predominately White population. There is evidence that caregivers from ethnic minorized groups provide more care than White caregivers and report worse physical health (McCann et al., 2000) and poorer health outcomes (Williams et al., 2010). There has been documented evidence of the physical and mental toll of caregiving on the caregiver over a period of decades (Pinquart & Glajchen, 2012; Schulz & Sherwood, 2008, Vitaliano et al., 2003). It is

possible that the additional care provided by minoritized groups translates into worse physical health (McCann et al., 2000) and poorer health outcomes (Williams et al., 2010).

Not all studies have had similar findings. Haley et al. (1985) noted a deficit in the literature surrounding caregiving stress and the impact on minoritized families and conducted a study examining psychological, social, and health variables of 175 Black and White caregivers of dementia patients and non-caregivers. Findings were such that there was no support for a negative impact of caregiving on physical health. And that caregivers did not show significantly poorer health on any of the measures of health symptoms, self-reported health, or health behaviors. Differences in ages and health status of participants and the challenges associated with self-reporting health status may be factors in these findings. It was noted that other studies have had inconsistent findings.

Gierisch et al. (2017) conducted a literature review in an attempt to quantitatively synthesize the evidence on health coaching for adults with chronic medical conditions. The study, part of the Veteran's Affairs (VA) Evidence-based Synthesis Program which provides analysis of targeted healthcare topics important to clinicians, professionals, and policymakers as they work to improve the health and healthcare of Veterans. The systematic review of literature from 2000 and forward yielded 2,627 citations and identified 41 randomized control trials evaluating the effects of health coaching interventions for those with chronic medical conditions, to address clinical, behavioral, and self-efficacy outcomes. The study also explored if the intervention effects varied by program elements such as patient chronic disease status, intervention dose (i.e., the number of coaching sessions), mode of coaching delivery, and individuals conducting

health coaching (e.g., healthcare providers, peers, health coaches) and if effects varied by intervention based on an a priori list of key elements of health coaching (i.e., patient-centeredness, patient-determined goals, self-discovery process). The studies were not limited to VA patients or facilities. Women (65% of the population) with a median age of 59.2 years were the primary focus of the study. Of 18 trials reporting race, 58% were white. Of these 41 studies, 18 recruited populations with type 2 diabetes, with the remaining studies including patients with mixed diagnoses of diabetes and heart disease or renal disease ( $n = 4$ ), obesity ( $n = 7$ ), or heart disease only ( $n = 4$ ). Other trials addressed cancer ( $n = 2$ ), rheumatoid arthritis ( $n = 2$ ), systemic lupus erythematosus ( $n = 1$ ), multiple sclerosis ( $n = 1$ ), metabolic syndrome ( $n = 1$ ), or chronic medical conditions in general ( $n = 1$ ). The median number of participants was 201 (range 32 to 1835 per trial) with most studies conducted in the United States (61%). The majority of included trials used inactive interventions ( $n = 31$ ) (i.e., control groups or wait lists), only one trial was conducted in a VA setting with VA user. Overall study quality was not high with over 50% of trials ( $n = 21$ ) having an unclear risk of bias and 34% of trials ( $n = 14$ ) with a grade of high risk of bias.

The synthesis of literature on the evidence on health coaching for adults with chronic medical conditions suggests that health coaching may be an effective self-management approach for individuals with chronic disease, and that health coaching interventions have the potential to produce small yet positive, statistically significant impact on A1c (decreases), BMI (decreases), physical activity (increases) dietary fat (decreases), caloric intake (decreases) and self-efficacy (increases) when compared to the control group in the study. However, these results do not extend to studies with more

active control group members. In examining outcomes for program elements, there is evidence that a midrange dosage of coaching sessions, with six to 15 sessions, may be more beneficial than those with smaller or larger numbers of sessions. It was also found that telephone health coaching and in-person coaching yielded similar small to moderate positive effects for various patient outcomes, but not all were statistically significant. They were not able to effectively study the profession of the person delivering the coaching due to lack of consistency.

Gierisch et al. (2017) noted several limitations including variability in the included studies, lack of consistency in what constitutes health coaching, and inclusion of multiple non-coaching components as part of the overall intervention (i.e., the “program” included things other than coaching). This parallels the experience of Wolever et al. (2013) as they sought to operationalize health and wellness coaching. A large number of studies had high or unclear risk of bias, and studies self-identified as providing health coaching (i.e., no standard set of criteria applied, and individual authors may have vastly different definitions of what constitutes a health coaching program) again similar with the work of Wolever et al. (2013). Gaps in the literature for other areas were noted (smoking, medication adherence, physical function) and it isn’t clear how health coaching compares to other behavioral interventions. It is not prudent to make definitive conclusions considering the study limitations. As stated in the published study, results should be interpreted with caution. More research is needed to include more rigorously designed studies to examine the central elements that distinguish health coaching from other behavioral counseling and self-management approaches, and how specifically these elements may impact clinical and behavioral outcomes.

The Gierisch et al. (2017) study was important because it was the first study to quantitatively synthesize the evidence on health coaching for adults with chronic medical conditions for clinically significant improvements in key clinical and health behavior outcomes. Given the prevalence of adults in the United States having chronic disease, such as diabetes, heart disease, or obesity and 4 in 10 having 2 or more conditions (Centers for Disease Control and Prevention, 2022), this study is meaningful.

It is this researcher's opinion that additional study is needed in this area as many of the comparisons of Gierisch et al.'s (2017) study were based on a small number of studies which were noted to be of poor quality or unclear, as well as other limitations noted in the study (i.e., many of the studies had non-coaching components such as meal replacements, pedometers, and supervised exercise, making it hard to separate the impact of coaching, variability in the studies, lack of standardization of the field, limited to randomized controlled trials only). It is also this researcher's opinion that the lack of standardization in the field as discussed earlier in this paper and consistency in defining health and wellness coaching as well as study variability provide an over-arching rationale for future study and that while including only randomized controlled studies serves a purpose, health and wellness coaching is an intervention that can be extremely personal and not easily conducted in a controlled, laboratory setting.

Bennett et al. (2010) included telephone coaching, diabetes coaching and asthma coaching and patient outcomes within a literature review. The review found studies demonstrating mixed results on the efficacy of coaching on patient outcomes. Researchers noted that the studies were heterogeneous regarding who performed the

coaching, the nature of the coaching intervention and the chronic conditions studied.

Findings are similar to the Gierisch et al. (2017) review and the experiences of Wolever et al. (2013) in an effort to operationalize health and wellness coaching. As the field of health coaching evolves and there is more standardization, research will likely become more consistent.

Most recently, Wolever, Yang, et al. (2022) conducted a study which found that 10 sessions of health coaching for people at risk for coronary heart disease (CHD), type 2 diabetes (T2D) or both led to increased physical activity which was sustained six months after the intervention ended. The study of 200 participants, one of the largest trials to address the impact of health coaching on health behaviors, is one of the few that addresses the sustainability of health coaching beyond the coaching period. Compared with those not receiving health coaching, the health coaching group was 3.6 times more likely to report moderate to intense physical activity at 6-months ( $p = .0009$ ), and 2.9 times more likely to report such at 12-months ( $p = .0065$ ). This study examined remote health coaching which might be an effective delivery method to address the isolation issues noted by Gallagher and Wetherall (2020) and Riegel et al. (2019) and in other studies (Hajek et al., 2021; Kim & Given, 2008; Families of Cancer Survivors; Family Caregiver Council, 2023; National Council on Aging, 2023; Stenberg et al., 2010).

While the Wolever, Yang, et al. (2022) study was not specific to caregivers, caregivers are included in the chronic disease statistics (CDC, 2022) and may be represented in the Wolever et al. study population. Sustainability of health behaviors beyond the coaching period is relevant to the period of time spent as caregivers.

Caregivers often provide caregiving for an extended period of time, with the average duration of a caregiver's role being 4 years (National Alliance for Caregiving (NAC) and AARP (2015), with 24% of caregivers providing care for more than 5 years and 15% of caregivers providing care for 10 or more years. Long-term and sustainable behavior change similar to the outcomes with Wolever, Yang, et al. (2022) would be beneficial to caregivers given the statistics of those providing long-term care.

**Health Coaching and Special Populations.** While general chronic disease is the most common area in health coaching literature, there are documented studies conducted with specific populations that appeared somewhat frequently. Some examples of populations and studies include, but were not limited to, minoritized populations and chronic disease (Smart et al., 2022; Nyenhuis et al., 2021), pregnant women (Rissell et al., 2019; Skouteris, 2008; van Dijk et al., 2017; Clements et al., 2016), women in menopause (Almeida et al., 2016; Fujimoto, 2017; Senette, 2018; Stelter et al., 2018; Leemrijse, 2020) and women experiencing low-SES status (Thom, 2013; Margolius et al., 2018; Willard-Grace et al., 2015).

One interesting finding from the Rissell et al. (2019) study is that the women who were overweight or obese at pre-pregnancy were more likely to withdraw from the program than women with normal pre-pregnancy body mass index (BMI). This may in part be due to lack of education and awareness of the individuals' health condition or motivation. Findings from the Rissell et al. (2019) study suggest that education and awareness about the importance of healthy weight for this population is still needed given that those with unhealthy BMIs were more likely to withdraw from the intervention than

normal pre-pregnancy BMI. The need for education and awareness on a given area of health may translate into other populations – including caregivers – and their individual health conditions. Health coaches may include health education as part of the process of health coaching. Education is noted in the operationalized definition of health and wellness coaching by Wolever et al (2013). Though coaching does not center on education alone, it may be an important element for some receiving coaching for improved health coaching retention and any related improved health outcomes.

Within studies on the topic of health coaching and chronic disease, the most common chronic diseases studied were diabetes or heart disease. Examples of the few consistencies between studies include inconsistencies in modalities, definition of who is doing the health coaching, length of intervention, and type of intervention. The field is now becoming more standardized, which is helpful for intervention design. There were also very targeted research studies that appeared unique with few if any that were similar, such as physical activity health coaching and ambulatory adults (Barrett et al., 2020), and adolescents and mental health (Aschbrenner, 2019) to name a few. These studies are examples of health and wellness coaching for non-caregiver populations with findings that may provide insight on physical activity and mental health, frequent areas for coaching that may be applied to the caregiver population.

**Health and Wellness Coaching Literature Synthesis – The Health and Wellness Coaching Compendium.** As of 2017, there have been few summaries or organized synthesis of literature in health and wellness coaching research available to researchers and clinicians. In 2017, the Health and Wellness Coaching Compendium

(Sforzo et al.,2017) was developed as a tool for practicing health and wellness coaches, clinicians, and researchers. This readily available resource allows providers to determine if health and wellness coaching might be a beneficial adjunct treatment for their patients. Sforzo et al. (2017) supported the most recent definition of health and wellness coaching and used this operationalized definition of other researchers with studies whose definitions agreed with one another (Wolever, Simmons, et al., 2013; Olsen, 2014), a literature search was conducted using five inclusion criteria: training, professionals, goals, accountability, and relationship to develop the Health and Wellness Coaching Compendium (HWC). The search yielded 219 articles which met inclusion criteria and were compiled into The Compendium.

The Compendium (Part A only) spreadsheet columns addressing results identify nine commonly studied clinical disorders and diseases and outcomes in health and wellness coaching research including body weight (or BMI), systolic blood pressure (SBP), low-density lipoproteins (LDL), hemoglobin A1C, health risk appraisal (HRA), pain, psychological factors, exercise behaviors, and nutrition behaviors. The HWC Compendium includes 219 articles of which 150 are data-based and the remainder categorized as opinion, commentary, or reviews. Of the 150 articles in the Compendium, 32 articles are on diabetes and 31 are on obesity, representing the largest patient populations. The wellness category is the largest in the Compendium with 38 studies, though the population for each of the studies vary. Of all eight categories, cancer with 13 articles is the least reported category, although the research represented is adequate for the effect of health and wellness coaching in this population. Because the categorization

is by disease or condition and not by population, studies that included caregivers were not identified specifically.

The HWC Compendium Part A is data-based health and wellness coaching articles with HWC Compendium Part B (HWC articles without data and devoted to review, summary, and/or commentary). Full citations for each included article are in spreadsheet rows, while the columns address Population, Intervention, Comparators, Outcomes (PICO) items, other descriptors, study quality criteria, and results.

A summary is provided below in Table 1. The HWC Compendium is useful in identifying and quantifying the existing literature in an organized and clinically categorized manner while simultaneously bringing forth areas of strengths, weaknesses, and gaps in the literature such as caregivers and health coaching. A summary of results indicates health and wellness coaching as a promising intervention for chronic diseases, however additional research is warranted in most categories. The 2019 Addendum to the HWC Compendium (Sforzo, Kaye, et al., 2019) extends the initial work done in 2017 by adding another 104 peer-reviewed articles published over the last two years and is summarized in Table 2.

**Table 1**

*Health and Wellness Coaching Articles in Compendium Part A Organized by Compendium Category (i.e., Patient Presentation)*

<b>Topic</b>	<b>R</b>	<b>NR5</b>	<b>NR9</b>	<b>Other</b>	<b>Total</b>
Cancer	7	0	0	2	9
Cholesterol	9	0	0	5	14
CFS	0	0	0	0	0
Diabetes	14	7	3	8	32
Heart disease	7	3	0	2	12
Hypertension	7	2	1	4	14
Obesity	13	6	0	12	31
Wellness	15	7	3	13	38
<b>Total</b>	<b>72</b>	<b>25</b>	<b>7</b>	<b>46</b>	<b>150</b>

Abbreviations: R, randomized, controlled studies; NR5, nonrandomized before-after studies; NR9, qualitative studies; CFS, chronic fatigue syndrome; Other represents all other designs for studies in that category.

**Table 2**

*Health and Wellness Coaching Articles in Compendium Part A 2019 Addendum Organized by Compendium Category (i.e., Patient Presentation)*

<b>Topic</b>	<b>R</b>	<b>NR5</b>	<b>NR9</b>	<b>Other</b>	<b>Total</b>
Cancer	1	0	0	0	1
Cholesterol	2	1	0	2	5
CFS	4	4	0	4	12
Diabetes	6	1	0	0	7
Heart disease	2	4	1	0	7
Hypertension	5	3	0	1	9
Obesity	10		2	15	27
Wellness	6	6	0	1	13
<b>Total</b>	<b>36</b>	<b>18</b>	<b>3</b>	<b>23</b>	<b>81</b>

Abbreviations: R, randomized, controlled studies; NR5, nonrandomized before-after studies; NR9, qualitative studies; CFS, chronic fatigue syndrome; Other represents all other designs for studies in that category.

## *Caregivers*

**Caregiver Research Overview.** Caregiving and family caregivers have been important areas of research since the 1980s. (Zarit et al., 1980) The American Academy of Family Physicians (2023) notes that multiple research studies indicate caregivers have an increased risk for alcohol, tobacco, and drug abuse, anxiety disorders, cancer, diabetes, heart disease, high blood pressure, high cholesterol, heartburn, infection, obesity, and pain (muscles, joints, headaches). Research on family caregiving for individuals with Alzheimer's disease is most prevalent in the literature (American Psychological Association, 2020), though there is also research across age groups, health conditions and disorders, and sub-populations. Important areas of research include studies on the psychological, social, health, and economic impact of caregiving (American Psychological Association, 2020).

Zarit et al. (1980) was one of the first psychologically focused, empirical papers on family caregiving. Findings from this study included the importance of caregiver support which was critical in the care of elderly adults with dementia. This study found that the amount of caregiver burden was found to be less when dementia patients received more visits by other relatives, suggesting the importance of caregiver support as an important part of the community of care for elderly individuals with dementia. It was noted that the severity of behavioral problems of those with dementia was not associated with higher levels of burden.

Since the Zarit et al., (1980) study was published, family caregiving research has increased and is a popular area of gerontology research, though research on family

caregiving for individuals with Alzheimer's disease continues to be most common in the literature (American Psychological Association, 2020). There has since been more research across age groups, health conditions and disorders, and sub-populations. Important areas of research include studies on the psychological, social, health, and economic impact of caregiving (American Psychological Association, 2020) such as the impact of caregiving strain on immune system functioning (e.g., Lovell & Wetherell, 2011; Roth et al., 2019), the economic impact of caregiving (e.g., Reinhard, et al., 2019), the effects of caregiver strain on caregiver mortality (e.g., Roth et al., 2015), and the impact of caregiving on inflammation or compromised immunity summarized through meta-analysis (Roth et al., 2019).

The American Psychological Association (2020) also notes understudied areas in caregiver research based on outcomes from multi-disciplinary forums and expert recommendations such as those from the Family Caregiving Institute's 2018 Research Priorities in Caregiving Summit: Advancing Family-Centered Care across the Trajectory of Serious Illness (Harvath et al., 2020) and The National Academies of Sciences, Engineering, and Medicine's *Families Caring for an Aging America* (Schulz et al., 2016). A list of 24 priority understudied areas of caregiver research important to psychologists were noted, several of which include health and well-being of caregivers:

- The long-term impact of caregiving stress on health, especially biological outcomes and mortality;
- The long-term effects of caregiving interventions on well-being, health and mortality of caregivers;

- Understanding and promoting conditions under which caregivers can experience mental and physical health benefits from caregiving; and
- Understanding the effects of caregiving on sleep health and designing interventions to address sleep health in caregivers, and understanding mechanisms through which caregiving affects cognitive health.

Studies focusing on caregiver health and wellness may be important to health and wellness coaches who seek to provide support for this population, though caregiver health is a noted understudied area (American Psychological Association, 2020).

**Caregiver Health.** It is encouraging that there are studies on caregiver health, though collectively it does not present a favorable picture of health for this population. The American Academy of Family Physicians (2023) notes that multiple research studies indicate caregivers have an increased risk for alcohol, tobacco, and drug abuse, anxiety disorders, cancer, diabetes, heart disease, high blood pressure, high cholesterol, heartburn, infection, obesity, and pain (muscles, joints, headaches).

One study by Miyawaki et al. (2020) found that caregivers who are baby boomers – born between 1946 – 1964 - reported more frequent mental distress and chronic health conditions than non-caregivers, putting them at risk of becoming care recipients themselves. Compared with non-caregivers, baby boomer caregivers were more likely to have arthritis (44%), asthma (11%), chronic obstructive pulmonary disease (11.2%), or one or more chronic health conditions (63%). Similarly, Carbonelle's (2023) research also identifies caregivers as being at risk themselves along with those whom they care for given the increased risk of multiple conditions and disorders. This study notes that the

United States lacks a comprehensive long-term care plan for older adults and that family caregivers continue to be the assumptive care providers for an aging population and that there may be serious consequences for caregivers along with the older adults for whom they provide care.

Caregiver health putting the care recipient's health at risk appears to be a common concern, as evidenced by Miyiwaki et al. (2020) and Carbonelle (2023). An example is that the caregiver often makes and manages medical appointments for the care recipient (Carbonelle, 2023), or that the caregiver may no longer be able to provide care (Miyiwaki, 2020) which may mean the care recipient can no longer stay in the home and may be admitted to a long-term care facility (Family Caregiver Alliance, 2020).

Edwards et al. (2020), is another example of research that parallels findings of the American Academy of Family Physicians (2023), Miyawaki et al. (2020), and Carbonelle (2023) regarding poor caregiver health. This study examined demographic characteristics and health status of informal caregivers from 44 states, the District of Columbia (DC), and Puerto Rico, based on data from states participating in the 2015-2017 Behavioral Risk Factor Surveillance System (BRFSS). Approximately one in five adults reported that they had provided care to a family member or friend in the preceding 30 days with 58% of caregivers identifying as women, a majority being non-Hispanic white with at least some college and married or living with a partner.

In the Edwards et al. (2020) study, across all states, 19.2% of caregivers reported being in fair or poor health, although there was significant variation by state. The importance of caregiver health was noted, and that caregivers may jeopardize their own

health at the expense of the patient similar to findings of Miyawki et al. (2020) and Carbonelle (2023). After adjusting for age, there were 19 areas with higher rates of reported “fair” or “poor” caregiver health, with nine of those concentrated in the CDC’s South region (one of four regions): Kentucky, Tennessee, Mississippi, Alabama, Arkansas, Oklahoma, Louisiana, Texas, and West Virginia. The other ten areas were representative of the other three CDC regions: Alaska, Arizona, Indiana, Kansas, Nevada, New Mexico, Ohio, Oregon, Rhode Island, and Wyoming. The study did not examine specific health conditions of caregivers similar to that of Miyawak et al.’s research (2020), however.

It is known that chronic disease is more prevalent in the Southern region of the country (Oates et al., 2017). In the Oates et al. (2017) study, the Mid-South population had a greater percentage of current smokers, lower physical activity, and less fruit and vegetable consumption than the population in all other regions and had a higher percentage of individuals with chronic conditions – with the exception of asthma and chronic kidney disease – than all other regions. These findings were consistent with other reports (Barker et al., 2011; Tanner et al., 2013; Vaughn et al., 2014). This might explain the concentration of poor caregiver health in the CDC’s South region for the Edwards et al. (2020) study.

In addition to geographic location within the United States, race and ethnicity are important variables to examine when looking at caregiver health and well-being. Research provides evidence that caregivers from ethnic minorized groups provide more care than White caregivers and report worse physical health (McCann et al., 2000).

This is understandable, as minoritized populations often report poorer health outcomes compared to White populations (Williams et al., 2010). A meta-analysis of 116 studies (Pinqart & Sörensen, 2005) suggest additional differences among caregivers from minoritized communities including lower socioeconomic status, were more likely to receive support from family and friends, provided more care than White caregivers, and had stronger filial beliefs compared to White caregivers. This meta-analysis, similar to the McCann et al. (2020) study, also found that all minoritized caregiver groups reported worse physical health than that reported by White caregivers. Asian caregivers used fewer professional support services than White caregivers, and Hispanic and Asian caregivers were more depressed than White caregivers. African American caregivers experienced lower levels of caregiver burden and depression compared to White caregivers.

Caregiver health may impact that of the care recipient in many ways, including making the decision to put a loved one in a care facility. Studies have found that an influential factor in a caregiver's decision to place a loved one in a long-term care facility is the family caregiver's own physical health (Family Caregiver Alliance, 2020). With multiple studies such as those cited above finding that caregivers are at increased risk for both physical and mental conditions and disorders, this may translate into poor outcomes not only for themselves but also for those in their care. Caregiver health remains an important topic.

COVID-19 has had an impact on caregiver health. Before the COVID-19 pandemic, the National Alliance for Caregiving and AARP (2020) research found that

family caregivers were in worse health compared to the previous five years. Twenty-one percent of caregivers reported fair or poor health, 23% indicated that they find it hard to take care of their own health, and 23% indicated caregiving had made their health worse. The recent COVID-19 pandemic has only exacerbated poor caregiver health.

Recent research (Beach et al., 2021) indicates that the COVID-19 pandemic has negatively affected persons with existing chronic health conditions and has the potential to exacerbate the stresses associated with family caregiving. The study compares family caregivers with non-caregivers on physical, psychosocial, and financial well-being outcomes during the pandemic. The study aimed to determine which family caregivers are most at risk for adverse outcomes. It adds to earlier literature by addressing a range of physical, psychological, and financial well-being both during the pandemic (concurrent) and perceptions of change due to the pandemic.

In the Beach et al. (2021) study, a total of 576 caregivers and 2,933 non-caregivers participated in a cross-sectional online survey measuring anxiety, depression, fatigue, sleep disturbance, social participation, financial well-being, perceived changes due to COVID-19 (loneliness, financial well-being, food security), sociodemographic, caregiving contextual variables (e.g., caregiver–care recipient relationship, co-residence, care recipient condition(s) requiring care, and specific caregiving tasks performed), and COVID-19-related caregiver stressors. Findings, when controlling for socio-demographics indicated higher anxiety, depression, fatigue, sleep disturbance, lower social participation, lower financial well-being, increased food insecurity, and increased financial worries. Caregivers who reported more COVID-19-related caregiver stressors

and disruptions reported more adverse outcomes. Caregivers who were female, younger, lower income, providing both personal/medical care, and providing care for cognitive/behavioral/emotional problems reported more adverse outcomes.

Beach et al. (2021) do not cite measures specific to alcohol use disorder, though it would be interesting to know more about alcohol use disorder in the population studied given the community-based surveys found in the literature that indicate having an alcohol use disorder at least doubles the odds of depressive, anxiety, and other non-substance-use disorders (Hasin et al., 2005).

Caregiver sleep and depression and the impact of COVID were also examined in another recent study which also examined alcohol consumption (Strzelecki et al., 2022,). This study had similar findings to that of Beach, et al. (2021) with evidence of increased depressive symptoms along with significant sleep disturbances for both caregivers and non-caregivers. Alcohol consumption was also found to be increased only in caregivers. In the study, prospective participants were asked to complete an online questionnaire regarding alcohol use, sleep issues and depression during a pandemic window of time of June to August 2020 pandemic. Participants retrospectively assessed the same health behaviors in the months preceding the pandemic. The study found that insomnia severity increased, sleep quality decreased, and depressive symptoms increased for both caregivers and non-caregivers during the COVID-19 pandemic and that alcohol consumption increased only among caregivers. Findings also were that increased alcohol use was associated with decreased sleep quality and increased insomnia symptoms only among caregivers, but not

non-caregivers. This study is the first known study to examine the intersections of caregiving, sleep, alcohol use, and depression.

A third post-COVID-19 study found poor mental health among caregivers, as the impact of the COVID-19 pandemic on caregiver health behaviors was examined (Gallagher & Wetherall, 2020). The turmoil and uncertainty of the pandemic may have exacerbated these issues in a population already at risk of poor mental and physical health. Under more typical, pre-pandemic conditions, caregivers routinely report having few opportunities for respite and lack of time for self-care and isolation due to caregiving duties. In this study, Gallagher and Wetherall (2020) examined whether rates of depressive symptomatology increased in caregivers during COVID-19, whether the unintended consequences of social isolation exacerbated this risk, and whether caregivers retrieved any online or phone supportive resources during the pandemic.

In the Gallagher and Wetherall (2020) study, the longitudinal case-control population-level study of 7,527 participants, of which 1,349 were caregivers, found that higher levels of loneliness increased the risk of depression symptoms almost four-fold in caregivers, and that 60% of caregivers with depression symptoms reported not accessing any source of mental health support – either online or in person - during the COVID-19 pandemic. Lower social participation was noted in Beach, Schulz et al.'s (2021) research, with similar findings from Gallagher and Wetherall (2020) of large numbers of caregivers with depression symptoms not accessing any source of mental health support.

While Gallagher and Wetherall's (2020) findings were that higher levels of loneliness increased the risk of depression in almost four-fold in caregivers, Beach et al.

(2021) found that caregivers did not differ from non-caregivers on perceived changes in loneliness – which may lead to increased depression - since the COVID-19 outbreak. Mental health issues and isolation have been identified in the literature as a barrier to health and wellness coaching for caregivers (Kim & Given, 2008; Families of Cancer Survivors; Family Caregiver Council, 2023; Gallagher and Wetherall, 2020; Hajek et al., 2021; Hirschman et al., 2020; National Council on Aging, 2023; Riegel, 2019; Stenberg et al., 2010) as caregivers are not often able to leave the home due to their caregiving duties. Addressing mental health and isolation is important when discussing caregivers and health and wellness coaching and planning for effective health and wellness coaching interventions for this population.

Each of the three pandemic-focused studies (Beach et al., 2022; Gallagher & Wetherall, 2020; Strzelecki et al., 2022) contributed to the caregiver research literature specific to the COVID-19 pandemic. Gallagher and Wetherall (2020) examined caregiver accessing online or phone support resources during the pandemic while Beach, Schulz, et al. (2021) found lower social participation, either of which may have positively impacted loneliness noted so frequently in the caregiver population. It would be interesting to explore further why caregivers did not seek out this kind of support and social interaction and what might motivate them to do so. Strzelecki et al. (2022) was the only one of the three studies that included alcohol and found that alcohol consumption was increased only in caregivers. Given the lack of accessing support resources in the Gallagher and Wetherall (2020) study and the lower participation in the Beach et al. (2021) study, it would be interesting to examine if there were differences in alcohol consumption for caregivers accessing support resources or engaging socially. Depression or depressive

symptoms were included in all three studies, with sleep disturbances and anxiety included in the Strzelecki et al., (2022) and Beach et al., 2022) studies.

Sherwood and Shultz (2008) acknowledge studies with large population-based samples that demonstrated positive effects of caregiving (i.e., it made individuals feel good about themselves, strengthened relationships, gave meaning to their lives, and enabled them to learn new skills). About one third of caregivers report neither strain nor negative health effects and in the early stages of caregiving there may be no negative effects (Sherwood and Shultz, 2008). These findings, and that of other studies noting the positive impact of caregiving (Cohen, 2002; Folkman & Moskowitz, 2000; Haley et al., 2003; Haley et al., 2009; Hilgeman et al., 2007, Lui et al., 2023) are important in understanding the research questions posed in this dissertation research by acknowledging both the positive and negative impacts of caregiving.

**Innovative Approaches to Caregiver Health.** Innovative approaches to caregiver health are noted in the literature such as the Caring for Caregivers model (Carbonelle, 2023). The Caring for Caregivers model, developed and launched in 2019 by Rush University, utilizes health care providers to address the needs of caregivers in order to change the ways the health care system helps caregivers of older adults. It also provides education and support to improve the health of the caregiver and the patient. Since caregivers are often the gatekeepers of appointments – making and keeping them - for care recipients, health systems have a unique opportunity to meet the needs of caregivers. The Caring for Caregivers model begins with identifying caregivers which supports requirements of the CARE (Caregiver Advise, Record, and Enable) Act. This

act, effective in 44 states and territories, requires that caregivers of older adults needs to be identified and entered into the medical record upon admission to the hospital (AARP, n.d.). Not all states have passed similar legislation.

The Family Caregiver Alliance (2023) recently updated its 50 State Caregiving Profiles which indicate the number of caregivers per state. A comparison of states not enacting CARE legislation and where the state ranks in number of caregivers would be interesting and might be helpful for those advocating for policy change.

Rush University Medical Center has taken it a step further and established the CARE policy as a best practice in both its inpatient and outpatient settings. This model encourages providers to see the caregiver and care recipient as a dyad and to include caregivers in discussions that take place at appointments. Caregivers may also self-refer or be referred by anyone internal or external to the health system and the model supports the Age-Friendly Health Systems “4 M’s” framework of four evidence-based elements of care for older adults (What Matters, Medication, Mentation and Mobility), with an added component of the caregiver as a vital element of care.

An initial needs assessment is conducted, and an intervention plan is developed using evidence-based tools. Following are planning meetings – “Planning for What Matters” sessions - are held to support the needs of the caregiver and the care recipient and include up to 5 meetings with a mental health professional. The model includes skill-building meetings with physical therapists, occupational therapists, nurses, dietitians, pharmacists and social workers. It would be reasonable to include a health and wellness coach as part of this cadre of professionals to support caregiver health and wellness which

could serve to tie together the intervention plan and participant success in achieving it. The Caring for Caregivers model has demonstrated positive outcomes in caregivers with reductions in caregiver burden, depression, and anxiety, at one, three, and six-months post-intervention. Care recipients also demonstrated positive outcomes in the number of hospital admissions, length of hospital stays and emergency department visits when comparing these six months prior to and six months after caregiver participation. As of 2022 the program is being piloted at six sites with plans for expansion pending needed updates and improvements identified during the pilot phase. Including health and wellness coaches as part of this model would be an area worthy of exploration.

In summary, there is research on caregivers and caregiver health. Caregiver outcomes in the literature have been linked to primary and secondary stressors. It is known that caregivers are at increased risk of experiencing physical and mental health issues. It has been found that there are geographic differences in caregiver health with caregivers living in the CDC south region experiencing poorer health than those in other regions (Edwards et al., 2020). In addition, there is evidence of disparities in minoritized populations (Pinquart & Sörensen, 2005) suggesting minoritized caregivers provided more care than White caregivers and reported worse physical health similar to another study (McCann et al., 2020).

Most recent research during the COVID-19 pandemic indicates that some of these issues (notably mental health and depression, alcohol use, and poor sleep) have only increased in the caregiver population during the pandemic. Trends over the last five years have also shown increasingly poor health in caregivers. Some large studies have

reported positive impacts of caregiving. There are innovative caregiver health intervention models that have shown favorable outcomes in caregiver health as well as in that of their care recipients, and while health and wellness coaches may not currently be included in these interventions, it does provide an opportunity for further exploration.

### ***Health and Wellness Coaching and Caregivers***

While research is plentiful on health and wellness coaching and on caregivers as two unique and individual areas of research, there is more limited research on health and wellness coaching for caregivers. There are some studies that examine caregiver health and wellness (Alpajora et al., 2021; Ferré-Grau et al., 2021; Lin et al., 2020; Oliveira et al., 2019; Riegel et al., 2019; Smith et al., 2022; Williamson et al., 2014). These studies, however, did not directly address facilitators, barriers and challenges to health and wellness coaching for this population.

Alpajora et al.'s (2021) research focused on nine female caregivers of pediatric spinal cord injury (SCI) patients recruited from four practices across the United States. Each caregiver participated in up to 10 coaching sessions over a 10-week period, either live sessions or by phone. Statistically significant improvements were seen in self-care, productivity, and leisure activities as measured by the Canadian Occupational Performance Measure (COPM). These areas are important as they may contribute to overall caregiver health, a facilitator to health and wellness coaching and healthy lifestyles being examined in the current study.

There are no studies with similar protocols and health conditions for which to compare and contrast the Alpajora et al. (2021) study. However, when Lin et al.'s (2020)

research is complete, it does include examining self-efficacy, which can be a determinant of self-care according to Bandura's Social Cognitive Theory (1986), which may contribute to caregiver health. Findings from Lin et al. (2020) might be compared and contrasted with Alapajora et al.'s study. though the diagnoses and health conditions of the care recipients are not the same. Riegel et al. (2019) is also conducting a study, discussed below, which when published might also be compared and contrasted with these studies and also examines self-care for informal caregivers. Though the care recipients are those with heart failure, and a virtual health coaching intervention was used, both different from Alapajora et al.'s live or phone coaching intervention and Lin et al.'s live coaching intervention, comparing and contrasting these studies may yield findings to better understand caregiver health and wellness coaching and self-efficacy, which can be a determinant of self-care (Bandura, 1986), and which may contribute to caregiver health as a facilitator to health and wellness coaching and healthy lifestyles.

Lin et al.'s (2020) published study protocol tests the hypothesis that a nurse-led health coaching intervention can improve health outcomes for stroke survivors and their family caregivers in hospital to home transition care. The study will explore changes in self-efficacy of stroke survivors, from baseline to 12 weeks, changes in quality of life, functional ability, stroke-related knowledge, the number of adverse events, and unplanned hospital admissions. Caregivers, self-efficacy and caregiver-related burden at baseline and 12 weeks will be explored. Study outcomes have not yet been published and will be interesting to compare and contrast with studies such as that of Smith et al. (2022), that also look at caregiver health outcomes. While one study explores caregivers

of stroke patients (Lin et al., 2020) and the other caregivers of cancer patients (Smith et al., (2022), there may be opportunities for meaningful comparison and contrast.

In the Oliveira et al. (2019) study of 46 stakeholders and 27 caregivers, the views of caregivers of dementia patients and other stakeholders were explored specific to caregiver health promoting self-care behavior. Researchers identified “Services” and “Individual factors” as two overarching themes. Findings were that poor service organization and coordination, lack of respite breaks, lack of continuity of care, poor staff attitudes, difficulty in prioritizing one’s own needs, health impact, financial impact, and relationships and feelings were related poorer carer health-promoting self-care behavior. Findings also were that limited health-promoting self-care often led to situations of crisis, which were related due to caregiver health issues, need for emergency services, and unanticipated care home placement, much like what is described in the literature with caregiver health being an influential factor in a long-term care facility (Family Caregiver Alliance, 2020).

The need for caregiver support found in the Oliveira et al. (2019) study is supported in the early literature (Zarit et al., 1980) with one of the first psychologically focused, empirical papers on family caregiving providing similar evidence of the importance of caregiver support in the care of elderly dementia patients. This study found that the amount of caregiver burden was found to be less when dementia patients received more visits by other relatives, suggesting the importance of caregiver support as an important part of the community of care for elderly individuals with dementia. Riegel et al. (2019) is also conducting a study which when published, might also be compared and

contrasted with these studies, as it also examines caregiver support and self-care for informal caregivers, though the population is patients with heart failure and not dementia patients as with the Oliveira (2019) study.

Smith et al. (2022) is another study identified that focused on caregivers and health and wellness coaching. These researchers conducted a case study of a 44-year-old cancer patient's caregiver. The patient had neuroendocrine tumors from a rare and insidious type of cancer. The use of health and wellness coaching (HWC) with the caregiver was examined in this study. Study findings confirmed that cancer impacts not only the patient, but that patient caregivers endure psychological distress, have high levels of depression, and report isolation and strain (Kim & Given, 2008; Families of Cancer Survivors; Family Caregiver Council, 2023; Gallagher & Wetherall, 2020; Hajek et al., 2021; Hirschman et al., 2020; National Council on Aging, 2023; Riegel, 2019; Stenberg et al., 2010). After receiving coaching, the caregiver in this study reported decreased stress and anxiety and improved coping skills, along with improvements in multiple health habits and behaviors (e.g., increased physical activity, more consistent sleep schedules (Smith et al., 2022)). Researchers concluded that health and wellness coaching should be considered a viable option for supporting caregivers who may have multiple physical, psychological, and emotional challenges.

With technology available today, it is important to examine health and wellness coaching interventions for caregivers delivered in a virtual format. The Riegel et al. (2019) study currently being conducted will evaluate the efficacy of a virtual health coaching intervention for self-care with informal caregivers of those with heart failure.

Caregivers of those with heart failure report significant stress, poor self-care, and are typically homebound and often isolated. Researchers developed a virtual support intervention with live (i.e., real-time) coaching (ViCCY [“Vicky”] –Virtual Caregiver Coach for You). The study was to evaluate the use of ViCCY in caregivers of those with heart failure compared to health information alone, with full results anticipated in 2024. Preliminary published findings (Hirschman et al., 2020), focus on the use of technology as part of a health coaching intervention. Patient outcomes were not discussed, however, if shown to be efficacious and cost effective, it is noted that virtual health coaching can be scaled to provide support globally to millions of caregivers. This is important as having remote coaching available may be a facilitator to health coaching for caregivers who may not otherwise be able to participate in health and wellness coaching.

While the Riegel et al. (2019) study does not specifically seek to address facilitators, barriers, and challenges to health and wellness coaching for caregivers, caregiver isolation is noted as barrier that may prevent caregivers of heart failure patients from participating in coaching activities outside of the home (Saunders, 2012). This suggests that interventions delivered by telephone and the Internet may be more appealing. Hirschman et al. (2020) published a paper on the challenges of implementation with the Riegel et al. (2019) video-based health coaching study, noting caregiver isolation and caregivers not always being able to leave the home due to caregiving responsibilities. As previously mentioned, Isolation is an issue that often emerges for caregivers (Kim & Given, 2008; Families of Cancer Survivors; Family Caregiver Council, 2023; Gallagher and Wetherall, 2020; Hajek et al., 2021; Hirschman et al., 2020; National Council on Aging, 2023; Riegel, 2019; Stenberg et al., 2010).

The study by Riegel et al. also addresses the role of technology. While not specific to health and wellness coaching, Baik et al. (2023) conducted a study on barriers and facilitators of older caregivers (aged 65 and older) and older adult heart (aged 65 and older) failure patients to physical activity engagement and suggested there may be value in using digital health technology. While there are differences in digital literacy among older adults vary and which should be considered (American Library Association, 2023; Baik et al., 2023) the COVID-19 pandemic stimulated increased technology use by older adults (Sixsmith et al., 2022). Use of technology to improve caregiver health and wellness may be valuable to explore for all caregivers.

Ferré-Grau et al. (2021) conducted a study that also utilizes technology using a smartphone mobile app with the aim of evaluating the effectiveness of the intervention to increase positive mental health for nonprofessional caregivers. Findings were that the intervention was effective in promoting positive mental health and decreasing the burden of caregivers, providing evidence that mobile phone app-based programs may be useful tools for increasing nonprofessional caregivers' well-being. While the mobile app did not deliver health and wellness coaching, it is an example of how technology may benefit caregivers who may struggle with mental health challenges and may also serve as a resource for health and wellness coaches to share with their patients or clients.

Using technology to support caregivers is also demonstrated by Williamson et al. (2014) who conducted a needs assessment for long-distance caregivers. In this needs assessment of long-distance caregivers, it was determined that information regarding medication regimens and adherence, calendaring, and cognitive health were most needed.

As with the Ferré-Grau et al. (2021) study, while the technology does not deliver health and wellness coaching, it is another resource that health and wellness coaches might use with their patients or clients as part of the health and wellness coaching process, and another means to support caregiver health and well-being.

Similar to the Reigel et al. (2020) study which notes caregiver isolation, another study specific to isolation and the recent COVID-19 pandemic (Beach et al., 2021) found greater decreased social participation of caregivers as compared to non-caregivers during the pandemic. This study suggests that use of technology to address isolation and to facilitate access to telehealth support services that have the potential of maintaining the physical and emotional health of both the caregiver and care recipient may support health and well-being. It is known that environment can play a role in health and wellbeing (Bandura, 1986), and findings from these and other studies can inform the health and wellness coaching field as to how to effectively reach caregivers.

While the examples provided are not the target audience of the current study, they are noted to demonstrate the sparse literature results that does exist for health and wellness coaching and caregivers of older adults ages 65 and older. There were no studies identified for health and wellness coaching specifically for caregivers of older adults, though some of the studies cited above may have included older adults such as the Oliveira, Zarit, et al. (2019) study.

There were more differences than there were commonalities in each of these studies. Of the commonalities which were few, the main theme in these studies was barriers to health coaching, with the studies' focus on health outcomes from the coaching

interventions. Common barriers were lack of time, isolation, and mental health issues (stress, depression, burnout) amongst the caregivers participating in a health coaching program (Alpajora et al.,2021; Ferré-Grau et al., 2021; Lin et al., 2020; Oliveira et al., 2019; Riegel et al.,2019; Smith et al., 2022; Williamson et al., 2014) Differences included length or duration of coaching program or intervention, delivery method, type of individual leading the intervention, outcomes measured, and whether the coaching was combined with other interventions or was stand-alone.

While published research is limited in facilitators, barriers, and challenges to health coaching for the caregivers of older adults ages 65 or older, there are examples in the literature that have not been found as frequently in that of the general population. Mental health issues and isolation are commonly cited as barriers and challenges with caregivers and health and wellness coaching (Alpajora et al.,2021; Ferré-Grau et al., 2021; Lin et al., 2020; Oliveira et al., 2019; Riegel et al.,2019; Smith et al., 2022; Williamson et al., 2014)., but were not as frequently noted in health and wellness coaching studies with non-caregivers. No studies were identified citing isolation as a barrier or challenge to health and wellness coaching with the non-caregiver population.

In summary, this chapter presented a review of the relevant literature regarding health and wellness coaching, caregivers, and health and wellness coaching for caregivers. In addition, Social Cognitive Theory (Bandura, 1986) and the Transtheoretical Model (Prochaska and DiClemente, 1982) were discussed as both form the theoretical framework for the current study and can be used to better understand how to reach caregivers with health coaching interventions to facilitate behavior change.

## CHAPTER THREE: METHODOLOGY

### Introduction

The purpose of this descriptive study was to examine unpaid caregivers of older adults aged 65 or older and their receptivity to health and wellness coaching as a strategy for promoting healthy lifestyle behaviors and reducing chronic disease. This included the identification and examination of barriers, challenges, and facilitators to caregivers of older adults aged 65 and older receiving health and wellness coaching. It also included analyses to assess relationships between receptivity, barriers, challenges, and facilitators to health and wellness coaching and sex, age, race, ethnicity, income, employment, geographic area of residence, or health status.

### Research Design and Procedures

A descriptive study of caregivers of older adults aged 65 or older was conducted to answer the following research questions:

The following research questions were addressed through this study for caregivers of older adults aged 65 or older:

1. What are the facilitators, barriers, and challenges to receiving health and wellness coaching for caregivers?
2. Is there a relationship between caregiver health status and receptivity of health and wellness coaching?
3. Is there a relationship between facilitators, barriers and challenges and receptivity to health and wellness coaching?

4. Do barriers, challenges, and facilitators to receiving health and wellness coaching differ by sex, age, race, ethnicity, income, employment, area of residence, or health status?

Institutional Review Board (IRB) approval from Middle Tennessee State University was obtained prior to data collection (Appendix C). Participants in this study were asked to give informed consent to participate and were informed that they could stop participation in the study at any time. All data are being kept confidential. Only the principal researcher selected members of the dissertation committee and a data consultant have access to the data. A survey was administered both electronically and on paper throughout the months of April, May, and June 2023. The study was voluntary, taking approximately 25-30 minutes for those completing a survey. There were minimal risks involved with the study.

For purposes of this study, the following definitions were established:

"Barrier or Challenge": Something that makes it difficult for a caregiver to participate in health and wellness coaching. Examples include lack of financial resources or cost, lack of access to a health and wellness coach, lack of time, or physical environment which might include isolation.

"Facilitator": Something that makes it easier for a caregiver to participate in health and wellness coaching. Examples include caregiver support, virtual coaching, health insurance coverage, and motivation.

“Caregiver”: Someone who has, during the last 12 months, given personal care for a period of one month or more to a family member or friend because of a physical or medical condition, illness or disability. Personal care might include:

- Providing transportation to medical appointments
- Purchasing or organizing prescriptions and other medications
- Monitoring medical conditions
- Communicating with the health care team and medical professionals
- Advocating on someone’s behalf with providers or agencies, assisting with getting in and out of beds, chairs, and sofas
- Assisting with getting dressed, bathing, or showering
- Assisting with grocery shopping, housework, meal preparation
- Assistance with finances

“Caregiver Support”: Level of support provided by family members or friends in the caregiver’s role as caregiver (i.e., do they provide help when needed? Do they encourage the caregiver in their role as caregiver? Do they support the choices the caregiver makes?) and encouragement of the caregiver by family and friends to take care of themselves and their health and well-being.

Conceptually and for purposes of data analysis and reporting results barriers and challenges are combined in the current study. What may be a barrier to some individuals – as an example cost or lack of financial resources – may be a challenge to others. For

example, cost or lack of resources may completely prohibit someone from participating in health and wellness coaching while for another, cost makes participating more difficult, but not prohibitive. Both barriers and challenges are considered as something that may make it difficult for caregivers to participate in health and wellness coaching.

Barriers, challenges, and facilitators in the current study are determined at the individual response level. Some items may be considered as either a barrier or challenge, but also as a facilitator. As an example, caregiver support may be considered a facilitator, but lack thereof could also make it a barrier. The decision to categorize as one versus the other was determined through data analysis at the individual response level as outlined below in the data analysis section.

### **Participant Recruitment**

Participants were recruited through social media, electronic listservs, and other electronic communications, as well as targeted outreach to organizations having contact with caregivers. A list of contacts identified for study recruitment was developed with 55 entries which also included social media pages and groups having national and international reach (Table 3). Of the 55 entries, 36 were social media pages or groups identified on Facebook, LinkedIn, and Reddit, with some requiring pre-approval to “join” the page or group. Of those 36 pages or groups identified, 21 allowed posts soliciting research participants. A survey link was posted on the researcher’s personal social media accounts as well as on 21 of the social media groups and pages where these posts were allowed, recruiting caregivers to take and share the survey. The 21 social media pages or groups where posts were allowed had 141,902 “followers” or members. Posts were made

initially and repeated periodically over a 3-month period. Targeted outreach was done with 19 organizations, agencies, or individuals that work with or have access to caregivers of older adults as well as online caregiver support groups to recruit participants.

Agencies or organizations with potential to reach large number of caregivers or those who work with caregivers were contacted and asked to share the survey. One example is the Tennessee Commission on Aging and Disability which shared information about participating in the study with every senior citizen center in the state of Tennessee. Organizations having national reach were also contacted and agreed to promote the study, such as The Caregivers Voice, Community ConneXor, and Caregiver Action Network. Efforts to reach other national organizations such as the American Association of Retired Persons and the Alzheimer's Association were made but with limited success. Multiple departments and individuals at Middle Tennessee State University (MTSU) including the June Anderson Women's Center, the MTSU Chapter of the American Association of University Women, and the MTSU Education Association agreed to share the survey. One MTSU faculty member, who is a facilitator of multiple local caregiver support groups, distributed the survey.

Departments and individuals at MTSU were asked to share information on the survey with caregivers in their regular communications and outreach, without limits on geographic location. A recruitment flier which included a link to and QR code for the survey was also shared with these agencies or organizations. There were 14 organizations, groups, or individuals who responded and shared information about the

study (Appendix D). There were also 21 social media pages and groups where sharing about the study was allowed (Appendix D). Information about the study was shared by these organizations, groups, and individuals primarily through electronic communications (i.e., newsletters, listservs, and blog posts), though some were shared at live caregiver support group meetings. Caregivers ages 18 and over who were able to read English were eligible to take the survey. After the participant agreed to the informed consent, they were then directed to the survey.

**Table 3**

*Recruitment of Study Participants*

Type of organization	Total identified ( <i>n</i> )	Actively promoted research study ( <i>n</i> )	Method
Social media groups and pages	36	21	Posts Listservs, blog, posts
Organizations	19	14	
Total	55	35	

**Participants**

Study participants included caregivers, aged 18 or over, of older adults aged 65 or older, who responded affirmatively to the following question: “During the last 12 months, have you given personal care for a period of one month or more to a family member or friend because of a physical or medical condition, illness or disability?”

It is important to make the distinction between these unpaid caregivers and those who have paid caregiving jobs (e.g., home health aides, nursing home staff). The objective definition of caregiver given by the American Psychological Association (2020)

was used for this study which has also been used in recent research (Kent et al., 2016). A caregiver is defined as any adult age 18 or older who responds affirmatively to the question “During the last 12 months have you, yourself, given personal care (e.g., hygiene, chores, errands, providing financial support) for a period of one month or more to a family member or friend because of a physical or medical condition, illness or disability?”

The current study aimed to collect data on caregivers of diverse populations (i.e., age, sex, race, ethnicity, areas of residence, employment, income levels), and health status who care for individuals with a variety of health conditions. To ensure participation and adequate representation from these populations, recruitment efforts included internet-based recruitment in online caregiver support groups and similar groups and pages which draw English-speaking participants of all ages, sex, race, ethnicities, locations, and with varying employment, income, and health status. The survey sought to include data on how many others the caregiver cared for in addition to the older adult.

### **Instrumentation**

No survey instruments were identified in the literature to address caregiver receptivity to health coaching. The survey used in the pilot study, *Receptiveness, Challenges and Barriers - Health Coaching in the “Sandwich Generation”* (Chafin, 2021) was used, with modifications, for this dissertation research. This survey was developed as an online Qualtrics (Qualtrics, Provo, UT) survey with closed and open-ended items (Appendix A) and was also disseminated in hard copy format. The survey was developed after careful review of the literature. Items were adapted from existing

tools and constructed in consultation with a psychometrician with survey methodology expertise (A. Bowman, personal communication, March 8, 2021). One section of the survey includes questions from the American Medical Association (AMA) Caregiver Self-Assessment Questionnaire (2009) which measures mental and emotional health, social support, and physical well-being. Another section of the survey includes the Centers for Disease Control and Prevention (2019) “Healthy Days Measures” to assess quality of life through an assessment of overall health, physical health, mental health, and the impact of health on daily activities.

The literature was used to inform survey development with questions designed to address personal, environmental, and social factors from the Social Cognitive Theory and questions assessing the Stages of Change that comprise the Transtheoretical Model. Question content is based on barriers and facilitators to health coaching for the general population and common challenges for caregivers (not specific to health coaching but caregiving in general). The survey was also based on limited studies in health coaching and caregivers.

The key construct being measured is receptivity. Receptivity has not been defined in health coaching literature, but it has been defined in other literature (Keller et al., 2023) as an area of research in its infancy. Common definitions of receptivity (Merriam-Webster, n.d.; Cambridge University Press, n.d.) include one's willingness to receive, listen to, or accept ideas or suggestions, recognizing that there are conditions which might impact an individual's receptivity (Keller et al., 2023). While not documented in the health and wellness coaching literature, receptivity towards health and wellness

coaching may be influenced by barriers, challenges, and facilitators towards health and wellness coaching and is part of the hypothesis of this research. For purposes of this research, receptivity is defined as one's level of willingness to work with a health and wellness coach with the goal of improving one's health and wellbeing. The latent variable or construct measured is motivation to work with a health and wellness coach. Manifest variables of age, gender, race, ethnicity, place of residence, employment, income, and health status were included to determine any differences based on these variables. Latent variables measured were receptivity as it pertains to health coaching and healthy lifestyles and perceived barriers and challenges to health coaching.

Survey questions were categorized as follows: Demographic Data, Receptiveness to Health Coaching, Perceived Barriers, Challenges, and Facilitators, and Mental and Emotional Health, Social Support, and Physical Well-being.

Demographic Data questions were multiple-choice questions and included questions about age, sex, race, ethnicity, geographic location of residence, employment status, household income, and number of individuals living in the household full-time or part-time. Additional questions such as "How much time do you spend on caregiving responsibilities each week (not including travel time if you do not live with the person for whom you are providing care)?", "How much total time do you spend each week traveling to provide caregiving?" and "In addition to the older adult you are caring for, how many other individuals are you providing care for?". Questions specific to health status were asked including a multiple-choice question about general health status, "Would you say in general that your health status is: excellent, very good, fair, poor, don't know/not sure?" There were three questions from the Centers for Disease Control

and Prevention (2019) “Healthy Days” measures specific to caregiver mental and physical health, one question about caregiver diseases present, two questions about support received, one question about difficulties in taking care of one’s own health, and one question about the caregiver’s physical environment.

Questions specific to Receptivity to Health and Wellness Coaching were included as a multi-part multiple choice question “Please indicate whether you would be ready to work with a health and wellness coach on making improvements in any of these areas” with 18 areas listed such as increasing energy, reducing food cravings such as sweets, and preparing healthy food, quickly and easily. Answer choices were “Very Ready,” “Somewhat Ready,” “Already Working On,” “Don’t Need to Work on this Area,” and “Not at All Ready” constructed with consideration given to the Transtheoretical Model (Prochaska and DiClemente, 1982).

Questions specific to Perceived Barriers, Challenges, and Facilitators were multiple choice questions such as “What barriers do you have to engaging in healthy behaviors? Check all that apply.” And “How likely would you be to work with a health coach if virtual counseling sessions were an option (sessions that could be held using technology on your cell phone or computer)?”

Questions about Mental and Emotional Health, Social Support, and Physical Well-being were multiple choice questions such as “During the past week or so, I have felt completely overwhelmed,” or “During the past week or so, I have been satisfied with the support my family has given me.”

For each item, regardless of category or type of question, a code was assigned to each response for scoring and later used for data analysis.

At the end of the survey (Appendix B), a list of caregiver and health and wellness coaching resources was provided.

The American Medical Association (AMA) Caregiver Self-Assessment Questionnaire (CSAQ) (2009) is a validated survey instrument reported to have a reliability coefficient of  $\alpha = 0.78$ , indicating that the instrument is sensitive to detecting depressive symptoms and preventing onset of a major depressive episode, which is important for caregivers who are chronically stressed (Epstein-Lubow et al., 2010). This questionnaire is included in the current study's survey instrument.

Another section of the survey used for the current study includes the validated Centers for Disease Control and Prevention (2019) "Healthy Days Measures" to assess quality of life through an assessment of overall health, physical health, mental health, and the impact of health on daily activities. The CDC aging studies program and two other CDC public health programs (i.e., Disability Prevention Program, Office of Women's Health) supported several studies in the 1990's to determine the validity of the Healthy Days Measures in various populations. Findings from the analyses of responses from the U.S. noninstitutionalized adult population were that that the CDC HRQOL-14 measures had good construct validity (Moriarty et al., 2003). Additional studies in Hamilton, Ontario, Canada; Sweden and Puerto Rico which have also established the construct validity for use in similar populations (Ounpuu et al., 2000; Alfredsson, 2020; Centers for Disease Control and Prevention, 2002). More recently, the CDC's "Healthy Days Measures" were evaluated by Barile et al. (2013) as a measure for Healthy People 2020 purposes and found to be appropriate for assessing burden of disease for chronic

conditions as part of the Healthy People 2020 goals and objectives. Moriarity et al. (2003) notes that the brief standard CDC HRQOL-4 measures are now often used in surveys, surveillance systems, prevention research, and population health report cards, which includes the Behavior Risk Factor Surveillance System (BRFSS) and the U.S. National Health and Nutrition Examination Survey (NHANES).

Additional questions on the survey were informed by the literature to address personal, environmental and social factors that form the basis of the Social Cognitive Theory as well as questions that assess the Stages of Change that comprise the Transtheoretical Model. Question content is based on findings in the literature of the barriers and facilitators to health coaching for the general population as well as common challenges for caregivers (not specific to health coaching but caregiving in general) and the limited studies in health coaching and caregivers.

### **Data Analysis**

Survey data were downloaded from Qualtrics (2005, Provo, UT) Version 2023 and were cleaned prior to analysis. One duplicate was removed along with one “test” response, and another 54 removed where responses were not at least 80% complete. The descriptive data analysis for this paper was generated using Qualtrics software, Version 2023 of Qualtrics (2005, Provo, UT). Data were then uploaded to IBM SPSS Statistics (Version 29) predictive analytics software for further analysis. Descriptive statistics, ANOVA, regression, and t-test analyses were utilized in this study. Descriptive statistics, frequencies and percentages, were assessed for each of the demographic and

study variables. In addition to close-ended survey questions, open-ended comments were noted but not included in the analyses.

The following research questions were answered through data analysis with Qualtrics and SPSS:

1. What are the facilitators, barriers, and challenges to receiving health and wellness coaching for caregivers?
2. Is there a relationship between caregiver health status and receptivity of health and wellness coaching?
3. Is there a relationship between facilitators, challenges, and barriers and receptivity to health and wellness coaching?
4. Do barriers, challenges, and facilitators to receiving health and wellness coaching differ by sex, age, race, ethnicity, income, employment, area of residence, or health status?

Research question #1 was addressed by using descriptive statistical analysis and reporting frequencies and percents. Research question #2 was addressed by conducting ANOVA analyses. Question #3 was addressed by conducting regression analyses. Question #4 was addressed by conducting T-tests and ANOVA analyses depending on the variables for each question sub-part. Health status was determined by responses to survey item #23 “Would you say that in general your health is: Excellent, Very Good, Good, Fair, Poor, “Don’t Know/Not Sure.” Responses were combined for “Excellent” and “Very Good,” and “Fair” and “Poor” to determine a score for health status. “Good” was not combined. “Don’t Know/Not Sure” responses were not included in the analysis. Specific

to Question #3, geographic area was organized by regions (National Center for Health Statistics (2020-2021)). Regions were then further categorized as “South” and “Other Region” for analysis. This categorization was made because there were so few participants in regions other than the “South” region and the variable needed to be further collapsed in order to use it in the hypothesis testing.

The decision on how to categorize as a facilitator or a barrier was based on analyses of each answer choice for positive or negative responses. If the response was seen as a positive (i.e., Do you have access to a health coach? Access can be a facilitator OR lack of access could be a barrier), it was listed as a facilitator. If the response was such that it was a negative, it was listed as a barrier. If the response was to a multiple-choice question, the response was listed as a facilitator or barrier depending on which answer choice was made (i.e., #29 Describe level of support from family - Very supportive or supportive = facilitator, neutral = none, unsupportive/very unsupportive = barrier/challenge). All items were dichotomized into “yes” or “no” where “yes” being a facilitator and coded as a “1” and with “no” being a barrier or challenge and coded as a “0”.

Data analyses were conducted to test the following hypotheses based on the research questions:

- 1 a. Facilitators to health and wellness coaching will include availability of remote or virtual coaching and caregiver support.
- 1 b. Barriers and challenges to health and wellness coaching will include lack of time and physical environment (isolation).

2. It is predicted that people with “fair” or “poor” self-reported health will be less receptive to health and wellness coaching than those with “excellent” or “very good” health.
- 3 a. As the number of facilitators increases, so does the receptivity to health and wellness coaching.
- 3 b. As the number of barriers and challenges increase, receptivity to health and wellness coaching will decrease.
- 4 a. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by sex.
- 4 b. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by age.
- 4 c. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by race.
- 4 d. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by ethnicity.
- 4 e. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by income.
- 4 f. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by employment.

- 4 g. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by geographic residence.
- 4 h. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by health status.

## CHAPTER FOUR: RESULTS

There were 258 individuals who responded to the survey with 202 responses being 80% or more complete (Table 4) and included in the analyses and another 56 excluded after data cleaning. There were 247 surveys completed electronically and another 11 completed on paper with the paper surveys completed mostly by individuals participating in live caregiver support groups. There were 202 surveys available for analysis after data cleaning.

### Caregiver Demographics

Of the 202 complete responses, there were 181 participants 155 (85.64%) participants identifying as female, and 26 (14.36 %) identifying as male. Of the 180 who responded to the demographic question pertaining to race, 175 participants identified as Caucasian (96.11%), and 4 (2.21%) identified as Black or African American. There were 175 (97.22%) participants who identified as not Latino or Hispanic, with 2 (1.11%) who identified as Hispanic or Latino. Of the 143 participants who responded to a question about age, 38 (26.57%) of participants were aged 56-60 with 51 (35.66%) aged 61-65, comprising the largest percentage. A survey summary and the survey including the consent form are included as Appendices A and B, respectively.

**Table 4***Demographics*

Answer	<i>n</i>	%
Age	143	
18-20	0	0.00%
20-29	10	6.99%
30-39	14	9.79%
40-55	30	20.98%
56-60	38	26.57%
61-65	51	35.66%
65+	0	0.00%
Sex	181	
Male	26	14.36%
Female	155	85.64%
Racial Group	180	
American Indian/Alaskan Native	1	0.56%
Asian	2	1.11%
Black or African American	4	2.22%
Native Hawaiian/Pacific Islander	0	0.00%
White	173	96.11%
Do not wish to answer	1	0.56%
Ethnicity	180	
Not Hispanic or Latino	175	97.22%
Yes Hispanic or Latino	2	1.11%
Do not wish to answer	4	2.22%

*Note: N = 202*

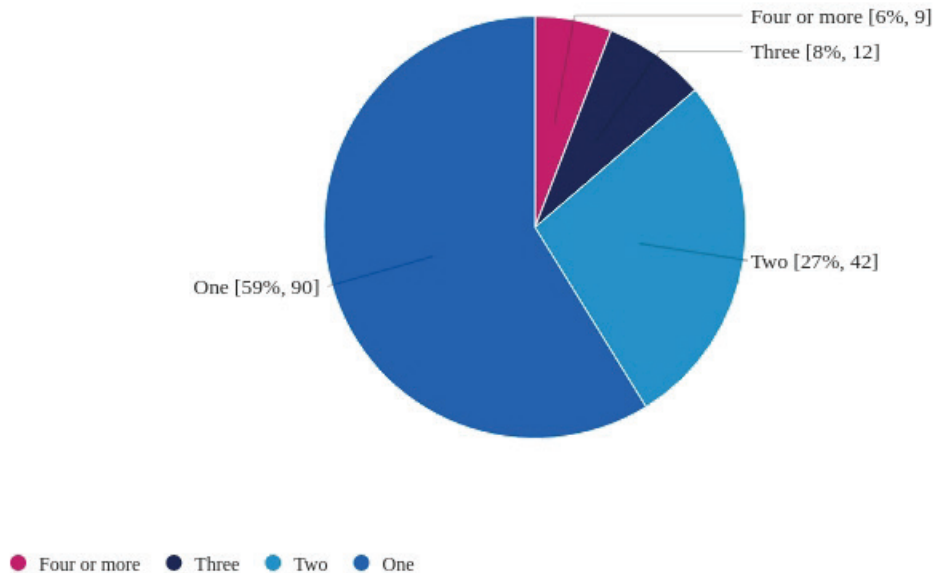
This study was accessible to participants anywhere in the world given that recruitment included online outreach through social media. One hundred and eighty participants responded to the residence question, with 174 (96.67%) residing in the United States, 4 (2.22%) in Canada, and 2 (1.11%) indicating “other.” Within the United States, participants from Tennessee represented over half of the sample with 102

participants (58.29%) being from Tennessee. This is likely due to extensive networking and personal outreach and contact made by the researcher who lives in Tennessee. There were participants from a total of 26 states (Appendix E)

Participants were asked how many other individuals do they provide care for in addition to the older adult. Of the 153 participants, the majority, or 90 (58.82%) provided care for one person in addition to the older adult (Figure 1).

**Figure 1**

*Number of Other Individuals for Whom Providing Care*

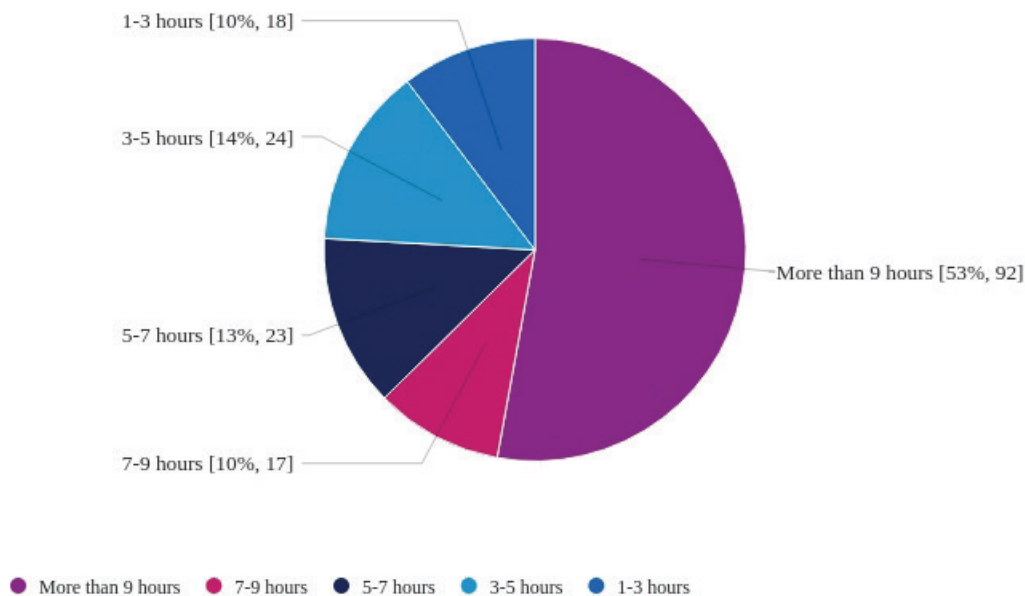


*Note:*  $N = 153$  participants

The majority of participants, or 92 (52.87%), spent more than nine hours each week caregiving (Figure 2).

**Figure 2**

*Time Spent on Caregiving Each Week (excluding travel time)*

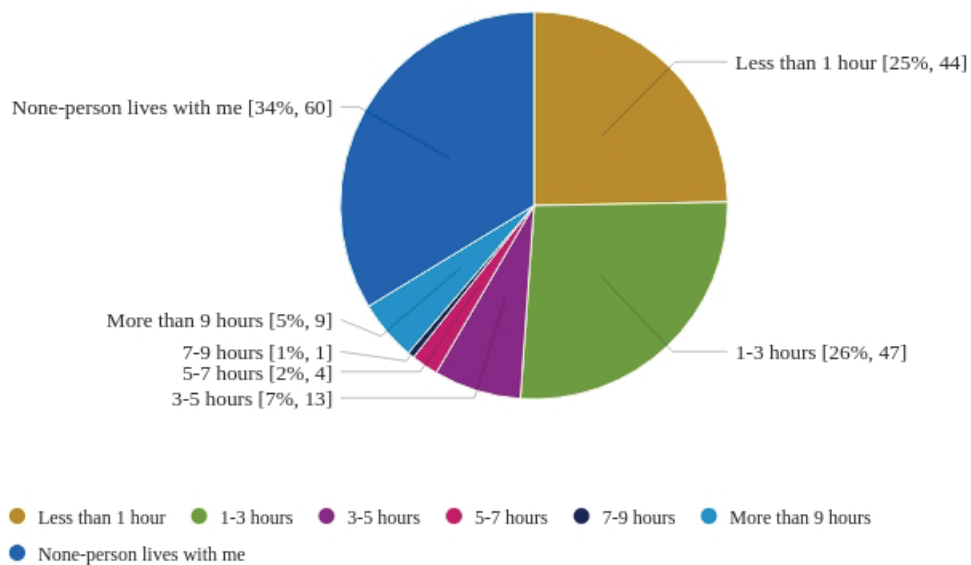


*Note:*  $N = 174$  participants

Sixty (33.71%) of the 178 responding to the question about travel time indicated that the person lived with them requiring no travel, with another 44 (24.72%) traveling less than an hour per week (Figure 3).

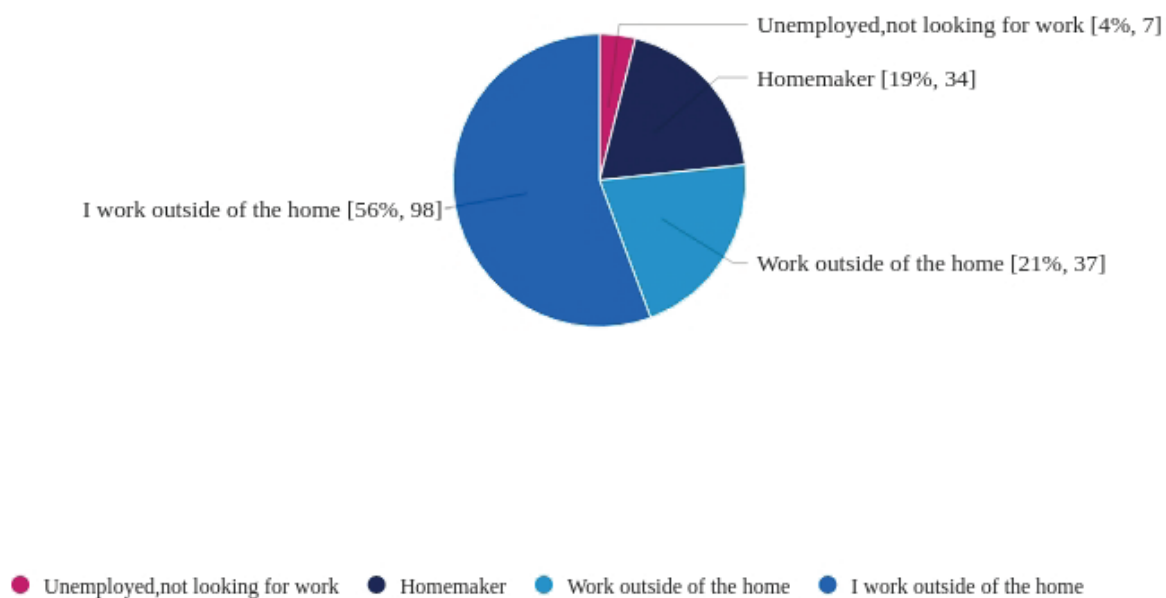
**Figure 3**

*Total Time Spent Each Week Traveling to Provide Caregiving*



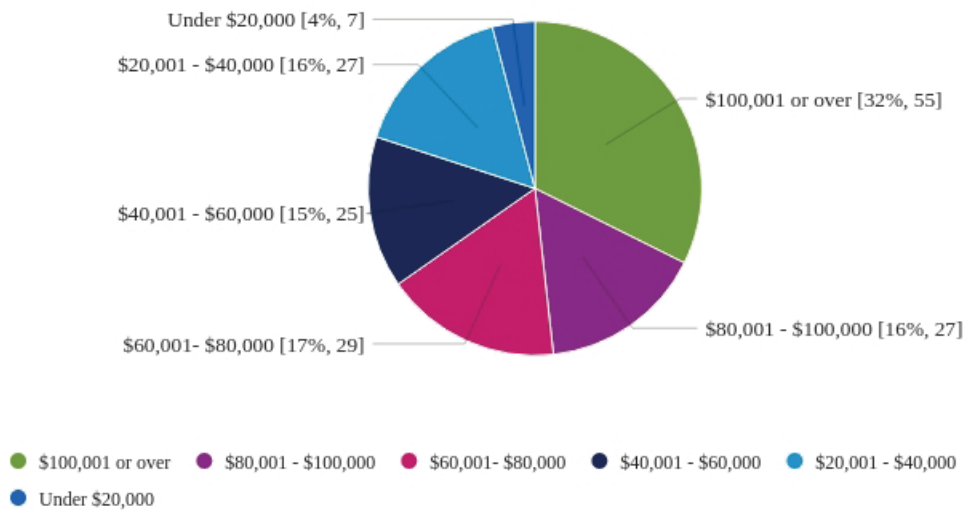
*Note:*  $N = 178$  participants

There were 98 (55.68%) of 176 participants that worked outside of the home and 34 (19.32%) unemployed and not looking for work (Figure 4).

**Figure 4***Type of Employment*

*Note:*  $N = 176$  participants

Household incomes for 82 (48.23%) of 170 participants was \$80,001 or more, with 34 (20.00%) having a household income of \$40,000 or less (Figure 5).

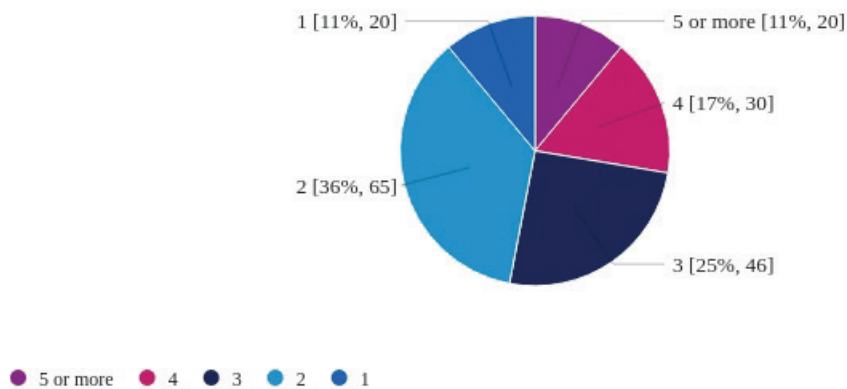
**Figure 5***Household Income*

*Note:*  $N = 170$  participants

Household size was 2 individuals for 65 (35.91%) of the 181 participants, with another 46 (25.41%) individuals having a 3-person household (Figure 6). Additional responses were 30 individuals (17.65%) having a 4-person household, and 20 individuals (11.05%) each reporting a 1- or 4-person household.

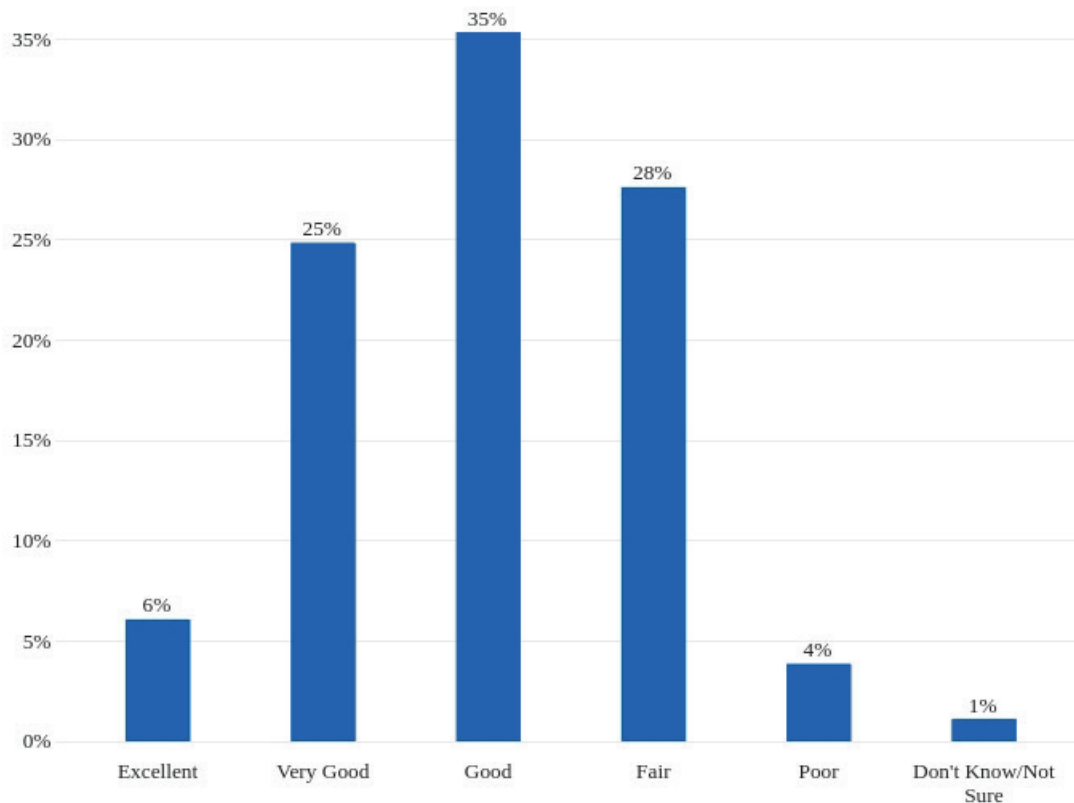
**Figure 6**

*Number of People Living in Household Full or Part-Time*



*Note:*  $N = 181$  participants

Caregiver self-reported health was “good” for 64 (35.36%) of the 181 participants, with 57 (31.49%) reporting “fair” or “poor” overall health and (Figure 7).

**Figure 7***Self-Reported Caregiver Overall Health*

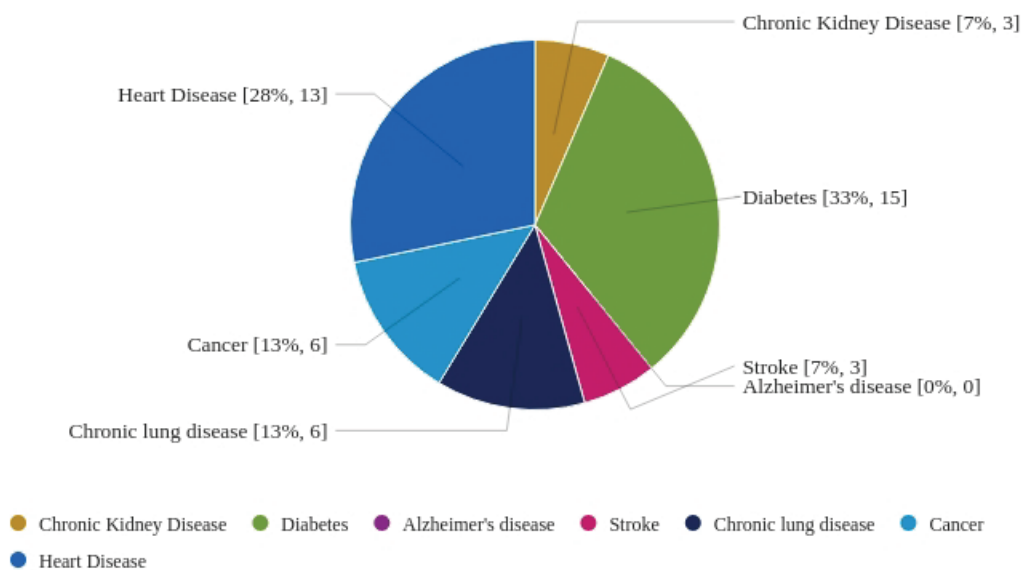
*Note:*  $N = 181$  participants

The mean number of days participants ( $N = 177$ ) indicated mental health was not good over the past 30 days was 1.23 days and was a mean of 6.73 days for physical health not being good over the past 30 days. The mean number of days poor physical or mental health kept participants from not doing usual activities such as self-care, work or recreation was 1.60.

Thirty- nine caregivers indicated that they currently have a chronic disease, with diabetes being most common for 15 participants (32.61%) followed by heart disease for 13 (28.26%) participants (Figure 8). There were 43 chronic diseases reported in responses.

**Figure 8**

*Chronic Disease Caregivers Presently Have*



*Note: N = 43 participants*

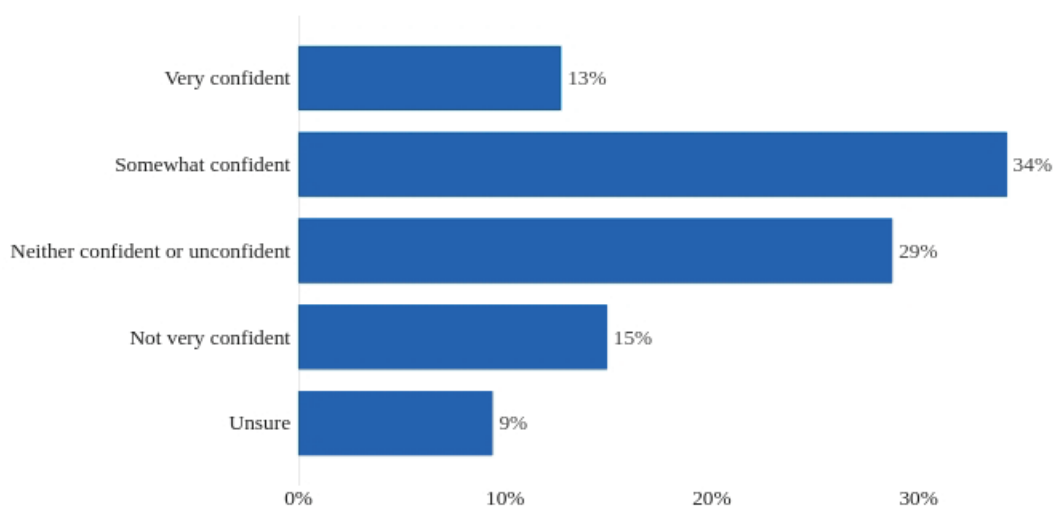
Sixty-four (35.56%) of the 181 caregivers responding had prior experience with health and wellness coaching, while 116 (64.44%) did not. Ninety-three 93 (51.96%) of

the 179 caregivers responded that they have engaged in a personal health improvement program, and 86 (48.04%) had not.

Sixty-two (34.25%) caregivers were somewhat confident they could be successful working with a health and wellness coach to meet health and wellness goals. Twenty-three (12.71%) who were very confident (Figure 9).

### Figure 9

*Caregiver Confidence in Being Successful Working with a Health and Wellness Coach to Meet Health and Wellness Goals*



*Note:* N = 181 participants

## **Facilitators, Barriers, and Challenges**

There were two questions as part of Hypothesis #1 related to remote or virtual coaching and caregiver support as facilitators, and lack of time and physical environment (isolation) as barriers and challenges.

Hypothesis #1:

- 1 a. Facilitators to health and wellness coaching will include availability of remote or virtual coaching and caregiver support.
- 1 b. Barriers and challenges to health and wellness coaching will include lack of time and physical environment (isolation).

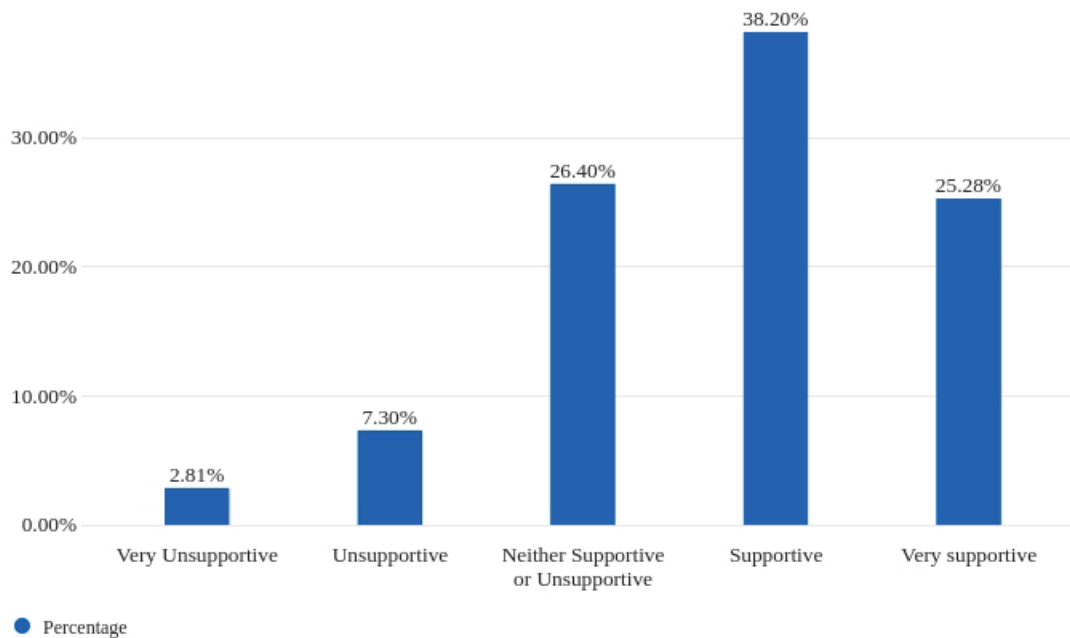
The results detailed below indicate that hypothesis #1a and 1b are supported, with facilitators including availability of remote or virtual coaching and caregiver support, and barriers and challenges including lack of time and physical environment (isolation).

### ***Facilitator – Caregiver Support***

One hundred and thirteen of 178 participants (63.48%) indicated the level of support received in their role as caregiver from family members or friends as “very supportive” or “supportive” (Figure 10). Only 13 (10.11%) of participants indicated the level of support as “unsupportive” or “very unsupportive”.

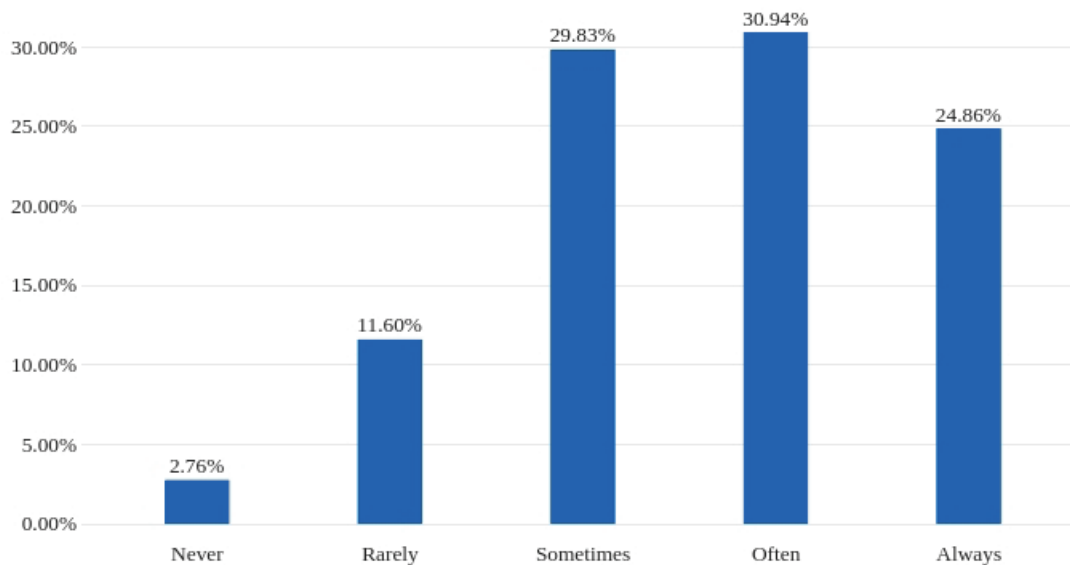
**Figure 10**

*Level of Support from Family Members or Friends for Caregivers*



*Note:*  $N = 178$  participants

One hundred and one (55.80%) of 181 participants indicated family and friends “always” or “often” encouraged them to take care of themselves and their health and well-being (Figure 11). Lack of support and the need for it were noted 8 times in the response to the survey’s open-ended questions (Appendix F).

**Figure 11***Encouragement from Family and Friends to Practice Self-Care*

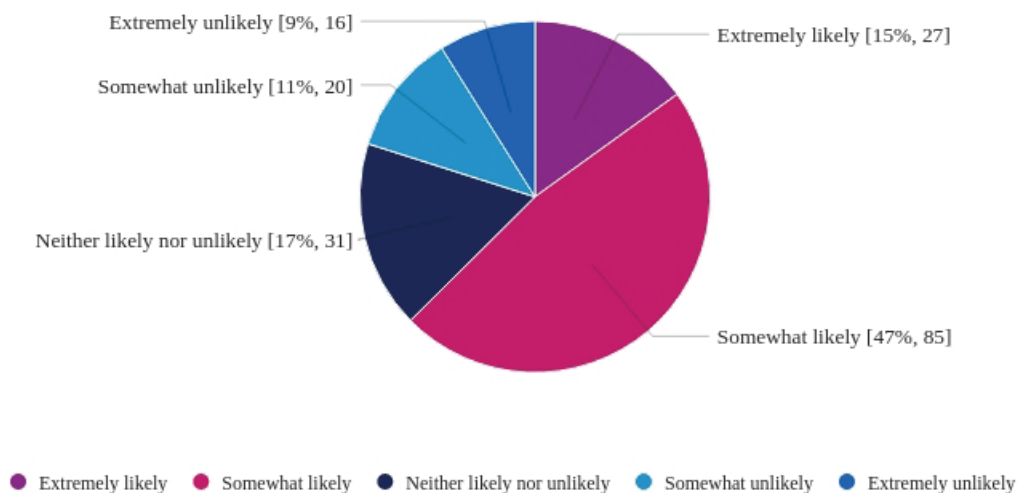
*Note:*  $N = 181$  participants

***Facilitator – Virtual Coaching***

One hundred twelve (62.57%) of the 179 participants indicated that they would be “extremely likely” or “somewhat likely” to work with a health and wellness coach if virtual coaching was an option (Figure 12).

**Figure 12**

*Likelihood of Working with Health and Wellness Coach if Virtual Coaching Was an Option*

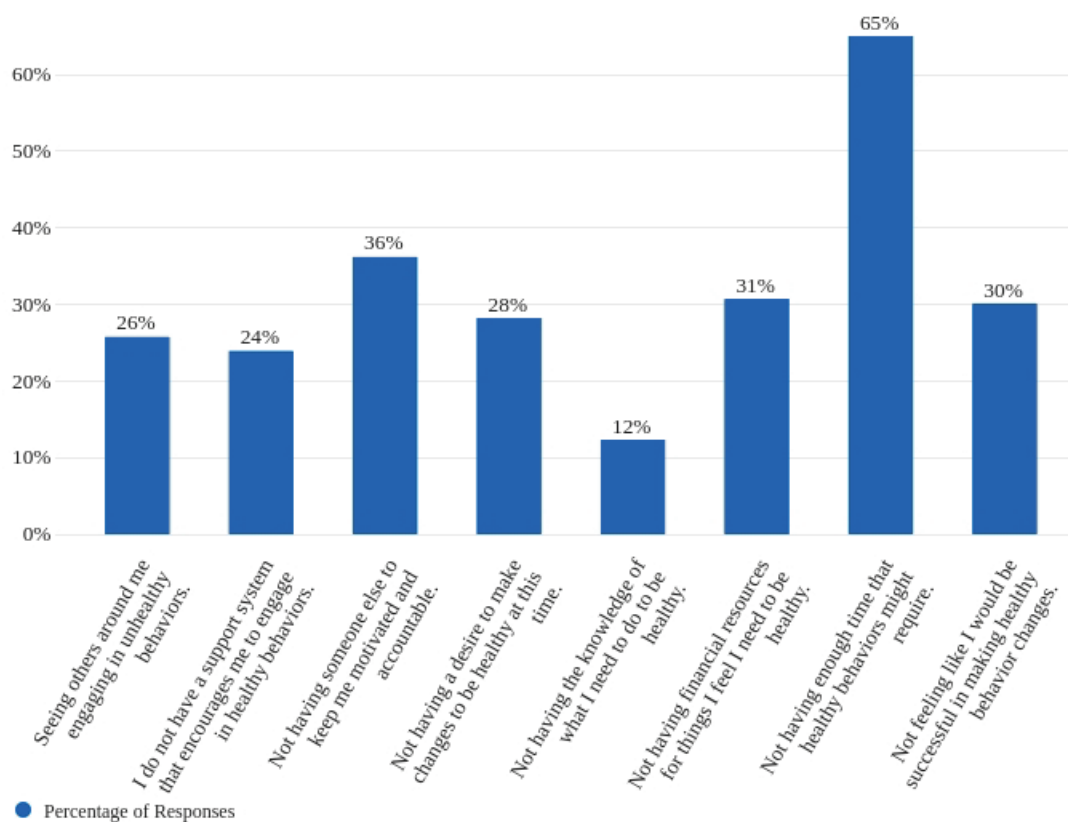


*Note:*  $N = 179$  respondents

There were 32 unique responses to question #46, “Please share any comments you may have about working with a health and wellness coach through virtual counseling sessions.” Comments varied and were both supportive of virtual coaching while other comments were less favorable (Appendix F). “Virtual sessions would be more convenient and doable,” and “Virtual would be the only possible option as I cannot leave my parent alone and do not have anyone else to provide care/supervision,” were examples of favorable comments received, while another participant noted, “Don’t like technology! Prefer human interaction,” and another noted, “Can’t navigate technology.

***Barrier/Challenge – Lack of Time***

When asked in question #55 about what barriers and challenges there were to engaging in healthy behaviors, the most common barrier or challenge noted was lack of time, cited by 106 (65.03%) participants (Figure 13). Across all three open-ended questions, lack of time was cited a total of 30 times. There were 49 unique entries for open-ended question #44, with the most frequent comment specific to barriers and challenges present being lack of time for 23 (52.27%) participants who answered this question (Appendix F).

**Figure 13***Barriers and Challenges to Engaging in Healthy Behaviors*

Note:  $N = 163$  responses

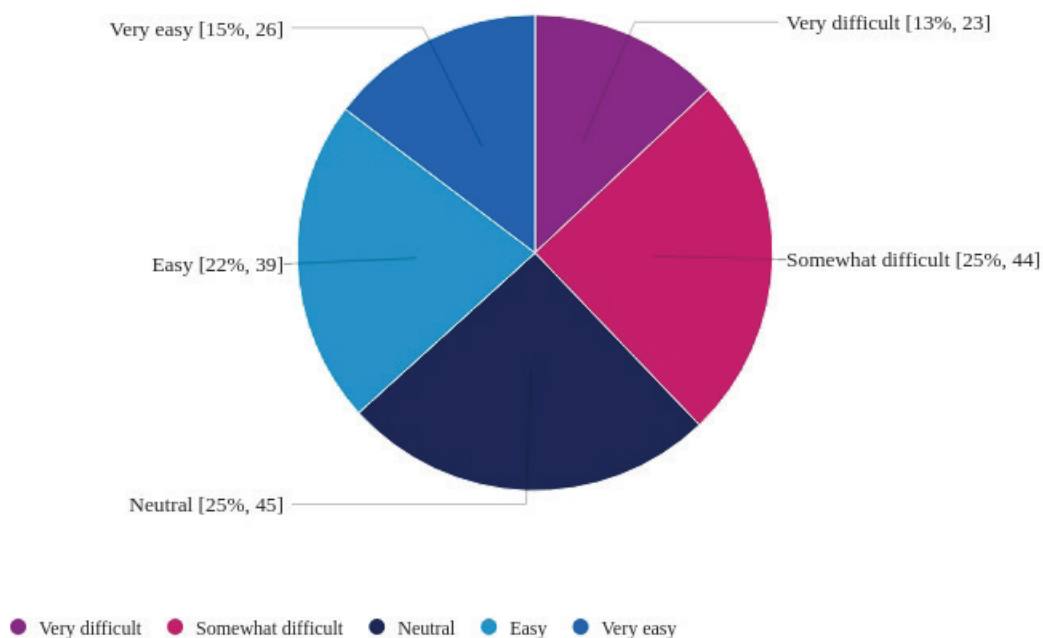
***Barrier/Challenge – Physical Environment***

When asked about physical environment (e.g., lack of access to area to exercise or be active, noise that makes it difficult to sleep well, lack of space that allows for hobbies and stress-reducing activities), the physical environment made it “very difficult” or

“somewhat difficult” for 67 (37.85%) of the 177 participants answering this question to take care of their own health and wellness (Figure 14).

**Figure 14**

*Physical Living Environment and Difficulties in Taking Care of Health and Wellness*



*Note:*  $N = 177$  participants

There were two written comments indicating physical environment was a barrier to health and wellness coaching and/or making positive healthy lifestyle changes (Appendix F).

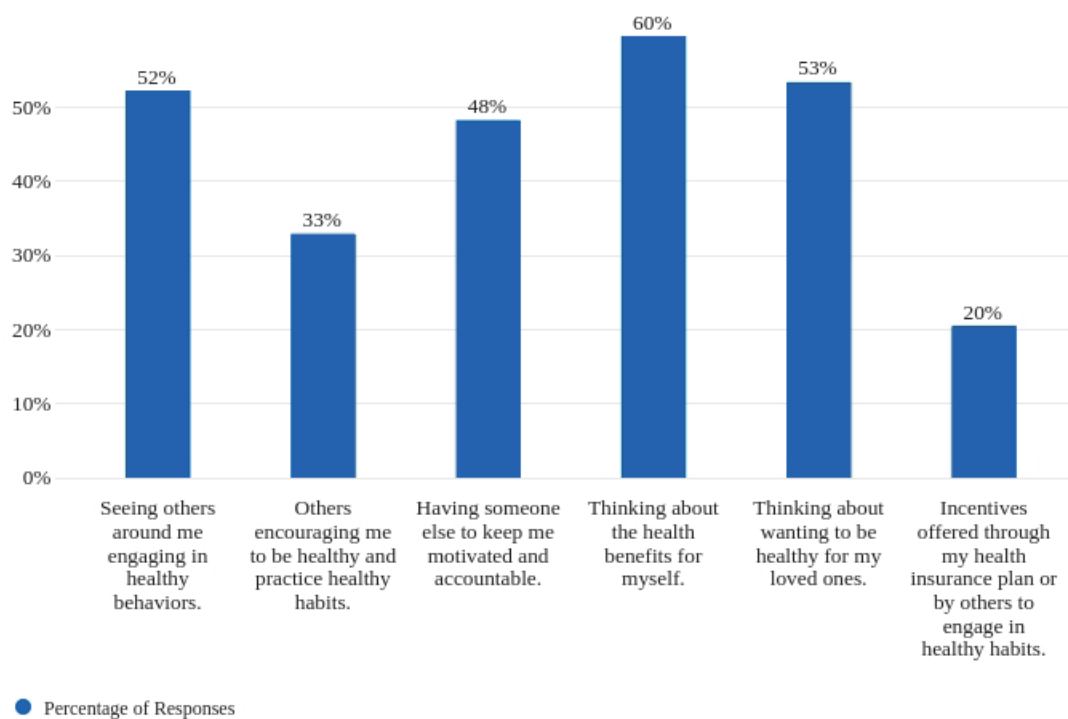
### ***Other Facilitators, Barriers, and Challenges***

Additional study findings relevant to Research question #1 are detailed below.

**Facilitator – Health Insurance Coverage.** While there were no questions asked specific to whether an individual had insurance coverage, question #33 asks “Sometimes people have access to a health and wellness coach through their medical insurance or through their employee assistance program (EAP). Do you have access to a health and wellness coach?” It would be reasonable to surmise that at least some people answered the question through the framing of insurance coverage. Of the 181 participants, 65 (35.91%) said they did not have access to a health and wellness coach through insurance, 61 (33.70%) who weren’t sure, and another 55 who (33.70%) did.

Lack of financial resources or cost was identified as a barrier which may relate to the facilitator of health insurance coverage and has been reported below (Figure 13).

**Facilitator – Motivation.** Caregiver motivation for engaging in healthy behaviors included, “Thinking about the health benefits for myself” for 105 (59.66%) of 101 participants, with the next most common response “Thinking about wanting to be healthy for my loved ones” for 94 (53.41%) participants (Figure 15). Only 36 (20.45%) indicated “Incentives offered through my health insurance plan or by others to engage in healthy habits” as providing motivation to engage in health habits.

**Figure 15***Caregiver Motivation to Engage in Healthy Behaviors*

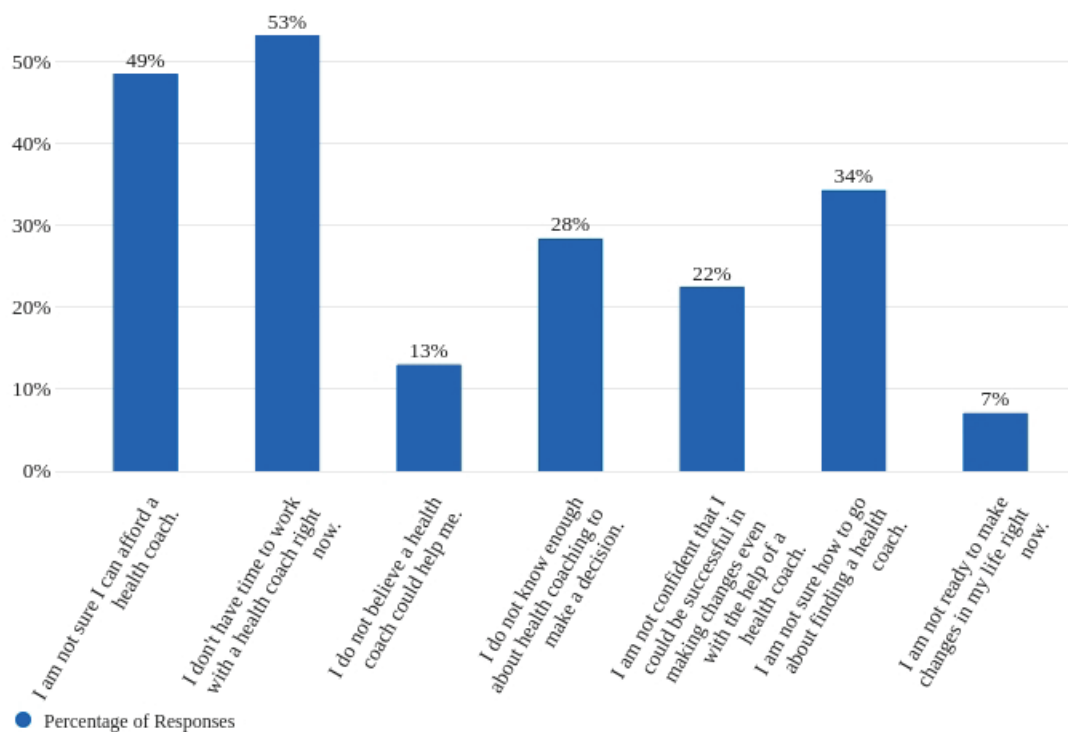
*Note:*  $N = 176$  responses

**Barrier/Challenge – Lack of Financial Resources or Cost.** Lack of financial resources was cited by 50 (30.67%) participants as a reason for not making change, and a barrier to engaging in healthy behaviors (Figure 13). There were 82 (48.52%) of 181 participants who cited cost (i.e., “Not sure I can afford a health coach”) as a reason for not wanting to make positive healthy lifestyle changes through health and wellness coaching as part of question #56 which was second only to “don’t have time” (Figure 16) for 90 (49.72%) participants. Cost was also the second most common response to the

open-ended question #44 which asked about barriers and challenges to health and wellness coaching, with 7 responses indicating cost as a consideration (Appendix F). Health insurance coverage was identified as a facilitator which may relate to the barrier/challenge of lack of financial resources or cost and has been reported above.

**Figure 16**

*Caregiver Reasons for Not Making Changes*

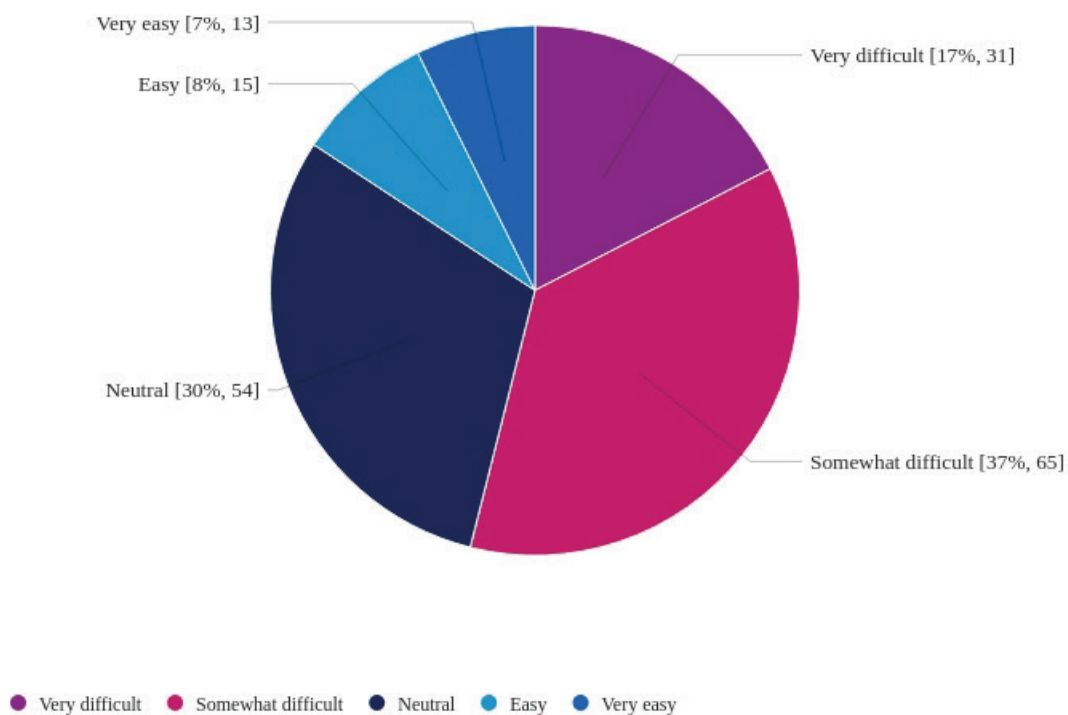


*Note: N = 169 responses*

**Barrier/Challenge – Caregiver Health.** Caregivers reported the level of difficulty in taking care of their own health as being “very difficult” or “somewhat difficult” due to caretaking for more than half of participants, with 96 (53.94%) participants indicating such, and with 54 (30.34%) being “neutral” about the level of difficulty (Figure 17).

**Figure 17**

*Level of Difficulty Taking Care of Health and Wellness due to Caregiving*



*Note:*  $N = 178$  participants

### **Barrier/Challenge – Lack of Awareness of Health and Wellness Coaching.**

Caregivers participating in this research were asked in question #45 “Prior to this survey, were you aware of health and wellness coaching as a way to support caregivers in making health and wellness improvements?” There were 74 (41.34%) who indicated they were aware of health and wellness coaching, with 103 (57.54%) indicating they were not.

### **Caregiver Receptivity**

For purposes of this study, receptivity is measured by caregiver motivation to work with a health and wellness coach. There were three hypotheses related to receptivity for which analyses were conducted.

#### **Hypothesis #2:**

It is predicted that people with “fair” or “poor” self-reported health will be less receptive to health and wellness coaching than those with “excellent” or “very good” health.

#### **Hypothesis #3:**

3. a. As the number of facilitators increases, so does the receptivity to health and wellness coaching.
3. b. As the number of barriers and challenges increase, receptivity to health and wellness coaching will decrease.

#### **Hypothesis #4:**

4. a. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by sex.

- 4. b. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by age.
- 4 c. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by race.
- 4 d. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by ethnicity.
- 4 e. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by income.
- 4 f. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by employment.
- 4 g. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by geographic residence.
- 4 h. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by health status.

This analysis indicated that there is a relationship between caregiver health status and receptivity to health and wellness coaching, with those who self-reported “fair” or “poor” health being more receptive to health and wellness coaching than those that self-reported “excellent” or “very good” health. Hypothesis # 2 is not supported. Details are provided below.

This analysis indicated that as the number of facilitators increases, so does the receptivity to health and wellness coaching, and that as the number of barriers increases, the receptivity to health and wellness coaching decreases. Hypothesis #3 a. and 3 b. are supported. Details are provided below.

This analysis indicated that there are significant differences in the number of facilitators and the number of barriers and challenges to receiving health and wellness coaching by income, region, and health, but not by sex, age, or employment. There was not enough data to analyze by race and ethnicity. Details are provided below.

### ***Receptivity and Health Status***

Hypothesis #2 for this research states that there would be a relationship between caregiver health status and receptivity to health and wellness coaching, with individuals self-reporting “fair” or “poor” health being less receptive to health and wellness coaching than those with “excellent” or “very good” health.

A one-way ANOVA was performed to compare the effect of health status on receptivity to health and wellness coaching,  $F(2, 172) = 4.02, p = .014$ . For purposes of this study, statistical significance was set as  $\alpha = < .05$  or less. The post-hoc multiple comparison results indicate that there was a statistically significant difference in receptivity to health and wellness coaching between those whose self-reported health status was “very good/excellent” and the “fair/poor” group ( $MD = -6.83, SE = 2.39, p = .014$ ). See Table 5 for descriptives. Those with “Fair/Poor” health are more receptive to health and wellness coaching than those with “Very Good/Excellent” health. In other words, health status is a significant predictor of receptivity, with “Fair/Poor” health being

predictive of greater receptivity to health and wellness coaching. Hypothesis #2 is not supported.

**Table 5**

*Descriptives for Receptivity by Health Status*

Health Status	<i>n</i>	<i>M</i>	<i>SD</i>
Fair / Poor	57	37.60	12.26
Good	62	32.69	14.19
Very Good / Excellent	56	30.77	13.11
Total	175	33.67	13.47

***Receptivity and Facilitators, Barriers, and Challenges***

Hypothesis #3 for this research states that there will be a predicted relationship between facilitators, challenges, and barriers and receptivity to health and wellness coaching, and that as the number of facilitators increases, so does the receptivity to health and wellness coaching. It also states that as the number of barriers increases, receptivity to health and wellness coaching will decrease.

Multiple linear regression was performed to determine if the number of barriers and facilitators significantly predicted receptivity to health and wellness coaching. The full model included barriers and facilitators as independent variables, with barriers being entered into the model first. The model with only barriers was called Model 1 and the full model was called Model 2.

Model 2 was determined to best fit the data, with  $F(1,176) = 11.56, p < .001$ . Adjusted  $R^2$  was .106 which indicates that 10.6% of variance in receptivity was accounted for by barriers, challenges, and facilitators. Using Model 2, barriers and challenges significantly predicted receptivity where  $b = .31, p < .001$  and that facilitators marginally predict receptivity where  $b = .14, p = .057$  (Table 6). This analysis indicated that there will be a predicted relationship between facilitators, barriers, and challenges and receptivity to health and wellness coaching, and that as the number of facilitators increase, so does the receptivity to health and wellness coaching. It also indicated that as the number of barriers and challenges increased, the receptivity to health and wellness coaching decreased. Hypothesis # 3 a. and #3 b. are supported.

**Table 6**

*Receptivity by Facilitators, Barriers, and Challenges - Coefficients*

Variable	Model 1			Model 2		
	<i>B</i>	$\beta$	<i>SE</i>	<i>B</i>	$\beta$	<i>SE</i>
Constant	25.43		2.09	19.72		3.63
Number of Barriers	1.40	.31	0.32	1.54	.34	0.33
Number of Facilitators				0.89	.14	0.47
<i>Adj. R<sup>2</sup></i>	0.09			0.11		

***Receptivity by Sex, Age, Race, Ethnicity, Income, Employment, Geographic Residence, and Health Status***

Hypothesis #4 for this research states that there will be differences in the number of facilitators and the number of challenges and barriers to receptivity to health and wellness coaching based on sex, age, race, ethnicity, income, employment, geographic residence, and health status. T-tests and ANOVA analyses were conducted as appropriate for each of the variables for hypothesis #4.

4 a. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by sex.

Two-sample t-tests were performed to compare differences in the number of facilitators and the number of barriers and challenges to receiving health coaching by sex, (males and females).

There was not a significant difference in the number of facilitators to receiving health coaching between males ( $M = 5.04$ ,  $SD = 1.46$ ) and females ( $M = 5.54$ ,  $SD = 2.18$ );  $t(46.18) = 1.50$ ,  $p = .139$ . There was not a significant difference in the number of barriers and challenges to receiving health coaching between males ( $M = 5.92$ ,  $SD = 3.26$ ) and females ( $M = 5.71$ ,  $SD = 2.99$ );  $t(32.46) = -0.31$ ,  $p = .757$ .

Hypothesis 4a that there are differences in the number of facilitators and the number of barriers and challenges to receiving health and wellness coaching by sex is not supported.

4 b. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by age.

A one-way ANOVA was performed to compare the effect of age on the number of facilitators and barriers and challenges to receiving health and wellness coaching. For facilitators,  $F(6, 174) = .46$ ,  $p = .837$ . For barriers and challenges,  $F(6, 174) = 1.83$ ,  $p = .096$ . For purposes of this study, statistical significance was set as  $\alpha = < .05$  or less. See Table 7 for descriptives. Hypothesis 4b that there will be differences in the number of facilitators and barriers and challenges to receiving health and wellness coaching by age group is not supported.

**Table 7**

*Descriptives for Number of Facilitators, Barriers, and Challenges by Age Range*

Facilitator/Barrier	Age	<i>n</i>	<i>M</i>	<i>SD</i>
Number of Facilitators	61+	51	5.51	1.90
	56-60	38	5.18	1.97
	51-55	25	5.72	1.81
	46-50	13	5.92	2.63
	40-55	30	5.67	2.59
	30-39	14	5.14	2.21
	20-29	10	5.00	1.83
	Total	181	5.47	2.09
Number of Barriers	61+	51	5.22	2.80
	56-60	38	5.50	2.92
	51-55	25	5.48	2.92
	46-50	13	6.46	2.70
	40-55	30	6.00	3.55
	30-39	14	5.64	2.44
	20-29	10	8.40	3.47
	Total	181	5.74	3.02

4 c. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by race.

The sample size was not adequate to perform analyses for the number of facilitators, barriers, and challenges to receiving health and wellness coaching by ethnicity. The samples sizes for ethnicities other than “non-Hispanic” were not adequate to perform meaningful hypothesis testing. Hypothesis 4c cannot be supported or unsupported.

4 d. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by ethnicity.

The sample size was not adequate to perform analyses for the number of facilitators, barriers, and challenges to receiving health and wellness coaching by ethnicity. The samples sizes for racial groups other than "White" were not adequate to perform meaningful hypothesis testing. Hypothesis 4d cannot be supported or unsupported.

4 e. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by income.

A one-way ANOVA was performed to compare the effect of income on the number of facilitators and barriers and challenges to receiving health and wellness coaching, For facilitators,  $F(5, 164) = 3.30$ ,  $p = .007$ . For barriers and challenges,  $F(6, 174) = 4.02$ ,  $p = .002$ . For purposes of this study, statistical significance was set as  $\alpha = < .05$  or less. The post-hoc multiple comparison results indicate that there was a

statistically significant difference in the number of facilitators to receiving health and wellness coaching by income for those with incomes of \$100,001 or more and those with incomes under \$20,000 ( $MD = 2.70$ ,  $SE = 0.70$ ,  $p = .038$ ), meaning that those in the highest income group had on average 2.70 more facilitators than those in the lowest income group. There was a statistically significant difference in the number of barriers to receiving health and wellness coaching by income for those with incomes of \$20,001 - \$40,000 and those with incomes of \$100,001 or over ( $MD = 2.44$ ,  $SE = 0.75$ ,  $p = .024$ ). See Table 8 for descriptives. Hypothesis 4e that there will be differences in the number of facilitators and barriers and challenges to receiving health and wellness coaching by income is supported.

**Table 8**

*Descriptives for Number of Facilitators, Barriers, and Challenges by Income Range*

Facilitator/Barrier	Income	<i>n</i>	<i>M</i>	<i>SD</i>
Number of Facilitators	Under \$20,000	7	3.43	1.72
	\$20,001 - \$40,000	27	4.89	2.42
	\$40,001 - \$60,000	25	5.76	2.13
	\$60,001- \$80,000	29	5.21	1.52
	\$80,001 - \$100,000	27	5.11	2.29
	\$100,001 or over	55	6.13	1.97
	Total	170	5.45	2.12
Number of Barriers	Under \$20,000	7	8.29	3.09
	\$20,001 - \$40,000	27	7.07	3.30
	\$40,001 - \$60,000	25	6.12	2.91
	\$60,001- \$80,000	29	5.66	1.99
	\$80,001 - \$100,000	27	6.11	3.15
	\$100,001 or over	55	4.64	2.90
	Total	170	5.80	3.01

4 f. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by employment.

Two- sample t-tests were performed to compare differences in the number of facilitators and the number of barriers and challenges to receiving health coaching by employment.

There was not a significant difference in the number of facilitators to receiving health coaching between those not employed outside the home ( $M = 5.29$ ,  $SD = 2.04$ ) and those employed outside the home ( $M = 5.77$ ,  $SD = 2.02$ );  $t(169) = 1.52$ ,  $p = .130$ . There was not a significant difference in the number of barriers and challenges to receiving health coaching between those not employed outside the home ( $M = 5.89$ ,  $SD = 2.89$ ) and those employed outside the home ( $M = 3.73$ ,  $SD = 3.14$ );  $t(169) = .332$ ,  $p = .740$ .

Hypothesis 4f that there are differences in the number of facilitators and the number of barriers and challenges to receiving health coaching by employment is not supported.

4 g. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by geographic residence.

Two- sample t-tests were performed to compare differences in the number of facilitators and the number of barriers and challenges to receiving health coaching by region (South and Other Regions).

There was a significant difference in the number of facilitators to receiving health coaching between other regions ( $M = 4.60$ ,  $SD = 2.23$ ) and south ( $M = 5.73$ ,  $SD = 2.01$ );  $t(173) = -2.90$ ,  $p = .004$ . There was a significant difference in the number of barriers and

challenges to receiving health coaching between other regions ( $M = 7.17, SD = 2.97$ ) and south ( $M = 5.28, SD = 2.92$ );  $t(173) = 3.42, p < .001$ .

Hypothesis 4g that there are differences in the number of facilitators and the number of barriers and challenges to receiving health and wellness coaching by region is supported.

4 h. There will be differences in the number of facilitators, and the number of barriers and challenges, to receiving health and wellness coaching by health status.

A one-way ANOVA was performed to compare the effect of health status on the number of facilitators and barriers and challenges to receiving health and wellness coaching. For facilitators,  $F(2, 174) = 11.73, p < .001$ . For barriers and challenges,  $F(2, 174) = 9.96, p < .001$ . For purposes of this study, statistical significance was set as  $\alpha = < .05$  or less. The post-hoc multiple comparison results indicate that there was a statistically significant difference in the number of facilitators to receiving health and wellness coaching by health for those with fair or poor health and those with good health ( $MD = -1.40, SE = 0.35, p < .001$ ) and between those with fair or poor health and very good or excellent health ( $MD = -1.64, SE = 0.38, p < .001$ ). The post-hoc multiple comparison results indicate that there was a statistically significant difference in the number of barriers and challenges to receiving health and wellness coaching by health for those with good health and those with very good or excellent health ( $MD = 1.67, SE = 0.52, p = .005$ ) and between those with fair or poor health and very good or excellent health ( $MD = 2.34, SE = 0.54, p < .001$ ). See Table 9 for descriptives. Hypothesis 4h that there will be differences in the number of facilitators and barriers and challenges to

receiving health and wellness coaching by health status is supported.

**Table 9**

*Descriptives for Number of Facilitators, Barriers, and Challenges by Health Status*

Facilitator/Barrier	Health Status	<i>n</i>	<i>M</i>	<i>SD</i>
Number of Facilitators	Fair / Poor	57	4.49	2.00
	Good	64	5.89	1.84
	Very Good / Excellent	56	6.13	2.03
	Total	177	5.51	2.07
Number of Barriers	Fair / Poor	57	6.70	2.96
	Good	64	6.03	2.92
	Very Good / Excellent	56	4.36	2.75
	Total	177	5.72	3.02

### ***Receptivity and Caregiver Health Areas Ready to Address***

Each of the research questions #1-4 address receptivity. Receptivity in the current study is measured by caregiver motivation to work with a health and wellness coach in a given area. The areas caregivers indicated they felt a need to address and were very ready included: managing stress (63 or 35.20%) increasing energy (53 or 29.61%) improving sleep habits (52 or 29.05%) and improving the ability to be “in the moment” and focus (48 or 26.82%) (Table 10). It is not surprising that these areas were identified as they were cited in the responses to open-ended survey questions and were often cited in online caregiver support groups visited by the researcher. These areas have also been noted in the literature (Beach et al., 2022; Strzelecki et al., 2022). Caregivers felt a need and were somewhat ready to address were exercise (59 or 32.96%), preparing healthy food quickly

and easily (49 or 27.37%) managing stress (45 or 25.14%), and weight loss (44 or 24.58%). Forty-nine (27.37%) caregivers indicated they were already working on weight loss while another 45 (25.14%) indicated they were already working on exercise. Forty-two (23.46%) were working on increasing their energy.

The researcher visited online caregiver support groups multiple times per week and made personal observations while recruiting research participants. Online caregivers frequently stated that they were experiencing stress, low energy levels, and lack of sleep. Oftentimes posts sounded of desperation, frustration, and in some cases defeat due to the demands of caregiving. Caregivers being “very ready” to make changes in these areas are not unexpected or surprising, though for some it appears they know they need to make changes but do not feel that they can take on anything more in their lives.

While not all caregivers in this study reported having a chronic disease or condition, without proper attention to their health, they may be at increased risk of developing one (American Academy of Family Physicians, 2023), and may also be further at risk depending on geographic location of residence, particularly if they are in the south (Barker et al., 2011; Oates et al., 2017; Tanner et al., 2013, Vaughn et al., 2014).

**Table 10***Areas Caregivers Feel a Need to Address*

Response	Very Ready		Somewhat Ready		Already Working on		Don't Need to Work on This Area		Not at All Ready	
	n	%	n	%	n	%	n	%	n	%
Weight loss	33	18.44%	44	24.58%	49	27.37%	37	20.67%	14	7.82%
Increasing energy	53	29.61%	53	29.61%	42	23.46%	17	9.50%	11	6.15%
Reducing food cravings such as sweets	31	17.32%	43	24.02%	37	20.67%	53	29.61%	13	7.26%
Preparing healthy food, quickly and easily	27	15.08%	49	27.37%	39	21.79%	48	26.82%	13	7.26%
Lowering blood pressure through dietary changes	19	10.61%	31	17.32%	28	15.64%	84	46.93%	10	5.59%
Balancing blood sugar	14	7.82%	28	15.64%	25	13.97%	96	53.63%	10	5.59%
Lowering cholesterol through dietary changes	19	10.61%	34	18.99%	35	19.55%	73	40.78%	10	5.59%
Reducing emotional eating	34	18.99%	39	21.79%	33	18.44%	54	30.17%	14	7.82%
Making healthy choices when eating out	26	14.53%	28	15.64%	41	22.91%	64	35.75%	12	6.70%
Exercise	35	19.55%	59	32.96%	45	25.14%	20	11.17%	16	8.94%
Managing Stress	63	35.20%	45	25.14%	39	21.79%	17	9.50%	11	6.15%
Improving life satisfaction	47	26.26%	38	21.23%	33	18.44%	43	24.02%	12	6.70%
Improving sleep habits	52	29.05%	35	19.55%	33	18.44%	46	25.70%	8	4.47%
Improving your ability to be "in the moment" and focused without distractions	48	26.82%	31	17.32%	39	21.79%	44	24.58%	9	5.03%

Response	Very Ready		Somewhat Ready		Already Working on		Don't Need to Work on This Area		Not at All Ready	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Decreasing tobacco use	6	3.35%	8	4.47%	9	5.03%	140	78.21%	9	5.03%
Decreasing alcohol use	3	1.68%	10	5.59%	11	6.15%	143	79.89%	4	2.23%
Decreasing use of drugs that are not prescribed for you	0	0.00%	5	2.79%	7	3.91%	154	86.03%	4	2.23%
Other	1	0.56%	3	1.68%	2	1.12%	59	32.96%	4	2.23%

Note: *N* = 179

## CHAPTER FIVE: DISCUSSION

This descriptive research inquiry sought to understand receptivity to health and wellness coaching by caregivers of older adults aged 65 and older, and barriers, challenges, and facilitators to receiving health and wellness coaching by this population as a scientifically grounded and evidence-based strategy for promoting healthy lifestyle behaviors and reducing chronic disease. An 88-question survey was conducted online and in person with 65 multiple choice questions, 17 yes/no questions, two scaled and four open-ended questions on general demographics, receptivity to health and wellness coaching, barriers, challenges, and facilitators, and mental and emotional health, social support, and physical well-being. Descriptive statistics and regression analyses were utilized in this study.

Key facilitators to health and wellness coaching were caregiver support and motivation, key barriers and challenges were lack of time, not having someone to motivate and help hold one accountable, and lack of financial resources or cost. There were statistically significant differences in facilitators, barriers, and challenges based on income, region of residence (south) and health status. Sex, employment, and age were not significant for facilitators, barriers, or challenges. There was a statistically significant difference in receptivity based on barriers and challenges, and a marginally significant difference for facilitators. Having fair or poor health was a significant predictor of receptivity to health and wellness coaching. To this researcher's knowledge, this is the first study to specifically examine receptivity to health and wellness coaching by unpaid caregivers for this population.

This chapter provides a summary of findings according to each research question.

A summary of each research question is included below, followed by a more detailed discussion organized by caregiver demographics, identified facilitators, barriers, and challenges, caregiver receptivity to health and wellness coaching by health status, facilitators, barriers, and challenges, by demographics, and caregiver areas of health where there is readiness to address. Qualitative responses to the survey are included in this section to amplify quantitative findings.

**Research Question #1 - Facilitators, Barriers, and Challenges:** Findings for research question #1 demonstrated that facilitators for caregivers participating in health and wellness coaching were motivation, virtual coaching, health insurance coverage, and caregiver support. Caregiver support was the most frequently included facilitator in participant comments. Additional findings for this research question indicated that the most common barriers and challenges to caregivers participating in health and wellness coaching were lack of time, lack of financial resources or cost, and physical environment (including isolation), caregiver health, and lack of awareness of health and wellness coaching.

It is noted that some indicators could be considered as either a barrier or challenge (i.e., lack of caregiver support) or as a facilitator (caregiver support) which is further discussed in the Methods section of this paper.

**Research Question #2 - Receptivity by Health Status:** Receptivity was measured by readiness to work with a health and wellness coach in a given area. There was a statistically significant difference in receptivity to health and wellness coaching

between those whose self-reported health status was “Very Good/Excellent” and the “Fair/Poor” group. Those with “Fair/Poor” health were more receptive to health and wellness coaching than those with “Very good/Excellent” health. In other words, health status is a significant predictor of receptivity, with “Fair/Poor” health being predictive of greater receptivity to health and wellness coaching.

**Research Question #3 - Relationship between facilitators, barriers, and challenges and receptivity to health and wellness coaching:** Barriers and challenges significantly predicted caregiver receptivity to health and wellness coaching while facilitators marginally predicted caregiver receptivity.

**Research Question #4 - Differences in Facilitators, Barriers and Challenges by Demographics:** Findings indicated that there were no statistically significant differences in mean barriers, challenges and facilitators to caregivers receiving health and wellness coaching according to sex, income, and employment. There were significant differences for age, region of residence (south), and health status.

## **Overview**

Changing health behaviors can be challenging. As an example, the U.S. Department of Health and Human Services (2020) Surgeon General’s report cited that more than half of adult cigarette smokers report having made a quit attempt in the past year, but that fewer than one in ten succeed in quitting each year. Another example is the many individuals who have made New Year’s resolutions only to have broken them a short time later. One study (Oscarsson et al., 2020) found that 55% of participants kept their New Year’s resolution for less than a year, with 11% lasting at least six months,

14% lasting at least three months, 19% lasting at least one month and 11% lasting less than a month.

Oftentimes behavior change involves eliminating one unfavorable behavior while learning another simultaneously, which can be difficult. Behavior change can be incredibly complex with researchers completing thousands of health behavior change interventions on a wide range of topics such improving medication adherence, decreasing risky sexual activity, or promoting physical activity (Davidson & Scholz, 2020). Individuals may know what they need to do but may not be in a stage of readiness to make changes. Change is not always a linear process as explained by the Transtheoretical Model (Prochaska & DiClemente, 1982) also known as Stages of Change Model, and there may be multiple factors involved as explained by Bandura's (1986) Social Cognitive Theory including self-efficacy, outcome expectations, goals, and socio-structural factors.

In addition to the typical challenges in changing health behaviors, caregivers have additional difficulties associated with caregiving that may make changing health behaviors even more difficult. Factors include social isolation and lack of time due to caregiver responsibilities (American Psychological Association, 2011). Not only do caregivers face additional challenges, but they are also at increased risk for certain conditions (American Academy of Family Physicians, 2023) and as a population have experienced increasingly worse health (The National Alliance for Caregiving and AARP, 2020).

Health and wellness coaching is an opportunity to support a population that gives selflessly to others and who may frequently put themselves and their own health behind that of those for whom they are providing care.

### **Facilitators, Barriers, and Challenges**

It is important to understand facilitators, barriers and challenges to caregivers participating in health and wellness coaching so that coaching interventions are designed to maximize participation by those who wish to engage with a health and wellness coach to make positive healthy lifestyle changes. Research question #1 asks what the barriers, challenges, and facilitators to caregivers receiving health and wellness coaching are and will be discussed here.

#### ***Facilitator – Motivation***

Social cognitive theory (Bandura, 1986) has as its central tenet observational learning and an emphasis on social influence. It is noted that more than half of the participants participating in the current study indicated that “seeing others around me engage in healthy behaviors” was a motivator to making change, supporting this foundational theory. It is also important to examine intrinsic and extrinsic motivators. Motivators most frequently cited were thinking about health benefits for the caregiver followed by thinking about wanting to be healthy for loved ones, both intrinsic motivators. Of the six answer choices, only one involved a tangible, extrinsic motivator (incentives offered by insurance or other) which was cited the least frequently by participants. Because there were participants indicating both intrinsic and extrinsic motivators impacting their engagement in healthy behaviors, this reiterates the

importance of motivational interviewing as part of the health and wellness coaching strategy (Butterworth et al., 2006; Miller et al., 2009; Miller et al., 2013) where the coach can elicit from each individual patient or client his or her motivators as part of the self-discovery process.

The Wolever et al. (2013) definition of health and wellness coaching, acknowledges motivation and behavior change theory as part of the health coach's expertise and as a way to assist patients to develop intrinsic motivation and obtain skills to create sustainable change for improved health and well-being. The most frequent response to question #54 ("What motivates you to engage in healthy behaviors?") in the current study was "Having someone else to keep me motivated and accountable," demonstrating opportunity for health and wellness coaching to address caregiver needs for accountability and motivation in making healthy lifestyle changes. Findings of this current research project support both intrinsic and extrinsic motivators as being important to caregivers participating in the study, and in particular, health and wellness coaching as an accountability and motivational strategy.

### ***Facilitator – Virtual Coaching***

Virtual coaching may be part of the solution for the physical environmental issue of isolation experienced by caregivers. Environment is a known factor in behavior change as stated in the social cognitive theory (Bandura, 1986). For more than half of the survey participants, availability of virtual coaching was a facilitator to receiving health and wellness coaching. While not all participants were supportive of a virtual format, some saw it as the only way they might be able to engage with a health and wellness

coach. One participant commented, “Virtual would be the only possible option as I cannot leave my parent alone and do not have anyone else to provide care/supervision,” with others offering comments on the inability to leave their loved one alone. This is similar to the isolation noted by Hirschman et al. (2020) in their paper summarizing implementation experiences with a video-based health and wellness coaching study of caregivers of heart failure patients.

This participant comment also supports the findings of the Sixsmith et al. (2022) study addressing digital literacy and the COVID-19 pandemic’s stimulation of increased technology use by older adults. In order for individuals to participate in virtual coaching, it is necessary that they are digitally literate. Digital literacy is more than reading and processing information online, it includes using digital tools to connect with others online and being able to use technologies effectively (American Library Association, 2023).

Just as health and wellness coaching sessions are tailored to the individual, the delivery method must also be tailored to individual needs. Virtual coaching can be a facilitator to health and wellness coaching for caregivers but may not be appropriate for or received well by all. One challenge for health and wellness coaches may be in balancing the need for virtual coaching sessions for caregivers who are isolated at home with that of privacy concerns depending on the individual caregiver’s home environment as well as personal preferences and comfort level with technology.

Reviewing research on virtual coaching for caregivers (Riegel et al. 2019; Jafar et al., 2023; Olivier et al., 2021; Hudlicka, 2013) may be helpful in understanding how to

best use technology to support caregiver health and well-being through health and wellness coaching. For those caregivers not receptive to virtual health and wellness coaching and prefer in-person participation, as well as for those who are receptive to virtual coaching but also need additional support for a care recipient, exploring opportunities for caregiver respite care so that they can participate in health and wellness coaching knowing their loved one is being temporarily cared for is one strategy worth exploring.

### ***Facilitator – Health Insurance Coverage***

There were more study participants who noted lack of access to a health and wellness coach through their medical insurance or employee assistance program or being unsure whether they had access than those who indicated they had access. Health insurance coverage of health and wellness coaching may at least partially address lack of financial resources or cost-related barriers, which was identified as a barrier in this study.

Joint efforts by the National Board for Health and Wellness Coaching and the American Medical Association to ensure health and wellness coaching is an insurance covered service can only be a positive in addressing cost concerns of caregivers considering health and wellness coaching to make healthy lifestyle changes (National Board for Health and Wellness Coaching, n.d.). Effective January 2020, the American Medical Association's approval of three Current Procedural Terminology (CPT) Category III codes for health and wellness coaching insurance reimbursement go into effect (National Board for Health and Wellness Coaching, n.d.). Healthcare providers have been able to prescribe health and wellness coaching delivered by a National Board

for Health and Wellness Coaching credentialed coach or by a National Commission for Health Education Credentialing (NCHEC) certified health education specialist (CHES®/MCHES®) which may be eligible for medical reimbursement. As efforts continue, moving from a Category III emerging service to that of a Category I service would be expected to be of great value in addressing cost concerns.

It is acknowledged that even with insurance coverage that includes health and wellness coaching, cost may still be a concern as there may be co-pays or only partial coverage for this service, with cost still being a barrier. Overall, given the identified barriers of lack of financial resources and cost, health insurance coverage of health and wellness coaching may be a facilitator to caregivers receiving coaching with another barrier removed from caregivers in receiving this service and making positive healthy lifestyle changes. Interestingly, this was also listed as a barrier.

### ***Facilitator – Caregiver Support***

Caregiver support may be considered a facilitator or lack thereof may be considered a barrier to caregivers receiving health and wellness coaching. Question #55 in the current study survey, “What barriers do you have to engaging in healthy behaviors? Check all that apply.” frames caregiver support as a barrier given the frequency caregiver burden appears in the literature (American Psychological Association, 2020; Carbonelle, 2023; National Alliance for caregiving and AARP, 2015; Zaret et al., 1980). As explained in the Methods section of this paper, responses were coded at the individual level and there were more positive responses for questions specific to caregiver support than there was negative. Therefore, caregiver support is identified as a facilitator in the

current study findings rather than a barrier. In contrast, most of the comments received about caregiver support were framed as it being more of a barrier, though these questions were not included as part of the analyses as this was not a qualitative study. Additional research might be done with focus on caregiver support and the target population and how it may impact receptivity to health and wellness coaching (i.e., availability of respite care, type of support received, amount of support received, number of caregivers sharing responsibility for a care recipient).

The Social Cognitive Theory (Bandura, 1986) is based on the belief that behavior results from continuous interactions among environment, individual factors, and the behavior itself. This theory includes social support as part of the environment that shapes behavior. Participant comments in the current study repeatedly included the need for caregiver support in facilitating healthy lifestyle changes through health and wellness coaching. Having support may facilitate having a greater sense of agency, illustrating reciprocal determinism. Noting the need for hands-on support available to caregivers, one respondent stated:

To be perfectly honest, as someone who has been a caregiver for multiple family members for 20 years this type of help (health coaching) is dead last on my list of help priorities. I can access therapy, a dietician, and other services via my insurance that would fulfill the same or similar functions as what this seems it would be. While it would be nice to work with someone who understands the specific stressors of being a caregiver, the bulk of caregiver stress can't really be helped by a health and wellness coach. We need hands on assistance, financial resources, social service's assistance, etc.

More caregiver support may lead to more sense of agency (reciprocal determinism) and as a result, increased behavioral capability, reinforcements, expectations, and self-efficacy which are constructs of the Social Cognitive Theory.

Given the results found in this study indicated need for caregiver support, expansion of innovative programs such as the Caring for Caregivers (Carbonelle, 2023) model developed by Rush University may support opportunities for caregivers to engage in healthy activities such as working with a health and wellness coach. The program is being implemented by healthcare systems. Additionally, exploring opportunities for caregiver respite care so that caregivers can participate in health and wellness coaching knowing their loved one is being temporarily cared for is a strategy worth exploring.

Caregiver support may be considered a facilitator, or a lack of support may be considered a barrier to caregivers receiving health and wellness coaching. Question #55 in the current study's survey, "What barriers do you have to engaging in healthy behaviors? Check all that apply." frames caregiver support as a barrier given the frequency caregiver burden appears in the literature (American Psychological Association, 2020; Carbonelle, 2023; National Alliance for caregiving and AARP, 2015; Zaret et al., 1980). The comments received about caregiver support were not included as part of the analyses as this was not a qualitative study. Additional study might be done specifically on caregiver support and the target population and how it may impact receptivity to health and wellness coaching.

***Barrier/Challenge – Lack of Time***

The most frequent barrier identified in this study was lack of time. Specific to lack of available time one participant noted, “My day is so packed with appointments, daily care, and working that I don’t hardly have time to breathe,” with another commenting:

Caregiving is hard because you don't know week to week how much time will be needed since the person's health can change drastically and you may spend much more time giving care than anticipated and then you have to change your schedule to accommodate the need.

The Gierisch et al. (2017) literature synthesis on the evidence on health coaching for adults with chronic medical conditions found evidence that a midrange dosage of coaching sessions, with six to 15 sessions, may be more beneficial than those with smaller or larger numbers of sessions. For a population that indicates lack of time as a barrier to receiving health and wellness coaching and to engaging in healthy behaviors, the time commitment for six to 15 sessions of health and wellness coaching may seem out of reach. However, by maximizing facilitators such as virtual coaching opportunities and caregiver support, it may be possible. This research identifies a need to explore opportunities to develop effective health and wellness coaching interventions tailored to this population with time constraints.

***Barrier/Challenge – Physical Environment***

It is known that physical environment plays a role in behavior change. The social cognitive theory (Bandura, 1986) is based on the belief that behavior results from continuous interactions among environment, individual factors, and the behavior itself.

Social cognitive theory purports that while environment can alter an individual's behavior, people can alter their environments to achieve desired outcomes. For the current study over a third of the participants that indicated the physical environment made it "very difficult" or "somewhat difficult" to take care of their own health and wellness. All facets of reciprocal determinism- self-efficacy, outcome expectations, goals, and self-evaluation - as a key construct of Social Cognitive Theory relate to this research question and help in understanding study findings. Barriers and challenges may create a sense of lack of agency, which in turn may impact self-efficacy, outcome expectations, goals and self-evaluation, some of which are evidenced in participant comments.

Participants who included comments in response to open-ended questions noted concerns over their environment such as one respondent who noted:

I work from home, which is where I care for my 80-year-old father. At the present moment, there are five people living in a very small apartment containing three rooms and one bathroom. I do not see me having the time or space to truly do the work that I believe would be necessary while living like this. (I would like to note that this is not a permanent situation and two people are expected to be leaving by January 2024).

Caregiver isolation can also be considered a physical environmental issue (Kim & Given, 2008; Families of Cancer Survivors; Family Caregiver Council, 2023; Gallagher and Wetherall, 2020; Hajek et al., 2021; Hirschman et al., 2020; National Council on Aging, 2023; Riegel, 2019; Stenberg et al., 2010). The Family Caregiver Alliance (n.d.)

states that feelings of isolation and loneliness may be attributed to the caregiver withdrawing from previous habits and lifestyle as they provide caregiving to a care recipient. Without support from other caregivers, a caregiver may feel that no one understands their situation which may lead to withdrawal from activities and other people, creating more isolation. It was also noted that some care recipients require 24-hour care (Family Caregiver Alliance, n.d.). The caregiver in these cases may be completely isolated if they do not have a support system or financial resources to secure paid support services.

Hirschman et al. (2020) noted that caregivers of adults living with heart failure experience similar challenges to caregivers of adults with other conditions and illnesses which may include complex care regimens. These regimens are often the responsibility of caregivers, where their role may involve supervising and monitoring adherence to complicated care management plans which may limit the time that the caregiver is able to be away from the home and which create isolation.

The Riegel et al. (2019) research, to be published in 2024, may provide insight on effective coaching interventions for caregivers who are isolated. The Social Cognitive Theory (Bandura, 1986) which includes environment as part of its framework provides the rationale for health and wellness coaches to consider physical environment and how that may be a barrier to receiving coaching and behavior change. Isolation at home with the inability to leave the care recipient alone is one physical environmental barrier to health and wellness coaching. A second physical environmental barrier to health and wellness coaching is a potential lack of privacy and space in the home environment

which limits options outside of in-person coaching. Depending on the physical environment, barriers and challenges may exist for both in-person coaching and for other options such as virtual coaching.

### ***Barrier/Challenge – Caregiver Health***

While study results indicate the majority of participants self-reported their overall health as “good” or “fair,” over half indicated taking care of their own health being “very difficult” or “somewhat difficult” due to caregiving. For this study, self-reported health status was used to determine receptivity to health and wellness coaching, as the value of using subjective data has been noted in the literature (Cleary, 1997). Cleary states that one of the most compelling reasons for assessing perceived health is that it can predict future morbidity and mortality, even with controlling for other variables (i.e., biological, health status), and cites evidence that elderly people with perceived poor health were six times more likely to die in a 4-year period than those who self-reported excellent health, which carries greater relative risk than for smoking. This may be due to self-fulfilling prophecy (i.e., people who already think their health is poor may not take steps to be healthier as much as others who see their health as more favorable and worth protecting).

It has been reported that self-perceived health has been shown to be strongly associated with personality characteristics (Suominen et al., 2001, Goodwin and Engstrom, 2002) and mental health (Hansen et al., 2001). Caramenti and Castiglioni (2022) examined physical indicators and found that body mass index (BMI), chronic diseases and medications, muscle strength, and mobility issues had a strong effect on self-perceived health, as did the quality of life, depression, and verbal fluency. Individual

characteristics, limitations in daily activities, and pain, along with others only had a small effect. While these areas were not measured in the current study, it may explain why the current study population perceived their health status as “fair” or “good” if this population had similar characteristics and indicators of those found in the literature.

There was less chronic disease present among the study population than expected, given that the majority of participants were from the south region which is generally less healthy as a population (Oates et al., 2017). In addition, the largest age group in the sample was ages 60-65 where one might expect more chronic disease to be present. The Centers for Disease Control and Prevention (2022) reports that six in 10 Americans have a chronic disease and four in 10 have two or more. The unanticipated finding of less chronic disease in the study population may be explained by the number of predominantly White, higher income, female participants, who as a population are healthier (Pinquart & Sorensen, 2005; McCann et al., 2000; Blue Cross Blue Shield, 2020; Kim et al., 2023). It might also be explained by not all diseases and conditions being included in the survey which was limited to the top ten leading causes of death as determined by the Centers for Disease Control and Prevention (2022). It is also possible that participants were not comfortable disclosing information on diseases and conditions they have.

With the mental and physical toll of caregiving (Pinquart & Glajchen, 2012; Schulz & Sherwood, 2008, Vitaliano et al., 2003), it is possible that caregivers do not have the physical or mental energy to participate in health and wellness coaching. Participants reported having diabetes, heart disease, cancer, and chronic lung disease

which may involve multiple medical appointments and treatment regimens that require time and have associated costs. Having less time and more medical costs may create barriers and challenges to caregivers participating in health and wellness coaching.

There are opportunities for health and wellness coaches to work within medical practices to provide services to caregivers who are already experiencing a chronic condition or disease or who are at risk of developing one, putting themselves at risk as well as those for whom they are providing care (Miyiwaki et al. 2020; Carbonelle,2023). In addition, innovative models such as Caring for Caregivers (Carbonelle, 2023) developed and launched in 2019 by Rush University, provides additional opportunities for caregivers by engaging health care providers to address the needs of caregivers with aims to change the ways the health system identifies and addresses the needs of family caregivers of older adults, and to provide education and support them to improve their and their care recipients' well-being.

### ***Barrier/Challenge – Lack of Awareness of Health and Wellness Coaching***

Over half of the caregivers participating in this research were not aware of health and wellness coaching as a way to support caregivers in making health and wellness improvements. This researcher's earlier pilot study (Chafin, 2021) also found an overall lack of awareness of health coaching in the caregiver population. This is not surprising as health and wellness coaching is an evolving field as evidenced by Wolever et al.'s (2013) systematic review of 284 studies which sought to define health and wellness coaching. If something cannot be defined, it cannot be effectively promoted, which may result in lack of awareness. The general public may not be aware and

knowledgeable of health and wellness coaching given that the industry itself is still evolving. There may be opportunities for industry professionals to educate the public on health and wellness coaching so that they know health and wellness coaches exist as well as their roles and what they do.

### **Receptivity**

It is important to understand variables that might impact caregiver receptivity to health and wellness coaching in order to tailor health and wellness coaching interventions that may be most effective for this population and to which they are receptive. Research questions #2, #3 and #4 address differences in receptivity to health and wellness coaching.

### ***Receptivity and Health Status***

For research question #2, study findings indicate that health status is a significant predictor of receptivity, with “fair/poor” health being predictive of greater receptivity to health and wellness coaching. It is possible that individuals with fair or poor health recognize that they need assistance to make improvements in their health. For those with chronic disease, their healthcare providers may have emphasized the importance of making changes or they no longer want to deal with symptoms associated with their conditions which might be improved with lifestyle change.

The study findings for this research question were unexpected, as other studies such as that of Rissell’s (2019) study of pregnant women participating in a telephonic lifestyle-based health coaching program, had women who were overweight or obese at pre-pregnancy being more likely to withdraw from the program than women with normal

pre-pregnancy body mass index (BMI), though it could be said that they were receptive to initially participating as evidenced by enrollment in the program, and less receptive to continued participation. This is similar to another study by Viken et al. (2019), which while not specific to health and wellness coaching, examined predictors of older adults participating in an exercise program. This study found the most self-reported indicator of dropping out of an exercise program was for health reasons, though not specific to BMI or weight as with the Rissell (2019) study. Additional reasons that followed were loss of interest, lack of time, and family reasons. These studies demonstrate a relationship between health status and receptivity to participating in healthy lifestyle programming, though not specifically health and wellness coaching.

These examples in the literature may support the theory of individuals who may be attempting to improve health behaviors and who may self-rate their health status as unfavorable and in need of improvement being less receptive to interventions to improve health status (e.g., health and wellness coaching). This is in contrast to the current study findings which could be due to a more educated study population with greater access to resources.

Self-reported subjective assessments of health status were discussed above as a barrier and challenge to health and wellness coaching and allude to possible causes of those reporting less favorable health statuses as less likely to engage in activities and behaviors that protect their health (Cleary, 1997). It is also possible that the examples in the literature are that of participants who may be lacking a sense of self-efficacy (Bandura, 1986) for successful change, or not believing that receiving outside support

(e.g., a health and wellness coach) could help them. It is possible that they have made repeated attempts at behavior change and are now less receptive to trying another intervention. Repeated unsuccessful attempts by smokers to quit smoking (United States Department of Health and Human Services, 2020) as well as the high rates of New Year's resolutions being broken (Oscarrson et al., 2020) support the notion of behavior change being difficult and individuals already having made multiple attempts to change health behaviors, which may impact receptivity to further participation in interventions that support health behavior change. Even if participants are initially receptive to participating in an intervention or program, continuing long enough for lasting behavior change may be challenging such as those in the Rissell (2019) and Viken (2019) studies. The findings of the current study related to health status and receptivity to health and wellness coaching are surprising given what is described in the literature.

It is noted that these findings in the literature cannot directly be compared with the current study, however, which assesses initial receptivity to working with a health and wellness coach. The findings do, however, provide insight to how health status might impact continued participation by those who may be seeking health behavior change and improvements in health status (i.e., specifically those individuals who see their health as less favorable than those with “excellent/very good” health statuses). The findings in the literature differ from that of the current study in that participants in the current study with poor or fair health status are more receptive to an intervention to improve health outcomes, specifically health and wellness coaching.

Those in the current study reporting “excellent/very good” health being less receptive to health and wellness coaching than those reporting “fair/poor” health might be explained through the Transtheoretical Model (Prochaska & DiClemente, 1982) which purports that there are varying stages of readiness for behavior change. Participants who reported “excellent/very good” health in the current study may not demonstrate readiness to work with a health and wellness coach if they see their health as already being favorable. It is also possible that they have recently made improvements in their health or lifestyle habits and are in the “maintenance” or “action” stage of the model, where they do not feel a need for coaching. There may be other factors involved as explained by Bandura’s (1986) Social Cognitive Theory including self-efficacy, where they may feel they can achieve favorable health outcomes without outside help and may already be working on health goals on their own.

While the current study findings indicate that for research question #2, health status is a significant predictor of receptivity, with “fair/poor” health being predictive of greater receptivity to health and wellness coaching, there are limitations to the current study and further research is needed to assess receptivity to health and wellness coaching and caregiver health status. In particular, the demographics of the largest number of participants in the current study were White (Pinquart & Sorensen, 2005; McCann et al., 2000; Blue Cross Blue Shield, 2020), higher income women (Kim et al., 2023), This might explain the more favorable health status of those participating in this study which does not reflect that of the general population and is also a limitation.

### ***Receptivity and Facilitators, Barriers, and Challenges***

Findings for research question #3 indicate that the number of barriers and challenges significantly predicted caregiver receptivity to health and wellness coaching, while the number of facilitators marginally predicted receptivity to health and wellness coaching.

These findings might be explained by the Social Cognitive Theory (Bandura, 1986) and reciprocal determinism as a key construct. People seeking to exert control over important events in their lives by having a sense of agency may find that barriers and challenges impact that sense of agency, decreasing their self-efficacy, outcome expectations, goals, and self-evaluation and reducing their receptivity to health and wellness coaching. (Bandura, 1986). It makes sense that even with multiple facilitators present (i.e., adequate caregiver support, virtual coaching, health insurance coverage, and motivation), barriers and challenges might still preclude participation regardless of the number of facilitators present. As an example, if a caregiver's health is poor (barrier/challenge) and physical or mental health prohibits their participation in a health and wellness coaching program, the fact that the costs are covered by an insurance program (facilitator) and they have adequate support (facilitator) with respite care or other resources may not matter and they still are precluded from participating in health and wellness coaching. Similarly, while they may have insurance coverage for health and wellness coaching (a facilitator), if they cannot afford the co-pay due to lack of financial resources (a barrier), they may still be precluded from participating in health and wellness coaching. The same can be said for the Social Cognitive Theory (Bandura, 1986) and facilitators increasing one's sense of agency. It becomes a matter of which

“outweighs” the other – facilitators or barriers and challenges - and would require additional study.

***Receptivity by Sex, Age, Race, Ethnicity, Income, Employment, Geographic Residence, and Health Status***

It is important to understand the impact that caregiver demographics may have on receptivity to health and wellness coaching, in order to effectively tailor interventions. Research question #4 addresses barriers, challenges, and facilitators to receiving health and wellness coaching and how they may differ by sex, age, race, ethnicity, income, employment, geographic area of residence, or health status.

There was no statistically significant difference in mean facilitators to receiving health and wellness coaching for age, sex, and employment. There was a statistical difference based on income, region of residence (South), and health status.

There was no statistically significant difference in mean barriers and challenges to receiving health and wellness coaching for age, sex, and employment. There was a statistical difference based on income, region of residence (South), and health status.

The sample was not large enough to include race and ethnicity in the analyses.

**Age:** There was no significant statistical difference for barriers and challenges by age. Of the participants answering the question pertaining to age, ages 61-65 was the largest single group of participants, indicating they were between the ages of 61 and 65. This age group is included in the “baby boomer” demographic which is made up of individuals born between 1946 – 1964 and currently in the year 2023, ages 59-77. When accounting for those in the ages 56-60 group, the two combined represent over half of all participants. This is not surprising and is reflective of the large percentage of caregivers

who are baby boomers found by the Miyawaki et al. (2020) study which estimated the prevalence of informal caregiving finding that of the 109,268 baby boomers surveyed, 24.2% were caregivers, and of all caregivers surveyed, 38.5% were baby boomers.

With an aging population (Vespa, 2019), and baby boomers themselves aging, it confirms the importance of the current study having adequate representation from this group as new strategies for addressing the health and wellness of this population – which might include health and wellness coaching - tailored to their needs. While fewer participants in the current study were within the age categories that include millennials born between 1981-1986 and who would be ages 37-42 in the year 2023, they are well-represented in the current study. The health impact of caregiving for millennials was greater than for baby boomers and Gen X in one study (Blue Cross Blue Shield, 2020), so having this population represented in the sample is also important.

Therefore, health and wellness coaching interventions consider the age of the targeted participants and differences in barriers and challenges to health and wellness coaching when developing interventions.

**Sex:** Analyses indicated that there was no statistically significant difference in mean barriers and challenges, and facilitators to receiving health coaching based on sex. However, this is an important factor associated with caregiving. The majority of study participants were female (85.65%) and is representative of what is reported in the literature (Family Caregiver Alliance, 2016; Institute on Aging, 2016; National Alliance for Caregiving and AARP, 2020), with the majority of caregivers being female. Estimates from these sources vary with females comprising anywhere from 60-75% of all

caregivers. While the analyses in the current study did not find statistically significant differences in mean barriers and challenges, and facilitators based on sex, it remains important that these barriers and challenges, and facilitators be identified and addressed to help optimize participation in health and wellness coaching interventions for female caregivers, given the high percentage of females in caregiving roles.

Male caregivers should not be overlooked, however. While male caregivers do not comprise the majority of caregivers reported in the literature (Family Caregiver Alliance, 2016; Institute on Aging, 2016; National Alliance for Caregiving and AARP, 2020) or those represented in the current study, it is estimated that they do represent approximately 25% of all caregivers (Family Caregiver Alliance, 2016; Institute on Aging, 2016) with other estimates at 40% nationwide (National Alliance for Caregiving and AARP, 2020). It is possible that the number of male caregivers is under-reported. As noted by Kent et al. (2016), there is variance in the literature of how caregivers are defined which may impact eligibility for and participation in research studies. Men may not see providing financial assistance, assisting with household chores, or other non-personal tasks as caregiving and elect not to participate in surveys or other research activities and self-identify as a caregiver, though those forms of support do fit the more objective American Psychological Association's (2020) definition of caregiver.

Studies indicate male caregivers are more likely to help with finances, arrangement of care, and other less burdensome tasks (National Alliance for Caregiving & AARP, 2009) while 36% of female caregivers handle the most difficult caregiving tasks (i.e., bathing, toileting, and dressing) as compared to 24% of males. In addition to

males potentially being less likely to self-identify as a caregiver because they do not recognize specific tasks as caregiving, another difference is in how they cope with stress and solicit support. The AARP (2017) reports that males are less likely to open up to others when feeling stressed or are overwhelmed by caregiving duties which may translate into poor caregiver health, an identified barrier in the current study, and reduced caregiver support, an identified facilitator in the current study. These findings should be considered as health and wellness coaching interventions are developed and implemented for male caregivers.

**Income:** There was a statistically significant difference in mean barriers and challenges, and facilitators based on income. The current study had the largest number and percentage of participants with income levels of \$80,001 or more, making up almost half of all study participants. From earlier research (Kim et al., 2023), it is known that socioeconomic status is an important consideration in health outcomes, and outcomes from the current study indicate that cost is a barrier to participating in health and wellness coaching for many caregivers.

It is not unexpected that those with higher incomes might have more facilitators. For example, those with incomes under \$20,000 may not be able to afford the cost of respite care or have access to or be able to afford health insurance which may cover the cost of health and wellness coaching, two facilitators. They may also not be able to afford or have access to technology and thus virtual coaching. In addition, for barriers, lack of resources would likely be a consideration for those in the \$20,001-\$40,000 income group,

as would caregiver health given what is known about income levels and health status with those with lower incomes often having less favorable health outcomes (Kim et al., 2023),

Based on these findings, and those for research question #3 that indicate the number of barriers is more predictive of receptivity to health and wellness coaching than the number of facilitators, it would be important to further examine the barriers to health and wellness coaching for caregivers with incomes of \$20,001 - \$40,000. Examining facilitators for those with incomes of \$20,000 or less would also be helpful to better understand how to improve caregiver receptivity to health and wellness coaching. There are examples of studies in the literature that include facilitators, barriers, and challenges to health and wellness coaching for vulnerable individuals, which include those with low incomes (Jordan, 2013; U.S. Department of Agriculture, 2021; Howard & Lee, 2019), though none were found specific to low-income caregivers. While facilitators, barriers, and challenges were not the focus of these studies, they were addressed. Limited incomes, long work hours, transportation, access to a health coach, lack of support systems, physical environment (including homelessness or subsidized housing), and health challenges were noted barriers and challenges in these studies. Facilitators included low-cost coaching programs, coaching availability (e.g., coaching offered 24 hours a day, 7 days a week), increased access through providers trained in health and wellness coaching, and telephone-based coaching.

Because socioeconomic play an important role in health outcomes (Kim et al., 2023), and outcomes from the current study cite cost as a barrier to health and wellness coaching for caregivers, health and wellness coaching interventions should consider cost

and how it might serve as a barrier to participation in health and wellness coaching based on income levels. While facilitators to health and wellness coaching for caregivers should not be overlooked, additional research on other barriers specific to lower-income populations would be helpful in addressing caregiver receptivity to health and wellness coaching for this group, given the study results on barriers being a greater predictor of receptivity than facilitators and findings specific to income and receptivity.

**Employment:** The majority of participants in the current study worked outside of the home. While study findings did not demonstrate statistically significant differences for this variable, it is important that these barriers and challenges, and facilitators be identified and addressed to help optimize participation in health and wellness coaching interventions for caregivers who work outside of the home. According to AARP, an estimated one in six employees are caregivers (AARP, n.d.) who may experience lack of time as a barrier. Lack of time was one of the most common barriers and challenges in the study. In addition, with caregiver support and health insurance coverage of health and wellness coaching being facilitators identified in the current study, workplace health and wellness coaching interventions and employer sponsored coverage of costs may be avenues for health and wellness coaching professionals to explore.

**Geographic location:** Participants were primarily from Tennessee. Findings from the current study indicate statistically significant differences based on region of residence. There was a significantly lower average number of facilitators to receiving health coaching for participants in other regions when compared to those the south, with those in other regions having one less facilitator on average than those in the south

region. There was a statistically significant higher number of barriers in other regions as compared to the south region, with those in other regions having an average of two more barriers on average than those in the south region.

In the United States, southern states were reported to have the highest prevalence of informal caregivers ( $\geq 25\%$ ) during 2015 to 2017 and age-adjusted rates of informal caregivers reporting fair or poor health in Alabama, Louisiana, Mississippi, and Tennessee during 2015 to 2017 were reported to be 20% or more (Edwards et al., 2020). It is known that chronic disease is more prevalent in the Southern region of the country (Barker et al., 2011; Oates et al., 2017; Tanner et al., 2013; Vaughn et al., 2014), so it is not surprising that there may be more caregivers in the southern states. With the current study findings that those in the south region had more facilitators and fewer barriers to health and wellness coaching on average than those in other regions, there are opportunities for health and wellness coaching to have a positive impact on a region with documented high prevalence of informal caregivers and with unfavorable health outcomes (Edwards et al., 2020).

With socioeconomic status and incomes on average being lower in the south as well as poorer health outcomes, both identified barriers in the current study, it might be expected that on average the number of barriers for this region would be greater, though that was not the case given the study findings. Further research might determine which individual barriers as well as individual facilitators are more common for this region. With the prevalence of more minorities in southern states (United States Census, 2020), it is possible that caregiver support is more common in the south region, similar to that

found in other studies (Pinqart & Sörensen, 2005) where minority caregivers were more likely to receive support from family and friends. This may be an area for further exploration.

It is important that health and wellness coaching interventions consider geographic region and caregiver facilitators, barriers, and challenges that may vary based on region of residence. There were no identified coaching interventions specifically targeting individuals that live in the south or in any other specific region.

**Health Status:** Findings for health status are specific to research questions #2 and #4. Caregivers participating in the current study reported diabetes as the most common chronic disease, which is also the most common area for disease-specific health and wellness coaching research (Health and Wellness Coaching Compendium (Sforzo et al.,2017; Sforzo et al., 2019). Heart disease was the second most cited in this study and also included in the Health and Wellness Coaching Compendium as a common area of study. With caregiver health status identified as a barrier or challenge to health and wellness coaching in the current study, and poor caregiver health noted in the literature (Miyiwaki et al.,2020; Carbonelle, 2023; Edwards et al. 2020), identifying or developing effective health and wellness coaching interventions for caregivers experiencing chronic disease might be considered that take into account factors such as medication adherence, prescribed lifestyle changes with diet and physical activity, self-monitoring of clinical indicators (i.e., blood sugars, HbA1c , blood pressure), stress management, and resources available for social support for a given condition.

### *Receptivity and Caregiver Health Areas Ready to Address*

Research questions #1 – 4 each include receptivity. In examining receptivity as measured by caregiver motivation to work with a health and wellness coach in a given area, participants in this study responded to questions about areas they felt a need to address and were either “very ready” to address or “somewhat ready” to address. Answer choices to survey questions specific to readiness were modeled after the Transtheoretical Model (Prochaska & DiClemente 1982). The Transtheoretical model helps in understanding the results as different strategies are needed for individuals who are “somewhat ready” than those who are “very ready.” Health and wellness coaches can determine where an individual falls in stages of readiness and can tailor coaching sessions accordingly for successful behavior change. Moving from “somewhat ready” to “very ready” and how that might happen can be explored through motivational interviewing and self-discovery.

Areas identified as needing to be addressed with participants being “very ready” were not surprising. Most frequently cited was managing stress, followed by and in order, increasing energy, improving sleep habits, and improving the ability to be “in the moment” and focus. These areas were clearly demonstrated in participant opinions and feedback to open-ended questions on the survey which provide context to this discussion. One research participant directly noted lack of sleep and energy in particular, and stress indirectly, “With the caregiver shortage and a nonverbal total care parent I can’t even get help to allow me time to shower and do other basic personal care every day so time for this would take away sleep which I can’t afford to do and function.” Another participant noted “I have less time and energy for myself, and I can barely take care of the

minimum.” This example also indicates lack of caregiver support, with support a noted facilitator in this study.

### **Limitations**

This research had several limitations that should be noted. With so few studies that look at both caregivers and health and wellness coaching, there were very limited studies to review. The lack of standardized evaluation tools was a limitation to the development of the survey. There also was no clearly defined variable to measure receptivity to health and wellness coaching in the literature. Another limitation was the length of the survey developed for this research and time for completion. The survey took approximately 25-30 minutes to complete which may have resulted in fewer individuals being willing to complete the survey without additional incentives which were not available for this study.

The sample size of 202 participants after data cleaning was less than the goal of 400 and a limitation of this study. This may have affected the ability to detect significant differences in groups. There were also limitations on generalizability due to participant demographics (i.e., needed more diverse geographic, racial, ethnic, gender, and socioeconomic representation). While the survey was promoted widely including online through multiple online communities and social media platforms which reached an international audience, participants were primarily from Tennessee with 102 participants or 56.6% being from Tennessee and likely due to extensive networking and personal outreach and contact made by the researcher who lives in Tennessee. While research has found the majority of caregivers to be female, having a larger number of male

participants in the current study sample would have been helpful in better understanding facilitators, barriers and challenges for this population.

The survey was limited to those who can read and understand English. Because of these limitations, study results may not be generalizable to a linguistically diverse population.

Another limitation to the study was that data specific to the number of hours spent caregiving was collected as a limited range of hours and not actual hours. The current study attempted to broadly address barriers and challenges, and facilitators and receptivity to health and wellness coaching. Given the findings of the current study with caregiver support identified as a common facilitator for the population studied, more focused research can be done specific to caregiving hours and barriers, challenges, and facilitators and receptivity to health and wellness coaching. The National Alliance for caregiving and AARP (2015) report that 4 in 10 (40%) caregivers are in high-burden situations, 18% medium burden, and 41% low burden based on the Level of Care Index (AARP and National Alliance for Caregiving, 1997). It is noted that burden of care increases with the hours of care provided and that providers are classified as “high burden” if they provide more than 21 hours or more of caregiving in a week. This report found that 92% of caregivers provided 21 more hours per week or more as compared to 16% of lower hour providers. Further study pertaining to facilitators, barriers, and challenges to health and wellness coaching where more precise hours of caregiving provided may be useful with targeted coaching interventions based on level of caregiver burden.

While there were several limitations to this study, there were noted strengths such as the use of a validated and reliable instruments, the American Medical Association (AMA) Caregiver Self-Assessment Questionnaire (2009) and the Centers for Disease Control and Prevention (2019) “Healthy Days Measures,” as part of the larger survey.

### **Future Recommendations**

It is recommended that facilitators, and barriers and challenges to health and wellness coaching by caregivers of older adults be further explored including research with larger sample sizes that are representative of a diverse population, specifically by sex, race, ethnicity, and geographic area of residence, and that more male caregivers are included in the sample.

Some of the most common facilitators, barriers, and challenges cited in this study as well as others specific to health and wellness coaching were virtual coaching to support caregiver isolation and limited time, health insurance coverage, caregiver support, lack of time, lack of awareness of health and wellness coaching, caregiver health, lack of financial resources and cost, and physical environment. Addressing these areas by developing interventions that consider each would be worthwhile.

Strategies to explore to address common barriers and challenges and to maximize facilitators include:

- Identifying innovative approaches to coaching that will maximize favorable health outcomes with the least amount of time required by the caregiver;

- Educating caregivers on health and wellness coaching that may be available to them at a low cost through insurance providers, medical providers or other sources;
- Educating caregivers on available support resources; and
- Making caregivers aware of coaching interventions that utilize technology for those isolated at home with loved ones.

Exploring expansion of the innovative Caring for Caregivers (Carbonelle, 2023) model developed and launched in 2019 by Rush University, to include health and wellness coaches as part of the professional team, and to expand the initiative to more healthcare provider practices, may provide additional opportunities for caregivers to receive needed support and resources to help improve their and their care recipients' well-being. Supporting the American Medical Association and the NBHWC's efforts to expand health and wellness coaching from a Category III emerging service to that of a Category I service would create more opportunities for caregivers to receive health and wellness coaching as an insurance covered service.

Lastly, exploring funding mechanisms that would support respite care for caregivers to participate in health and wellness coaching sessions would be an opportunity to maximize participation much like providing childcare for parents participating in parenting classes might maximize participation.

## **Conclusion**

In summary, the United States has an aging population and is projected to have more older adults than children by the year 2035 (Vespa, 2019). Unpaid caregivers

represent more than one in five Americans with that number increasing, with this group generally having poor health (The National Alliance for Caregiving (NAC) and AARP, 2020). The Centers for Disease Control and Prevention (2022) indicates that six in 10 adults in the United States have a chronic disease, and four in 10 have two or more.

Chronic disease is often connected to lifestyle and behaviors (Centers for Disease Control and Prevention, 2022). Health and wellness coaching is an emerging field demonstrating positive outcomes and which may be an effective strategy to facilitate improved health outcomes for caregivers, a generally unhealthy population. By understanding and addressing facilitators, barriers, and challenges to health and wellness coaching for this population, this group may be more receptive to opportunities to participate in a promising strategy for improved health behaviors and outcomes.

Coaching interventions that consider efficient use of caregiver time and that address caregiver concern over lack of time, those where the costs are covered by insurance and where caregivers are made aware of such, as well as those that utilize technology as a means of addressing caregiver isolation and inability to leave the home, and educating caregivers on available caregiver support resources may address common barriers and challenges while maximizing facilitators for this population to participate in health and wellness coaching.

Supporting expansion of innovative programs that link healthcare providers with caregivers such as the Caring for Caregivers (Carbonelle, 2023) model and supporting the American Medical Association and NBHWC's (National Board for Health and Wellness Coaching, n.d.). efforts to move health and wellness coaching from a Category III

emerging service to that of a Category I service will create more opportunities for caregivers to receive health and wellness coaching. Lastly, exploring funding mechanisms to support the cost of respite care to allow caregivers freedom to participate in health and wellness coaching sessions may eliminate barriers as well.

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**APPENDICES**

## Appendix A: Survey Summary Table

*Survey: Receptiveness, Challenges, Barriers, Facilitators - Health Coaching – 88*

*questions*

Category	Questions	Measures	Attributes
General Demographics	13 multiple choice questions on general demographics and 9 specific to health status and social support  Total Questions: 22	General Demographics information on participants to include age, sex, race, ethnicity, income level, employment status, household size, number of individuals cared for, time spent on caregiving, and travel time for caregiving.  General health status, physical health, mental health, disruption in usual activities due to poor health, disease status, level of support for caregiver role, caregiver encouragement, caregiver travel burden, and physical living environment	General demographics and Caregiver Descriptives  Health status and caregiving, social support and caregiving – Facilitators, Barriers/Challenges
Receptiveness to Health Coaching for Positive Lifestyle Changes	8 multiple choice questions with *2 of the 8 questions with a	Access to a health coach via health insurance, interest in working on several health areas and	Receptiveness to working with a health coach (motivation/readiness to

	<p>matrix of 18 individual components/questions</p> <p>Total Questions: 42</p>	<p>receptivity to working with a health coach in these areas which include weight loss, energy, cravings, food prep, blood pressure, blood sugar, cholesterol, blood pressure, emotional eating, eating out, working out, stress, life satisfaction, sleep, mindfulness, tobacco, alcohol, drugs, other.</p> <p>*Scale score calculated as sum of 18 individual components where Very Ready (1), Somewhat Ready (1), Already Working On (0), Not at all Ready, Last column (0) &lt;used as N/A or extreme disinterest). Range of scale score is 0 - 18</p>	<p>work on an identified area as the measure)</p> <p>Facilitators</p> <p>Barriers/Challenges</p>
<p>Barriers, Challenges and Facilitators</p>	<p>1 multiple choice question, 1 5-point scaled question, 2 open-ended qualitative</p>	<p>Barriers to working with a health coach, awareness of coaching for caregivers, receptivity to working with a health coach if no</p>	<p>Barriers, Challenges, and Facilitators</p>

	<p>feedback questions, 1 yes/no question</p> <p>Total Questions: 5</p>	<p>barriers, likelihood to work with a coach if virtual sessions were an option, other comments on barriers and facilitators.</p>	
<p>**Mental and Emotional Health, Social Support, and Physical Well- being</p>	<p>16 yes/no questions, 1 5-point scaled question, 2 open-ended qualitative feedback questions.</p> <p>Total Questions: 19</p>	<p>Focus, fears, decision- making, overwhelmed, need, loneliness, upset, loss of privacy, irritable, sleep, crying, strain, back- pain, ill, satisfaction, relative's living situation, stress, overall health, other.</p> <p>*Scale score calculated as sum of 18 individual components where Extremely likely (1), Somewhat likely (1) Neither likely nor unlikely (0), Somewhat unlikely, (0), Extremely unlikely. Range of scale score is 0 – 16.</p>	<p>Awareness of mental and emotional health, social support, and physical health and well-being</p>

Resources for Caregivers and on Health Coaching	N/A	N/A	

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\* Centers for Disease Control and Prevention “Healthy Days” Measures (1993)

\*\* American Medical Association’s Caregiver Self-Assessment Questionnaire (2009)

**Appendix B: Survey Instrument**

Welcome!

IRBF024 - Participant Informed Consent

Primary Investigator: Cynthia Chafin Student Investigator: Cynthia Chafin

PI Department & College: Health and Human Performance Faculty Advisor (if PI is a student):Chandra Story

Protocol Title: : Facilitators, Challenges, and Barriers to Health and Wellness Coaching for Caregivers of Older Adults

Protocol ID: FY2023-69 Approval Date: 3-21-23 Expiration Date: *NIA*

#### Information and Disclosure Section

1. Purpose:

This research project is designed to help us evaluate unpaid caregivers of older adults (age 65 or older) and their willingness to work with a health and wellness coach as well as what makes it easier or more difficult to do so.

## 2. Description:

This study seeks to examine whether unpaid caregivers of older adults (age 65 or older) would be willing to work with a health and wellness coach and to determine what might make it easier or more difficult for them to work with a health and wellness coach. The United States Census Bureau (Vespa, 2019) indicates that by 2035 the United States will have more older adults than kids, evidence of an aging population. The National Alliance for Caregiving (NAC) and AARP (2020) note in a recent report that family caregivers now include more than one in five Americans and that the number of caregivers is increasing. They also report that caregivers are often in poor health with 23% finding it hard to take care of their own health as well as 23% indicating that caregiving has made their health worse. By learning more about caregivers and their willingness to work with a health and wellness coach as well as what makes it easier or more difficult to do so, coaches are better able to understand how they might reach caregivers who desire to make improvements in their health and wellness.

### 3. Duration:

The whole activity should take about 25-30 minutes.

Here are your rights as a participant:

Your participation in this research is voluntary. You may skip any item that you don't want to answer, and you may stop the experiment at any time (but see the note below) If you leave an item blank by either not clicking or entering a response, you may be warned that you missed one, just in case it was an accident. But you can continue the study without entering a response if you didn't want to answer any questions. Some items may require a response to accurately present the survey.

### 4. Risks & Discomforts:

Risks of participating in this study are minimal and are no more than that of taking a survey for personal or professional purposes. It is possible that participants might feel

emotional distress when reading or responding to questions about health topics that may be sensitive (i.e., weight, mental health).

5. Benefits:

- a. Benefits to you that you may not receive outside this research: There are no direct benefits to you as a participant in this study.
  
- b. Benefits to the field of science or the community: The scientific community will benefit through the analysis of the available data, advances in understanding of facilitators, challenges, and barriers to health and wellness coaching for caregivers which may lead to a better understanding of how health and wellness coaches can better reach this population which as a group has documented unfavorable health outcomes. The National Alliance for Caregiving (NAC) and AARP (2020) report that caregivers are often in poor health with 23% finding it hard to take care of their own health as well as 23% indicating that caregiving has made their health worse. Health and wellness coaches have an opportunity to work with a population experiencing poor health but only if that population can be effectively reached. This research would support a better understanding of how this population would be reached which would be useful to practicing health and wellness coaches and the field overall. Caregivers who may engage with a

health and wellness coach may benefit through improved health status and as a healthier member of society at large.

6. Identifiable Information:

You will NOT be asked to provide identifiable personal information/You may provide contact information for follow-up/ We may request your contact information for compensation purposes

7. Compensation:

There is no compensation for participating in this study.

8. Confidentiality:

All efforts, within reason, will be made to keep your personal information private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board,

Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.

9. Contact Information.

If you should have any questions about this research study or possibly injury, please feel free to contact Cynthia Chafin by telephone 615-898-5493 or by email [Cynthia.chafin@mtsu.edu](mailto:Cynthia.chafin@mtsu.edu) OR my faculty advisor, Chandra Story by telephone, at 615-615-898-2812 or by e-mail at [Chandra.story@mtsu.edu](mailto:Chandra.story@mtsu.edu). You can also contact the MTSU Office of compliance via telephone (615 494 8918) or by email ([compliance@mtsu.edu](mailto:compliance@mtsu.edu)). This contact information will be presented again at the end of the experiment.

You are not required to do anything further if you decide not to enroll in this study. Just quit your browser. Please complete the response section below if you wish to learn more or you wish to part take in this study.

---

ConfirmRead I have read this informed consent document pertaining to the above

identified research

No

Yes

---

Confirmed Clear The survey instructions are clear to me.

No

Yes

---

Confirmed 18+ I confirm that I am 18 years or older.

No

Yes

---

ConfirmedRisks I am aware of the risks of the study.

No

Yes

---

By clicking below, I affirm that I freely and voluntarily choose to participate in this survey research study. I understand I can withdraw at any time without facing any consequences.

NO I do not consent

YES I consent

ConfirmedVoluntary More Information about this Survey:

This is an online survey about adults who are unpaid caregivers for an older adult (age 65+) and their attitudes, beliefs, and motivation to use a health and wellness coach for purposes of developing and maintaining healthy lifestyle behaviors. You are eligible to complete this survey if you are an adult over the age of 18 and can answer “Yes” to the

following question: “During the last 12 months have you, yourself, given personal care (e.g., hygiene, chores, errands, providing financial support) for a period of one month or more to a an older adult (age 65 or older) because of a physical or medical condition, illness or disability?”

**Why is this survey important?** This information from unpaid adult caregivers of older adults (age 65 or older) will help researchers gain a better idea of how health and wellness coaching may help these individuals develop and maintain healthy lifestyle habits as they deal with the stresses and challenges of caregiving.

**What can I expect from participating in this survey?** The survey will take about 25-30 minutes to complete. In addition to basic questions about your age, sex, and race, questions will be asked about whom you care for and questions about your interest in participating in health and wellness coaching as a strategy for developing and maintaining healthy lifestyle behaviors as well as any barriers you might face to using the services of a health and wellness coach. Specific topic areas mentioned in the survey questions may include mental and emotional health, physical health, chronic conditions, stress, use of tobacco, alcohol, and other drugs, and healthy lifestyle habits.

YesCare Please read and acknowledge the following: I affirm that I am age 18 or older and during the last 12 months have given personal care for a period of one month or more to a family member or friend because of a physical or medical condition, illness, or disability. I agree with the above statement and wish to participate in this survey. Click yes or no if you agree with the above statement and wish to participate in

this survey.

No

Yes

Age What is your current age?

18-20

20-29

30-39

40-55

46-50

51-55

56-60

61+

Sex What was your sex at birth?

Male

- Female
- Other not listed
- Do not wish to answer

Race What racial group do you most identify with?

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Do not wish to answer

Ethnicity Are you Hispanic or Latino?

- No, not Hispanic or Latino
- Yes, Hispanic or Latino origin
- Do not wish to answer

Q35 Where is your home located?

- United States
- Canada
- Other
- Prefer not to say

Q36 If your home is in the United States, in which state do you live?

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado

Connecticut

Delaware

Florida

Georgia

Hawaii

Idaho

Illinois

Indiana

Iowa

Kansas

Kentucky

Louisiana

Maine

Maryland

Massachusetts

Michigan

Minnesota

Mississippi

Missouri

Montana

Nebraska

Nevada

New Hampshire

New Jersey

New Mexico

New York

North Carolina

South Dakota

- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia

Wisconsin

Wyoming

For the following items, care or support means meeting the physical, emotional, and social needs or providing financial support (either primary support or some support in the past year) for an older adult (age 65 or older).

WhoCaringFor In addition to the older adult you are caring for, how many other individuals are you providing care for?

One

Two

Three

Four or more

TimeSpentCaregiving How much time do you spend on caregiving responsibilities each week (not including travel time if you do not live with the person for whom you are

providing care?)

- 1-3 hours
- 3-5 hours
- 5-7 hours
- 7-9 hours
- More than 9 hours

TravelTimeCaregiving How much total time do you spend each week traveling to provide caregiving?

- None - the person I provide care for lives with me.
- Less than 1 hour
- 1-3 hours
- 3-5 hours
- 5-7 hours
- 7-9 hours
- More than 9 hours

Employment Do you work outside of the home? Check the answer or answers that apply to you. More than one response is o.k.

- I work outside of the home
- I am a homemaker
- I am currently unemployed and not looking for work

I am currently unemployed and looking for work

UnemployedAdditional If you answered "I am currently unemployed" to the question above, please mark the correct response below.

I am a full-time student

I am a part-time student

I am retired

I am active military

None of the above

HouseholdIncome What is your current household income?

Under \$20,000

\$20,001 - \$40,000

- \$40,001 - \$60,000
- \$60,001 - \$80,000
- \$80,001 - \$100,000
- \$100,001 or over

HouseholdSize How many people live in your household full or part-time?

- 1
- 2
- 3
- 4
- 5 or more

GeneralHealth Would you say that in general your health is:

- Excellent
- Very Good
- Good
- Fair
- Poor
- Don't Know/Not Sure
- Retired

PhysicalHealth30Days Now thinking about our physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health

not good?

Number of Days \_\_\_\_\_

None

Don't Know/Not Sure

Refused

Q40 Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

Number of Days \_\_\_\_\_

Don't Know

Not Sure

SelfCare30Days During the past 30 days, for how about many days did poor physical or mental health keep you from doing your usual activities such as self-care, work, or

recreation?

Number of Days \_\_\_\_\_

None

Don't Know/Not Sure

DiseasesPresent Indicate which if any of the following diseases you have:

Heart Disease

Cancer

Chronic lung disease

Stroke

Alzheimer's disease

Diabetes

Chronic Kidney Disease

Q47 Describe your level of support from family members or friends in your role of caregiver (i.e., do they provide help when needed? Do they encourage you as a caregiver? Do they support the choices you make as a caregiver?)

- Very supportive
- Supportive
- Neither Supportive or Unsupportive
- Unsupportive
- Very Unsupportive

Q48 Do family and friends encourage you to take care of yourself and your health and well-being?

- Always
  - Often
  - Sometimes
  - Rarely
  - Never
-

Q49 Rate the level of difficulty taking care of your own health and wellness due to traveling to care for our loved one.

Very difficult

Somewhat difficult

Neutral

Easy

Very easy

Q50 How difficult does your physical living environment make it to take care of your own health and wellness (i.e., no access to area to exercise or to be physically active, noise that makes it difficult to sleep well, lack of space to pursue hobbies and stress

reducing activities)

- Very difficult
- Somewhat difficult
- Neutral
- Easy
- Very easy

## **Part II: Receptiveness to Health Coaching for Positive Lifestyle**

**Changes:** Health coaches are individuals who are professionally trained and credentialed (or certified) to assist individuals safely and effectively in making behavioral changes to promote health and wellness. Experienced health coaches use skills in communication and have a basic knowledge of a variety of health, wellness, and lifestyle topics that guide individuals towards making changes (for example smoking cessation, weight loss, increasing exercise), and refer to other professionals as appropriate (medical providers, dietitians, personal trainers, etc.). Some people think of health coaches as being personal trainers, but they cover many areas of health and wellness as noted through the examples above. Health coaches provide one-on-one assistance to prevent or

manage a variety of chronic illnesses.

AccesstoCoach Sometimes people have access to a health and wellness coach through their medical insurance or through their employee assistance program (EAP). Do you have access to a health and wellness coach?

- Yes
- No
- Unsure

Q51 Do you have prior experience with health and wellness coaching?

Yes

No

Q52 Have you ever tried to engage in a personal health improvement program?

Yes

No

Q53 How confident are you that you could be successful working with a health and wellness coach to meet your health and wellness goals?

Very confident

Somewhat confident

Neither confident or unconfident

Not very confident

Unsure

AreasforWork Do you feel you need to address any of	Yes	No	Do not wish to respond
Weight loss	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increasing energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reducing food cravings, such as sweets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preparing healthy food, quickly and easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lowering blood pressure through dietary changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balancing blood sugar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lowering cholesterol through dietary changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reducing emotional eating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making healthy choices when eating out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing Stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving life satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving sleep habits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving your ability to be "in the moment" and focused without distraction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decreasing tobacco use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decreasing alcohol use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Decreasing use of drugs

Other

Readiness Please  
 indicate whether you  
 would be ready to  
 work with a health

Very Ready	Somewhat Ready	Already Working On	Don't Need to Work on this Area	Not at all Ready	Click to write Scale Point 6
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Weight loss







Increasing  
 energy







Reducing  
 food  
 cravings  
 such as  
 sweets







Preparing  
 healthy  
 food,  
 quickly and  
 easily





Decreasing  
alcohol use

Decreasing  
use of drugs  
that are not  
prescribed  
for you

Other

Q54 What motivates you to engage in healthy behaviors? Check all that apply.

- Seeing others around me engaging in healthy behaviors.
- Others encouraging me to be healthy and practice healthy habits.
- Having someone else to keep me motivated and accountable.
- Thinking about the health benefits for myself.
- Thinking about wanting to be healthy for my loved ones.
- Incentives offered through my health insurance plan or by others to engage in healthy habits.

Q55 What barriers do you have to engaging in healthy behaviors? Check all that apply.

- Seeing others around me engaging in unhealthy behaviors.
- I do not have a support system that encourages me to engage in healthy behaviors.
- Not having someone else to keep me motivated and accountable.

- Not having a desire to make changes to be healthy at this time.
- Not having the knowledge of what I need to do to be healthy.
- Not having financial resources for things I feel I need to be healthy.
- Not having enough time that healthy behaviors might require.
- Not feeling like I would be successful in making healthy behavior changes.

The following questions are about things that might make it hard for you to begin working with a health and wellness coach (barriers), things that might make working with

a health and wellness coaching harder once getting started (challenges) and needs that might make it easier to work with a health and wellness coach.

ReasonsforNo For the things that you indicated "no" or did not want to work on, what are the reasons? Check all that apply. More than one response is o.k.

- I am not sure I can afford a health coach.
- I don't have time to work with a health coach right now.
- I do not believe a health coach could help me.
- I do not know enough about health coaching to make a decision.
- I am not confident that I could be successful in making changes even with the help of a health coach.
- I am not sure how to go about finding a health coach.
- I am not ready to make changes in my life right now.

Virtual How likely would you be to work with a health coach if virtual counseling sessions were an option (sessions that could be held using technology on your cell phone or computer)?

	Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CommentsBarriers Please share any comments you have about barriers to working with a health and wellness coach.

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AwarenessofCoaching Prior to this survey, were you aware of health and wellness coaching as a way to support caregivers in making health and wellness improvements?

- Yes
- No
- Do not wish to answer

CommentsCoaching Please share any comments you may have about working with a health and wellness coach through virtual counseling sessions.

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This section of the survey is adapted from the American Medical Association Caregiver Self-Assessment Questionnaire (2009). Caregivers are often concerned with caring for their relative's needs that they lose sight of their own well-being. Please take a few moments to answer the following questions.

Felt During the past week or so, I have:	Yes	No	Do Not Wish to Answer
Had trouble keeping my mind on what I was doing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that I couldn't leave the person for whom i am providing caregiving alone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had difficulty making decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt completely overwhelmed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt useful and needed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt lonely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Been upset that the  
person for whom I am  
providing caregiving  
has changed so much  
from his/her former  
self

Felt a loss of privacy  
and/or personal time

Been edgy or irritable

Had sleep disturbed  
because of caring for  
my relative

Had a crying spell(s)

Felt strained between  
work and family  
responsibilities

Had back pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt ill (headaches, stomach problems or common cold)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been satisfied with the support my family has given me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Found the person for whom I am providing caregiving has a living situation that is inconvenient or a barrier to care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

RateHealth Please rate your current health compared to what it was this time last year.

	Excellent	Good	Average	Poor	Terrible
0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



AnyFeedback Please feel free to comment or provide feedback on any of the above questions. If you do not have any comments or feedback to share, you may leave this question blank.

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AnythingElse? Is there anything about caregiving or health coaching which you haven't already shared but would like to share? If you do not have any comments to share, you may leave this question blank.

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Thank you for your time in completing this survey. This information collected from unpaid, adult caregivers ages 18 and up who provide personal care to older adults (adults ages 65 and over) will help researchers gain a better idea of how health and wellness coaching may help these individuals develop and maintain healthy lifestyle habits as they deal with the stresses and challenges of caregiving. Your participation in the survey is greatly appreciated to support this research.

Additional resources for caregivers and about health and wellness coaching are included below.

**Caregiver Resources:**

Eldercare Locator:

(A national directory of community services) 1-800 677-1116

[www.aoa.gov/elderpage/locator.html](http://www.aoa.gov/elderpage/locator.html)

Family Caregiver Alliance 1-415- 434-3388

[www.caregiver.org](http://www.caregiver.org)

Medicaid Hotline 1-800-638-6833

National Alliance for Caregiving 1-301-718-8444

[www.caregiving.org](http://www.caregiving.org)

National Family Caregivers Association 1-800 896-3650

[www.nfcacares.org](http://www.nfcacares.org)

For additional tools for caregiving or aging, visit [www.CaregiversLibrary.org](http://www.CaregiversLibrary.org) of the American Medical Association.

**Health and Wellness Coaching:**

National Board for Health and Wellness Coaching "Find a Health Coach"

<https://nbhwc.org/find-a-certified-coach/#!/directory/ord=rnd>

Centers for Disease Control and Prevention

[https://www.cdc.gov/pcd/issues/2013/13\\_0116.htm](https://www.cdc.gov/pcd/issues/2013/13_0116.htm)

Web MD

<https://www.webmd.com/balance/guide/life-and-wellness-coaches>

## Appendix C: Institutional Review Board (IRB) Approval



Office of Research Compliance  
 2269 Middle Tennessee Blvd.  
 Sam H. Ingram Bldg (ING) Room 010A  
 Box 324  
 Murfreesboro, TN 37132  
[www.mtsu.edu/irb](http://www.mtsu.edu/irb)

Date: March 21, 2023

PI: Cynthia Chafin

Department: Health and Human Performance, Research and Sponsored Programs

Re: Initial - IRB-FY2023-69

Facilitators, Challenges, and Barriers to Health and Wellness Coaching for Caregivers of Older Adults

The Middle Tennessee State University Institutional Review Board has rendered the decision below for Facilitators, Challenges, and Barriers to Health and Wellness Coaching for Caregivers of Older Adults. The approval is effective starting March 21, 2023.

Decision: Approved

Category: 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Findings:

Research Notes:

**Please note:**

**Any modifications to the approved study must be submitted for review through Cayuse IRB.** Please note, as well, that according to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to complete the required training. If you add researchers to an approved project, please add them to the project within Cayuse IRB for approval **before** they begin to work on the project.

**Any unanticipated harm to participants or adverse events must be reported to the Office of Compliance,** and any subsequent changes to the protocol must be submitted to the IRB for review before implementing this change.

**You must submit an end-of-project form to the Office of Compliance upon completion of your research.** Completed research means that you have finished collecting data.

All research materials must be retained by the PI or faculty advisor (if the PI is a student) for at least three (3) years after study completion and then destroyed in a manner that maintains confidentiality and anonymity.

## Appendix D: Participant Recruitment

Recruitment - Study Participants		
Social Media and Organizations Actively Promoting Research Opportunity		
	Platform	# Members or Followers
<b>Social Media:</b>		
AARP Family Caregivers	Facebook - Member Only	14,000
Aging Parent Support	Linked In	65
Alzheimer's Caregivers	Linked In	380
Cancer Caregivers	Reddit	3,900
Caregiver Action Network	Facebook - Professional Page	15,000
Caregiver Action Network	Linked In	4,000
Caregiver Support	Reddit	13,400
Caregivers of Elderly Parents	Facebook - Member Only	15,200
Caregivers of Reddit	Reddit	721
Caregivers Self-Care	Reddit	254
Caring for the Caregiver	Facebook - Member Only	3,000
Dementia	Reddit	24,800
Empowered Caregiver	Linked In	662
Family Caregivers Support Group	Facebook - Public	13,000
Family Caregivers Support Group	Facebook - Member Only	1,700
Parkinsons	Reddit	10,100
Parkinsons Caregivers	Reddit	1,000
Sandwich Generation: Support for Caregivers of Elderly Parents	Facebook - Member Only	19,200
The Caregiver Space	Linked In	724
The Healthy Caregiver	Facebook - Member Only	498
Tips for the Sandwich Generation & Baby Boomers	Linked In	298
Total		141,902
<b>Organizations:</b>		
Area Agency on Aging		
Choices		
Community ConneXor		
Middle Tennessee State University (MTSU) Subscriber List		
MTSU American Assoc. of University Women (AAUW)		
MTSU Faculty		
MTSU June Anderson Women's Center		
MTSU- MTSU Education Association Members		
MTSU Positive Aging Consortium Members		
St. Clair Senior Center		
Tennessee Commission on Aging and Disability		
Tennessee Respite Organization		
The Caregivers Voice		
We Remember You		

**Appendix E: United States Participants - State of Residence**

States Represented	Response Count (N=175)
Alabama	1
Alaska	
Arizona	2
Arkansas	
California	5
Colorado	
Connecticut	
Delaware	1
Florida	5
Georgia	8
Hawaii	
Idaho	
Illinois	4
Indiana	1

Iowa	
Kansas	
Kentucky	5
Louisiana	
Maine	1
Maryland	4
Massachusetts	
Michigan	3
Minnesota	1
Mississippi	
Missouri	1
Montana	
Nebraska	
Nevada	
New Hampshire	
New Jersey	1

New Mexico	
New York	4
North Carolina	4
South Dakota	1
Ohio	4
Oklahoma	
Oregon	1
Pennsylvania	
Rhode Island	
South Carolina	
Tennessee	102
Texas	7
Utah	1
Vermont	
Virginia	3
Washington	3

West Virginia	
Wisconsin	2
Wyoming	