Health Outcomes of Family Caregivers:

Examining the Role of Spirituality and Religion

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Dedication

"Supporting one person not only creates happiness for their life, but affects all lives connected to that one individual." ~ Satsuki Shibuyo

Abstract

Estimates project nearly 40 million family caregivers are actively providing care for loved ones with a chronic illness in the United States today (American Association for Retired Persons, 2015). This number is projected to double by the year 2050, as our nation's baby boomers become recipients of this care (Family Caregiving Alliance, 2016; Pollard & Scommenga, 2014). Family caregivers are at higher risk for negative emotional (e.g., depression, anxiety) and physical (e.g., heart disease, cancer, diabetes, arthritis) health outcomes. The impacts that caregiving have on health outcomes are clear. Which factors put caregivers at higher risk for poor health outcomes is not as clear (Kane, 2011). What remains particularly understudied is how the spiritual and religious practices of caregivers influence their personal mental and physical health. This study advanced a secondary analysis on a longitudinal sample of caregivers aimed to understand how use of spirituality and religiosity impacts mental and physical health outcomes. A predictive model showed that caregivers' religious resources had an impact on their mental health. More specifically, use of private religious practices showed more positive mental health outcomes over other variables of religious resources. Implications for clinical practice and research are discussed. **207 words

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Abbreviations

ABC-X Theory	ABC-X Family Stress Theory
ADL	Activities of Daily Living
BPS Model	Biopsychosocial Model
BPSS Model	Biopsychosocial – Spiritual Model
CMFS Model	Contextual Model of Family Stress
IADL	Instrumental Activities of Daily Living
MIDUS	National Survey of Midlife Development

Chapter 1

Introduction

Being diagnosed with a chronic illness is a healthcare event that can happen to anyone, at anytime. The diagnosis of a chronic illness is not isolated to the individual who becomes ill; it extends to and impacts the family unit. Family members are often the untrained professionals that either self-select, or are assigned, to the role of being an informal caregiver. An informal caregiver is anyone who has a significant personal relationship with, and provides a broad range of assistance for, another person with a chronic or disabling condition (Centers for Disease Control and Prevention, 2016). A longstanding assumption is that being a caregiver for a family member is a chronically stressful process. A considerable amount of research points to poor mental and physical health outcomes for those serving in caregiving roles (Roth, Freedman, & Haley, 2015; Schulz & Sherwood, 2009).

Applying a theoretical lens to the processes of caregiving provides a framework by which specific assumptions can be tested. Theoretical models of stress and coping have been applied to family caregiving, but only a small amount of empirical literature has applied a family-level stress theory. Family stress theory posits that the stress outcomes that a family experiences are highly correlated with the resources the individual or the family have available to draw from (Boss, Bryant, & Mancini, 2017). The most common resource explored in the literature is social support, which acts to mediate poor caregiving outcomes. Intra-personal beliefs, by way of spirituality and religion, can also be viewed as a resource. Spirituality and religion have been understudied in both the caregiving and family stress literature. This dissertation aimed to examine the role(s) that spiritual and religious resources have on mental and physical health outcomes of family caregivers. This study provided two strengths that contribute a marked improvement over previous research on caregiving, spirituality and religion, and health outcomes: (a) inclusion of multiple and distinct aspects of religion and spirituality, including religious affiliation, spiritual behaviors such as meditation, attendance at services and involvement in other religious activities, spiritual beliefs, and religious identity; and (b) controls for social support outside of religious settings, such as family support and friend support. The purpose of this study was to explore the relationship between three types of resources (i.e., social resources, spiritual resources, and religious resources) to determine their respective and combined association with caregiver health outcomes over time.

Caregiving

It is estimated that there are nearly 40 million family caregivers actively providing care for a loved one with a chronic illness in the United States today (American Association for Retired Persons, 2015). This number is projected to double by the year 2050, as our nation's baby boomers become recipients of this care (Family Caregiving Alliance, 2016; Pollard & Scommenga, 2014). Family caregivers are at higher risk for negative emotional (e.g., depression, anxiety) and physical (e.g., heart disease, cancer, diabetes, arthritis) health outcomes (Charles, Piazza, Mogle, Sliwinski, & Almeida, 2013; Li, Shaffer, & Bagger, 2015; Roth et al., 2015). Caregivers also die at a rate that is 66% higher than same age peers who are not caregivers (Kriseman, 2014; Schulz & Beach, 1999).

The impacts that caregiving have on health outcomes are clear. Which factors put caregivers at higher risk for poor health outcomes is not as clear (Kane, 2011). What remains particularly understudied is how use or presence of spirituality and religion of caregivers influence their personal mental and physical health. Musick and Worthen (2010) noted that the connection between self-reported measures of spirituality/religion and self-rated health have not been well documented, and thus call for more attention in the literature.

Spirituality and Religion: Similar but Distinct Concepts

The diagnosis of a chronic illness is often accompanied by an attempt to make sense of it (i.e., create meaning and/or a reason for its onset). How family members adapt to and cope with the role of being a caregiver has a lot to do with the beliefs they hold about the illness at hand (Wright, 2017). Maturana and Varela (1992) discuss a person's belief or meaning-making system comes from their history of interactions over time across a wide variety of contexts. Wright and Bell (2009) state, "A belief is the 'truth' of a particular reality that influences bio-psychological-sociological-spiritual structure and function" (p. 27). Spirituality and religion act to facilitate this meaning-making process, and offer a means to process one's intrapersonal beliefs. Spirituality and religion in a broad sense represent a set of beliefs and reflections used to create meaning around an event. In a general sense, they encompass the desire, or search for, meaning, purpose, connection, or fulfillment (Koenig, 2012; Wright, 2017). Most research conducted on spirituality and religion has been done so by exploring their concepts uni-dimensionally (Idler et al., 2003). Spirituality and religion in this study are not synonymous concepts. This study explored the concepts as separate and distinct in order to understand if various resources of spirituality (e.g., believing in a higher power) impacted health differently, or more so than religious resources (e.g., the act of going to church). An in-depth description of the differences in these concepts is presented in Chapter 3.

Examining whether spirituality and religion are protective or inhibiting to the stress and/or coping process while caring for a family member is an important topic to explore. Spirituality and religion, and their association with overall health and well-being, have a strong research base. For their connection to physical health, research has shown that those who report higher levels of spirituality/religion have healthier diets (Hart, Bowen, Kuniyuki, 2007; Hannon, & Campbell, 2007), healthier weight (Bruce, Sims, Miller, Elliot, & Ladipo, 2007), and less risky sexual behaviors (Burdette, Ellison, Hill, & Glenn, 2009). Indirect associations between spirituality/religion and physical health include positive outcomes for the following conditions: coronary heart disease (Berntson, Norman, Hawkley, & Cacioppo, 2008), cardiovascular well-being (Sparrenberger, Cichelero, & Ascoli, 2009), dementia (Conrad, 2008), immune functioning (Lutgendorf, Ullrich, Wallace, Russell, & Harris, 2004), cancer (Koenig, George, & Titus, 2004), pain and somatic symptoms (Wachholtz & Pearce, 2009), and mortality (Hummer, Benjamins, Ellison, & Rogers, 2010).

For their connection to mental health, spirituality/religion have been shown to directly and indirectly influence mental health pathways such as: coping with adversity (Koenig, McCullough, & Larson, 2001), positive emotions (Koenig, Kvale, & Ferrel, 1988), well-being/happiness (Crabtree, & Pelham, 2009), hope (Ai, Park, Huang, Rodgers, & Tice, 2007), optimism (Krause, 2006), meaning and purpose (Krause, 2010), sense of control (Fiori, Brown, Cortina, & Antonucci, 2006), depression (Braam, Deeg, Poppelaars, Beekman, & Van Tilburg, 2007), anxiety (Razali, Hasanah, Aminah, & Subramaniam, 1998), suicide ideation (Rasic et al., 2009), and substance abuse (Fallot & Heckman, 2005).

Coping and Family Stress

Most studies on the effects of spirituality and religion have been conducted without controlling for family and social support, which arguably are stronger predictors for better health outcomes than religiosity or spirituality alone. This study employed Boss's (2002, 2017) Contextual Model of Family Stress as an explanation of caregiver health outcomes due to the stressors of being a family caregiver. This theoretical lens provided justification for controlling well-known resources (e.g., family support, friend support) in order to examine more closely religious and spiritual resources and their individual contributions to caregiver health outcomes.

Becoming a caregiver can be viewed as a stressful family process. Research has shown that varying degrees of family stress can lead to poor health outcomes. Resources in the Family Stress literature include the collective strengths at the time of the event, such as employment, connection to community, support from family and friends, ties to a social network, and connection to religion and/or spirituality (Boss, 2017). In this study, resources were captured by three distinct categories (i.e., social resources, spiritual resources, and religious resources). Social resources included variables that represented relational resources such as: spousal support, family support, and friend support. Spiritual resources included variables that represented: presence of spirituality, spiritual coping, and daily spiritual experiences. Religious resources included variables that represented: religious support, religious identification, and private religious practice.

Purpose of the Present Study

This dissertation examined three constructs of resources (i.e., social resources, spiritual resources, and religious resources) to determine if they have an impact on family caregivers' mental and physical health outcomes. Research using Family Stress Theory supports that relational resources (e.g., friend support, family support) can buffer against poor outcomes, resulting in less stress. This study will expand the concept of resources beyond what has been traditionally studied. Variables related to spiritual resources and religious resources were explored to test if their significance in accounting for in variance in health outcomes beyond that which social resources explains.

Research Objectives

The purpose for this research was to: (a) systematically test the relationships between caregivers' social resources, spiritual resources, and religious resources and health outcomes; and (b) develop a trajectory of research targeting the influence that spirituality and religion have on caregivers' health outcomes. The objective of this research was to investigate a predictive model that tests the relationship between caregivers' social resources (e.g., family support, friend support); spiritual resources (e.g., spiritual coping, daily spiritual experiences); and religious resources (e.g., religious identification, private religious practice) at Time 1; and the association with caregivers' personal mental health outcomes (e.g., depression, anxiety) and physical health outcomes (e.g., number of chronic illnesses, self-rated physical health) at Time 2 (i.e., 10 years later).

Aim #1: Identify whether social resources, spiritual resources, and religious resources predict stronger mental health and physical health outcomes in long-term family caregivers (i.e., 10 years).

Hypothesis 1: Long-term family caregivers with high levels of religious resources and high levels of spiritual resources at Time 1 will have stronger mental and physical health outcomes at Time 2.

Aim #2: While controlling for social resources, identify the subscales of spiritual resources and religious resources most reliably associated with better mental health outcomes and physical health outcomes in long-term family caregivers.

Hypothesis 2: While controlling for social resources, subscales of spiritual resources (i.e., daily spiritual experiences), and religious resources (i.e., private religious practice) will be associated with variance in mental and physical health outcomes in long-term family caregivers.

Significance of the Study

The contribution of this study will be significant because an individual's use of spirituality and religion as a means of coping may be the most important factor in determining stress outcomes when other factors are unable to be controlled (Boss, Bryant, Mancini, 2017). For example, at the time a family member becomes a caregiver, s/he may not have control over how much support friends and family can provide, or how many days per week an employer allows for time off. However, s/he may be able to control how they use prayer or mindfulness, or how often they attend an organized religious congregation. These resources could lead to a lessened degree of stress response over time and better health outcomes. By utilizing longitudinal data, this study may be able to predict the risks that caregivers have for poor health outcomes, based on their religious and spiritual resources at the time they become a caregiver.

Chapter 2

Theoretical Frameworks

Considerable research exists that identifies a strong correlation between being a caregiver and the prevalence of poor mental and physical health outcomes (Eifert, Adams, Morison & Strack, 2016; Roth et al., 2015). Not all caregivers fail in health as they perform their caregiving tasks, but those who do share many of the same characteristics. Those who have poorer health outcomes compared to their non-caregiving peers tend to be non-White, female, from the cohort of the "sandwich generation", lower socioeconomic status, and have poor social supports. The type of illness the caregiver is caring for (e.g., Alzheimer's, cancer), as well as the type of caregiving tasks (e.g., tasks of daily living, physical transport) also influence health outcomes (Lin, Fee, & Wu, 2012; National Academy on an Aging Society, 2013; National Alliance for Caregiving and AARP, 2015; Pinquart & Sorensen, 2006).

As the mean age of the population in the United States continues to rise, the need for more family caregivers becomes a topic of interest on a public health level. The Centers for Disease Control and Prevention (CDC) estimate that currently 80% of Americans age 65 years and older have at least one chronic condition. Of those with a chronic condition, one quarter have one or more major limitation to their daily functioning. These limitations have implications to not just the individuals, but also their family members–who oftentimes become the ones providing care (Anderson, 2004; Centers for Disease Control and Prevention, 2013). In the United States, informal or family caregivers are estimated to provide care valued at approximately $522 billion per year. Conversations in popular media have emphasized the need to value the invaluable. Replacing the care given by family caregivers with an unskilled worker at minimum wage would cost $221 billion annually, whereas replacing them with a skilled nurse would cost $642 billion (National Alliance for Caregiving & AARP, 2015). Placing accurate monetary estimates valuing this oftentimes-invisible workforce will inevitably propel healthcare systems and policy makers to take notice. Keeping caregivers healthy and investing in their capacity to continue this level of care is an economic and public health necessity.

Biomedical to Biopsychosocial Model

The Biopsychosocial Model (BPS) developed out of the biomedical model when George Engel proposed an expanded and improved perspective for working with disease and illness (Engel, 1977, 1980). Prior to Engel's model, there were two prominent beliefs systems in medicine: reductionist and exclusionist. Reductionists believed that any behavioral occurrence must be a deviation in biological or physical chemistry (Ahn, Tewari, Poon, & Philips, 2006). Exclusionists believed that any condition lacking a biological or chemical origin was to be excluded from disease or illness categories (Wurmser & McDaniel, 2013). The biomedical model failed to consider contextual dimensions (e.g., psychological, social) of illness (Borrell-Carrio, Suchman, & Epstein, 2004). Engel (1977) did not intend to do away with the medical model entirely. His aim was to "broaden the approach to disease to include the psychosocial without sacrificing the enormous advantages of the biomedical approach" (p. 131). Engel asserted that individuals are parts of whole systems. These systems consist of internal, external, environmental, and larger social interactions. Engel's contribution to medicine was significant because it allowed for a contextual consideration of disease. This contextual consideration added options for conceptualizing disease and illness beyond a simply biological or chemical explanation. The BPS Model has been well documented as a means to clinically conceptualize a variety of illnesses (Lutgendorf & Costanzo, 2002; McDaniel, 1995; Nicholas, Molloy, & Brooker, 2006; Phelps et al., 2009; Prest & Robinson, 2006; Walker, Jackson, & Littlejohn, 2004). Research using this systemic model continues to grow. Its contributions are strengthening the competencies by which clinicians operationalize their patient care (Hodgson, Lamson, & Reese, 2007; Prest & Robinson, 2006).

Biopsychosocial to Biopsychosocial-Spiritual Model

Engel (1980) noted that "Nothing exists in isolation, every system is influenced by the configuration of the systems of which each is a part" (p. 537). This belief continues to hold true even as additional paradigms were added to his model. In 1992 the field of family nursing made its impact on Engel's model by encouraging the expansion to include spirituality, thus advancing the Biopsychosocial-Spiritual (BPSS) Model that is familiar to many who practice relational medicine today. Wright, Watson, and Bell (1996) recognized that belief systems–connected to spiritual and religious beliefs–impact healthcare choices, treatment, and outcomes (Hodgson et al., 2007; Prest & Robinson, 2006; Wright et al., 1996). This new BPSS Model, similar to Engel's (1977) model, has received attention as an assessment tool and clinical intervention, but significantly less attention as a framework for research. Although the importance of spirituality in health care is relevant across all populations and healthcare settings, it may be particularly important among those dealing with chronic illness and caregiving. Clinicians rooted in systems and relational thinking, use the BPSS Model to better understand the unique factors that impact a family's health experience. In doing so, it may assist in efforts to improve patient and family health outcomes. An increasing amount of literature supports the importance of considering the inclusion of spirituality in the assessment and treatment of health issues (e.g., George, Larson, Koenig, & McCullough, 2000; Walsh 2013; Wright, 2017). Spirituality represents a set of beliefs and reflections used to create meaning around an event. In a general sense, it is the desire, or search for, meaning, purpose, connection, or fulfillment (Koenig, 2012; Wright, 2017). Belief systems refer to how individuals, families, and communities assign meaning (e.g., hope, optimism, positive outlook, spirituality, inspiration) to an event or adversity (Walsh, 2013). The BPSS Model provides an important framework to clinicians, which can be used to better understand a family's experiences and beliefs about health and illness. Without contributions to broaden the expansion of the BPSS Model, current literature will continue to focus on the biological and psychological facets often overlooking the importance of larger contextual and spiritual issues so common in chronic illness and family caregiving.

Family Stress Theory

The theoretical foundation for this dissertation is grounded in Reuben Hill's (1958) ABC-X Family Stress Theory, which posits that an individual's ability to adapt to a situation (X) is dependent on the stressors (A) and resources (B) present, and that this process is influenced by the individual's perceptions (C) of said stressors and resources. The ABC-X Model is a heuristic formulation used for scientific inquiry based on family stress theory (Boss, 2017; Crosbie-Burnett, 1989; McCubbin & Patterson, 1983). Family stress theory generally states that a provoking event or stressor may lead to family stress and/or crises (Molaison, 1990). Protective factors, such as family resources and perceptions of the event or stressors, can buffer the impact and thereby provide a means of coping (Rankin et al., 1992).

Contextual Model of Family Stress

Boss (2002, 2017) adapted Hill's model to be less linear and more contextual. The base constructs were expanded to provide a heavier emphasis on the perceptions (C) that a family assigns to stress, and further makes the distinction between stress and crisis in (X). Boss's adaptation is called the Contextual Model of Family Stress (CMFS); it provides the scaffolding for which constructs were tested in this study. The assumptions of Boss's adaptation are as follows: (a) the precipitating event or stressor (A) does not presume stress. It is viewed as the starting point for change, and carries with it the potential to disrupt the status quo within a family system; (b) aligning with Hill's model, resources (B) are viewed as the assets that a family has to employ–either individual, familial, or community–to assist in responding to potential disruption in the family system; (c) perception and meaning (C) are least understood variable(s) in predicting family stress outcomes, (d) stress on a family is simply a disturbance (X) – it is a continuous variable that is measured in degrees of stress.

Boss's model has the clear distinction that there are two parts to the (X) outcome variable. A family is either stressed to a low or high degree, or they are in crisis. Crisis is seen as a categorical variable, insofar as a family is either in crisis or it is not. For this dissertation, using the CMFS Model assigns the role of being a family caregiver to correspond to (A) and is viewed as the precipitating event. Boss's adaptation to Hill's model also further classifies stressors because of the variability. Boss's classification of stressor events and situations adds clarity to what can be viewed as (A) in the model. Stressor events fall into four categories, including source (e.g., internal, external); type (e.g., ambiguous, catastrophic, normative); duration (e.g., chronic, acute); and density (cumulative, isolated). Only individuals who have been long-term caregivers (i.e., 10 years or more) were included in this dissertation. Therefore, being a caregiver of chronic duration is the process that is considered the event in this study. The resource variable (B) is represented by assets and supports that the caregiver has available to draw from, specifically: social resources, spiritual resources, and religious resources. The most novel component of this study is the exploration of caregivers' spiritual and religious resources. Family stress literature describes resources as the relational, social, and intra-personal assets available to an individual. The diagnosis of a chronic illness is often accompanied by an attempt to make sense of (i.e., create meaning about) the illness, or establish some kind of reason for its onset. Spirituality and religion are often the means by which individuals and families process or make sense of events that cause distress. Finally, the stress or crisis outcome in the model (X) is caregivers' mental and physical health outcomes (e.g., depression, self-rated health, anxiety). Variables in family stress (X) reflect a degree of stress (e.g., high levels of depression, low levels of life satisfaction) or crisis. For this dissertation, because a subjective determination of crisis was not available in the secondary data analyzed, it was not evaluated. With support from other scholars (e.g., Boss, 2012, Boss, Bryant, & Mancini, 2017; Wright, 2017; Wright et al., 1996), spirituality and religion are understudied when the concept is applied to a family stress and BPSS framework. Although the CMFS is not a perfect fit for the data in which it was applied, it begins to provide a template for the addition of theory, further scientific inquiry, and development of intervention(s).

Conclusion

Currently the BPSS model offers only a partial picture of how spirituality impacts an individual's mental and physical health. In order to fully understand the impact(s) that resources (i.e., use of spirituality and religion) have on health outcomes, future iterations of the BPSS Model must emphasize the full model by strengthening constructs connected to spirituality. BPSS and the Contextual Model of Family Stress provide a useful foundation by which to explore spirituality and religion and caregiver health outcomes. It is through this research that I recommend a greater emphasis on a theoretical model (i.e., CMFS) examining spirituality and religion in order to inform the BPSS clinical model.

Chapter 3

Review of Literature

The purpose of this literature review is to provide the reader with an overview of research examining various manners by which caregiving impacts caregivers' health outcomes. Specifically, this chapter focuses on the available research for aging trends, caregiver trends, caregivers' mental and physical health outcomes, caregivers' resources, positive impacts of caregiving, how spirituality and religions mitigate health, spirituality and religion's impact on caregiving, and family stress and caregiving.

Aging Trends

The "silver tsunami" is coming and it is receiving a great deal of attention from medical, mental health, and public health policy professionals. This is the term being used to describe Americans over 65 years of age–who will represent nearly one quarter of our Nation's population in 2050 (Bartels & Naslund, 2013). Baby boomers–those born between 1946 and 1964–are projected to comprise a large portion of the silver tsunami movement. It can be assumed that as our population ages, there naturally will be a higher prevalence of people diagnosed with chronic illness. While this holds true, it is not the quantity of illnesses present that should be of concern–it should be the type of illness, the potential severity of the illness, and the length of time someone could have an illness. It has been shown that baby boomers pose different challenges than cohorts before them. They are a cohort of higher education, earned higher wages, and have more work experience. They are also a cohort that birthed fewer children and had higher divorce rates (Administration on Aging, 2013). The United Healthcare Foundation (2013) found that although 50% of the aging population smokes less than the previous generations, there will be 55% more people with diabetes and 25% more who are obese. What this means is that they–America's Baby Boomer generation–are projected be the cohort most likely to live alone in old age, to cost more than previous elder generations, and to be sicker.

Household composition. Household composition–the sum of the individuals who live in the same home–plays an important role in the social support and economic well-being of our aging population. This information will help in forecasting the type of care ill individuals will need based on who is still living in the home, and how much these individuals and their families can afford to pay for outside care. A 2015 poll conducted in the United States showed that 72% of men aged 65 years and older were married, whereas only 48% of women had spouses. These numbers also do not favor widowed women, as there are more than twice as many widowed women as there are men currently. For men, this means if they are diagnosed with a chronic illness or disability, they have a significantly better chance of having someone to care for them in their home than do women. These women who live alone are also more likely to live in poverty, thus increasing their need for reliance on family members to presume the functions and roles of caregivers (Gallop, 2015).

Caregiver Trends

At some point in life, nearly every person will serve as an informal–also called family–caregiver. Family caregivers are partners, relatives, and friends who have a significant personal relationship with–and who provide a broad range of assistance for–a person with a chronic illness or disability (Freedman et al., 2013; Kaye, Harrington, & LaPlante, 2010; Spillman, 2009; Spillman & Black, 2005).

Who are the caregivers? There have been few population-based studies conducted that characterize the population of caregivers. The National Alliance for Caregiving and AARP (2009) is one of the most comprehensive national caregiving studies to date. The typical caregiver in the United States is a 48-year-old woman who has some college education, is employed, and spends more than 20 hours per week providing unpaid care to her mother (Giovannetti & Wolff, 2010; Johnson & Wiener, 2006; Spillman & Black, 2005; Spillman & Pezzin, 2000; Stone & Kemper, 1989; Wolff & Kasper, 2006). About half of caregivers are still employed at least part-time for pay, and provide an extensive array of caregiving tasks that depend on the severity of cognitive and/or physical declines of the care recipient (Johnson & Wiener, 2006; Spillman & Pezzin, 2000).

People who take on these roles do so without pay or training, and also while continuing many of their normal pre-caregiving life activities (e.g., parenting, employment). Providing care to an individual with chronic illness or disability is generally viewed as a major life stressor, and its effects on the health and well-being of the caregiver have been well documented in research literature (Eifert et al., 2016, Roth et al., 2015). Because the role of caregiving can be quite demanding, extend over long periods of time, and be physically and emotionally taxing, it is important to understand who takes on these roles, and how they are able to care for themselves throughout the duration of their caregiving career.

What are caregivers worth? As a group, informal caregivers provide an average of 75 hours of care per month. The average length of time caregivers report providing care is 4.6 years (National Alliance for Caregiving and AARP, 2009). Family caregivers provide a social and economic value to society, insofar as their services represent a fraction of the cost of care compared to hospital-based treatment. The current economic value of family caregivers is estimated to be worth around 257 billion dollars annually (Carek, Norman, & Barton, 2010; del-Pino-Casado, Frias-Asuna, Palomin-Moral, & Pancorbo-Hidalgo, 2011; Gallagher et al., 2011; Grabel & Adabbo, 2011; Northfield & Nebauer, 2010; Perrig-Chiello & Hutchinson, 2010; Pinquart & Sörensen, 2003; van Ryn et al., 2011). Recent reforms to home-based healthcare and institutionalized care have rendered more family members to become informal caregivers out of necessity for cost savings. For example, it is currently estimated that a family caregiver who provides care for a loved one with dementia will pay upwards of $11,000 annually for out-of-pocket expenses (AARP, 2016). What this means is that there is now an increased financial, physical, and emotional burden falling upon family members who are caring for their ill loved ones (Dorfman, Holmes, & Berlin, 1996; Emanuel, Fairclough, Slutsman, & Emanuel, 2000; Ownsworth, Henderson, & Chambers, 2010).

Caregiver Health Outcomes

Researchers have demonstrated that the act of caregiving can affect a caregiver's physical, psychological, and social livelihood, resulting in poor physical and mental health outcomes (Pinquart & Sörensen, 2003; Schulz, O'Brien, Bookwala, & Fleissner, 1995; Smith, Williamson, Miller, & Schulz, 2011). Caregiver outcomes that have been examined the most are biological (e.g., changes to physical health), psychological (e.g., changes in mental health), and cultural (e.g., strength of support systems, cultural influences) (Pinquart & Sörensen, 2003, 2007; Schultz, 2013). Providing care over a long period of time and the cumulative impact of fatigue has been shown to be associated with depression, anxiety, stress, lower quality of life, family conflict, social isolation, and overall deterioration of mental health when compared to pre-caregiving levels (Brink, 2004; Kang, 2006; Zehner-Ourada & Walker, 2014). Compared to non-caregivers, caregivers experience a higher frequency of chronic health conditions (e.g., high blood pressure, high cholesterol; heart attacks; diabetes; arthritis) (Ho, Collins, Davis, & Doty, 2005; Irfan, Irfan, Ansari, Qidwai, & Nanji, 2017). What could be considered day-to-day ailments–such as headaches, backaches, acid reflux, and sleep disturbances–have been reported disproportionately in caregivers (McCurry, Gibbons, Logsdon, Vitiello, & Teri, 2009). It has been shown that the compound effects of day-to-day ailments diminish the immune response, thus putting individuals at risk for more serious ailments such as cardiovascular events and cancer (Cannuscio et al., 2002; Franklin, Ames, & King, 1994; Lee, Colditz, Berkman, & Kawachi, 2003; Roth et al., 2015). Tending to caregivers' health and well-being is an important public health issue. If family caregivers are unable to perform their tasks as caregivers due to their own emotional and physical distress, we are doing a disservice to a growing population of people in need. Previous research on caregiving has focused on which caregivers, under which conditions, are at higher risk for poor mental and physical health outcomes.

Caregiver Health Outcomes by Demographics

Three main sociodemographic characteristics (i.e., age, gender, ethnicity) have been studied that show associations to caregiver health outcomes.

Age. Age differences associated with change in caregiver health outcomes have not been consistent. The mean age for a caregiver is about 47 years old. It could be assumed that the older the age of the caregiver, the worse their health would be. These assumptions are in part due to (a) as a whole, older individuals have poorer heath, and (b) caregiving is stressful; adding stress onto an individual who may already have poorer health will only exacerbate underlying health issues (Navai-Waliser et al., 2002; Rowe & Kahn, 1998). Research does support the association between older age of the caregiver to increased levels of stress (Jones & Peters, 1992; Shahly, Chatterji, & Gruber, 2013; Vlachantoni, Robards, Falkingham, & Evandrou, 2016; Winslow, 1997). Other research has suggested that being older in age may be a protective factor in health outcomes due to it being a developmentally on-time task (Harwood et al., 2000).

Gender. The majority of caregivers in America are women (Family Caregiver Alliance, 2010). Along with being a caregiver, many women still hold roles of being a spouse, employee, mother, and/or daughter. Female caregivers are more likely to spend a higher number of hours caregiving and experience higher levels of anxiety, depression, and stress than men who are in a caregiving role (Jones & Peters, 1992; Lee & Tang, 2015). Women also experience negative health consequences (e.g., physical issues, fatigue, depression, burn-out) due to role-conflict (DePasquale, et al., 2017; Sharma, Chkrabarti, & Grover, 2016).

Ethnicity. Rates of reported caregiving by ethnicity of caregiver are varied. It has been shown that ethnic minority family caregivers provide more care than their White peers and have poorer physical health outcomes (McCann, Bebert, Beckett, Morris, Scheer, & Evans, 2000; Pinquart & Sörenson, 2005). Other research supports that African-American caregivers experience lower levels of stress and reported depression compared to White caregivers (Haley et al., 2004), and Hispanic and Asian-

American caregivers experience more depressive symptoms than their White caregiving peers (Pinquart & Sörenson, 2005). Hypothesized reasons for variance in health outcomes for ethnic minorities have included access to healthcare (e.g., low-income, lack of access to quality healthcare, lack of access to paid care), presence of filial responsibility (e.g., collectivistic cultures caring for the elders, larger family size), and perceived health outcomes (e.g., over or under reporting perception of mental and physical health status) (Santoro, Van Liew, Holloway, McKinnon, Little, & Cronan, 2016).

Caregiver Health Outcomes by Task

Research has examined the health impacts of caregivers based on the type of care tasks they provide (Pinquart & Sörenson, 2003). Caregiving tasks fall into two broad categories: (a) Instrumental Activities of Daily Living (IADLs) and (b) Activities of Daily Living (ADLs). IADLs include activities such as meal preparation, managing money, shopping for groceries or personal items, performing housework, taking care recipients to medical visits, and conducting medication management. ADLs include everyday tasks of personal care such as bathing, dressing, grooming, eating, walking, taking medications, and other personal care activities (IOM, 2008). Informal caregivers who regularly provide "high intensity" assistance to care recipients in terms of greater hours of care and assistance with activities of daily living (ADLs) are more likely to experience burden and strain (Chappell & Reid 2002). This burden and strain presents as decreased health and quality of life for the caregiver. Emerging research demonstrates that caregivers are often managing complex health care activities at home (Donelan et al., 2002; IOM, 2008; Reinhard, Levine, & Samis, 2012), as well as having to navigate the demands of health care systems and transitions between care settings and specialties (Levine, Halper, Peist, & Gould, 2010; Wolff & Rotor, 2008). Such complex caregiving tasks increase the burden of care for the caregiver and the long-term impacts of this subgroup of tasks have not been extensively researched.

Caregiver Health Outcomes by Resources

Research has shown that the type of resources a caregiver has (i.e., internal or external) can impact the degree of stress they feel in their role, thus indirectly impacting their physical and mental health (Beach, Schulz, Yee, & Jackson, 2000). Lack of, or presence of, internal resources (e.g., level of information, skills, coping skill, perception) and external resources (e.g., support from friends/family, finances, paid care) may have an impact on how well caregivers can adapt to their role. Although the research on moderating effects of caregiver resources is relatively underdeveloped, the most researched type of resource is the degree of social support available to a caregiver (Pot, Deeg, & van Dyck, 2000). Having social support may act as a buffer to poor health outcomes by helping to alleviate stressors. Studies have found that having lower levels of social support were associated with poorer health outcomes (Bright & Stanton, 2017; Uchino, Keicolt-Glaser, & Capioppo, 1992). Studies have found direct relationships between level of social support and caregiver reported quality of life. Social support in these studies includes: adequacy of social support, presence of a social life, presence of social network, spousal support, quality of spousal relationship, resources, and paid support (Boyle et al., 2000; Haley, Levine, Brown, & Bartolucci, 1987; Jones & Peters, 1992; Nijboer, Triemstra, Templeaar, Sanderman, & van den Bos, 1999; Tement & Korunka, 2015).

Positive impacts of caregiving. Although broadly it may appear that caregiving is a stressful process with potential ramifications to ones health, careful consideration needs to be given to the positive aspects that caregiving provides too. Studies have shown that caregivers experience both strains and positive experiences at the same time (Harmell, Chattillion, Reopke, & Mausback, 2011; Lloyd, Patterson, & Muers, 2016). Positive experiences of caregiving (e.g., improved relationships, deeper sense of life meaning, prosocial behavior, confidence, self-efficacy, pride) may act to buffer against the negative health outcomes (Brown & Brown, 2014; Fredriksen-Goldsen & Muraco, 2010; Hooyman, Kawamoto, & Kiyak, 2014). Additional positive, personal rewards of caregiving that have been examined include feeling satisfaction in giving back to previous generations, feeling appreciated by the care recipient, personal contentment by knowing one is doing a good deed, spiritual and personal growth, and increased mastery (Hooyman & Kiyak, 2011; Sanders, 2005). These positive impacts deserve more attention in the literature to determine their potential buffering effects against the negative outcomes of caregiving.

Spirituality and Religion

Recent research has shown that about 95% of all Americans believe in God or ascribe to the belief of some kind of higher power. Decades of literature confirm this statistic, adding that this percentage has not dropped below 90% in over 50 years (Gallup Poll, 2013). As a nation, we are highly religious and spiritual individuals. This literature review is not set up to discuss the largely contrasted (and sometimes contested) notions of "spirituality" and (or versus) "religion". For every definition that exists, there exists a counterargument for why a particular definition is inaccurate.

Philosophical and scholarly literature on the concepts of spirituality and religion remain divided. The following sections are written in an attempt to provide a neutral representation of what exists and what was helpful in guiding this dissertation.

What is Spirituality?

There is no one correct or unified definition of spirituality. Spirituality is thought to involve humanism, values, morals, and connection to that which is sacred. This connection to the sacred is also considered to be a connection to the transcendent, also known as the Ultimate Truth. The transcendent in spirituality is not one ideological figure(s), as it is in religion. It is believed to exist outside of the self, and yet also within the self. Spirituality is viewed as a search within the self to understand and challenge one's own beliefs in order to find a place of surrender and devotion to what was found during this inner search. It can ultimately be operationalized as the search for purpose, inner wisdom, and meaning in one's life (Damianakis, 2001; Koenig, 2015; Lepherd, 2015).

What is Religion?

Just as with spirituality, there is no one unified definition of religion. It is thought to involve beliefs, practices, and rituals related to the transcendent, which is God, Allah, Brahman, HaShem, or a higher power. Religion usually has specific beliefs about rules and behavioral conduct within a social group and life after death. Religion is a multidimensional construct that includes beliefs, behaviors, rituals, and ceremonies that may be held or practiced in private or public settings. Religion has a strong community component as most of the traditions developed were done so over time within respective communities. These organized systems of beliefs, practices, and symbols are designed to (a) facilitate closeness to the transcendent, and (b) to cultivate an understanding of one's relationship and responsibility to others within a community (Koenig, 2005, 2015).

Spirituality and Religion as Combined, but Distinct, Concepts

For the rest of this review, spirituality and religion are used interchangeably and made distinct when possible. Given the manner by which previous research has assessed and combined the two, it is not always possible to report these phenomena as two distinct concepts. According to Bonelli and Koenig (2013), the term spirituality–unlike religion–has only been used in research on mental health since the early to mid-1990s. A critique of research examining spirituality, religion, and their associations to health has been that the concepts are generally framed as one-dimensional and lack distinction (Idler et al., 2003). Many of the variables used in research place spirituality and religion within the same construct. Hebert, Weinstein, Martire, and Schulz's (2006) review of the concepts revealed that the most frequently researched variables of spirituality and religion include: (a) attitudes and beliefs (e.g., perceived importance of religion/spirituality, belief in deity, religious/spiritual values), (b) behaviors (e.g., frequency of prayer, participation in worship services, reading sacred texts), (c) denomination (e.g., Catholic, Muslim), (d) coping (e.g., use of positive and negative strategies for dealing with difficulties), (e) well-being (e.g., life satisfaction in relation to religious/spiritual beliefs, feelings of a connection with a higher power), and (f) multidimensional concepts (e.g., studies that combined variables of spirituality and religion).

Bonelli and Koenig (2013) systematically reviewed 43 studies and found that 36 focused exclusively on one or more aspect of religion. Two studies (Mitchell & Romans, 2003; Nasser & Overholser, 2005) emphasized spirituality only (e.g., assessed "spiritual beliefs"). Five studies examined combined constructs of religion and spirituality and did not make clear a distinction between the two concepts, thus inhibiting interpretation of the results to be connected clearly to the health related outcome variables of interest. Guided by recommendations from Koenig (2010), when constructs and variables of spirituality and religion are not as clear, spirituality and religion will be distinguished by "S/R". When possible, distinction will be made separating the two concepts.

Spirituality/Religion and Health Outcomes

Research supports the notion that S/R people enjoy better physical and mental health (Ferraro & Kelley-Moore, 2001; Krause, Ellison, & Marcum, 2002). Much of the research on religion, health, and well-being focuses on attendance (e.g., at church) as its primary indicator of religiosity (Green & Elliot, 2012). Frequency of participation in religious services has been linked to greater psychological well-being (Ellison, Boardman, Williams, & Jackson, 2001; Ellison, Gay, & Glass, 1989; Francis & Kaldor 2002; Keyes & Reitzes 2007; Strawbridge, Shema, Cohen, & Kaplan, 2001) and better physical health (Hebert, Dang, & Schulz, 2007; Larson & Larson 2003; Smith, McCullough, & Poll, 2003). Strength of religious identity and frequency of prayer has been linked to both psychological well-being (Byrd et al., 2007; Ellison, 1991; Francis, & Kaldor, 2002; Greenfield, & Marks, 2007; Keyes & Reitzes, 2007; Maltby Lewis, & Day, 1999; Pargament et al., 2001; Peterson & Roy, 1985; Poloma & Pendleton, 1989;

Schnittker, 2001) and physical health (Banthia, Moskowitz, Acree, & Folkman, 2007; Ellison et al., 2001; Wink, Dillon, & Larsen, 2005).

Physical health. People who define themselves as religious report better physical health (Wink et al., 2005). Relationships between S/R and health outcomes have been modestly reported (Oman & Thorenson, 2005). Those who self-report using S/R indicate having better overall health, less physical disability, better physical function, and less prevalence of major diseases such as cancer, and heart disease (Levin & Chatters, 2008). Research indicates – regardless of religious affiliation – that people who identify as being religious report better health and happiness (Green & Elliot, 2012).

It is thought, that physical health is inadvertently impacted by the positive impact that S/R have on mental health, therefore improving physical health outcomes. This appears to be so because it facilitates coping and lessens the degree of perceived negative events. There is ample evidence that S/R is related to better mental health outcomes (e.g., less depression, less anxiety, lower levels of stress, greater well-being, and an increase in positive emotions) (Koenig, King, & Carson, 2012).

Mental health. People who define themselves as religious and who identify with a specific religious tradition tend to be less depressed (Koenig, 2007, 2011), report greater self-esteem (Keyes, & Reitzes, 2007; Schnittker, 2001), report having more effective coping skills (Banthia et al., 2007; Pargament et al., 2001), have higher levels of happiness (Ellison, 1991), and maintain greater life satisfaction (Gauthier, Christopher, Walter, Mourad, & Marek, 2006). Chi et al. (2009) reported an inverse relationship between religious involvement and decreased substance abuse and drug dependency. Identifying one's self as spiritual and religious attendance were concepts that significantly decreased the likelihood of lifetime incidence of suicidal attempts (Rasic et al., 2009). The most developed research has been on S/R's impact on depression; Bramm (2010) and King (2007) confirmed previous research that states those with high religiosity and those with low religiosity were the most prone to depression. In other words, being too religious (e.g., rigidly obedient) or lacking religion completely is associated with a higher risk of developing depressive symptoms.

Mechanisms of impact. There appear to be three main pathways to explain how S/R contributes to better health outcomes: (a) psychological, (b) social, and (c) behavioral. First, having an affiliation to S/R is thought to be connected to psychological well-being due to its association with improved social support, overall life stability, and less destructive behavior choices. S/R provides guidance on beliefs and doctrines by which to live life by. It encourages certain human virtues that are related with healthier life choices (e.g., honesty, altruism, forgiveness, self-discipline) (Krause, 2009; Skrabski, Kopp, Rozsa, Rethelyi, & Rabe, 2005). Second, S/R promotes pro-social behaviors and relationships. Participation in a community of likeminded individuals who are health-positive may lead to stronger social connections that promote a healthy lifestyle (Hutcherson, Seppala, & Gross, 2015; Levin, Chatters, & Taylor, 1995). Positive social factors are known to promote healthy behaviors such as receiving an increase of health information, which may lead to an increase in preventative healthcare and screenings (Krause, 1992; 1995; Maselko, Hughes, & Cheney, 2011). Lastly, S/R is thought to promote better health behaviors. It is associated with less substance use, more physical exercise, healthier diet, and safer sexual practices (Miller et al., 2007).

Spirituality/Religion as a Support

Utilizing spirituality and religion as a resource is one of the most predominant and least understood methods that people choose when coping with stress and illness (Cole & Pargament, 1999; Dein & Stygal, 1997; Koenig, Parkerson, & Meador, 1997; Koenig, King, & Carson, 2012). A fundamental need that use of spirituality and religion help to satisfy is that of helping individuals to better cope with stress and adversity (Krause, 2011). Adversity is inescapable; at some point in time, everyone will deal with a subjective sense of it. Examining research that identifies specific aspects of S/R and coping contributes to the understanding of its use to mediate poor health outcomes.

S/R coping and S/R resources are used interchangeably in the research. Included in these coping resources are: (a) church-based support (Krause, 2008a), (b) specific religious coping responses (Pargament, 1997), (c) religious supported feelings and sense of control (Schieman, Pudrovska, & Milkie, 2005), (d) prayer (Krause, 2009), and (e) religiously connected meaning in life (Krause 2008b).

An indirect link between S/R and psychological well-being is made through the constructs of S/R identity and social support (Ellison, 1991; Krause & Wulff, 2005; Maltby et al., 1999). Social support derived from being a member of a religious organization has been linked to psychological well-being (Byrd et al., 2000; Ellison, 1991). It is not about what religion one ascribes to or how spiritual one reports to be; psychological well-being has more to do with how many religious groups one belongs, and the strength of ties to those groups that predict greater psychological well-being

(Ellison, 1998). There appear to be three main mechanisms to explain how S/R contributes to greater mental health: (a) as a resource for coping, (b) as a means to provide a doctrine for how to live life and how to treat others, and (c) as an emphasis on love of others, compassion, and acts of kindness (Ellison & Daisy, 2008; Koenig, 2009).

Resource for coping. S/R provides resources for coping with stress. Using religion to cope (e.g., by making sense of stressful event, drawing from a supportive community of people) may decrease the likelihood that stress develops into a mental health disorder. Having S/R to draw from as a coping resource means knowing its presence can provide meaning to difficult life circumstances. It may also provide a sense of purpose when life appears to be full of adversity, and may provide a sense of control (e.g., prayer to God will allow him/her to influence the outcomes, prayer or belief in a higher power gives a sense of control). S/R beliefs provide meaningful and satisfying answers to existential questions, such as “Where did we come from?”, “What is my purpose?”, and “Why is this happening?” Koenig (2012) states that using spirituality and religion to make sense of these existential questions helps to normalize loss, suffering, and adversity.

Provides a doctrine. Most religions have doctrines (rules and regulations) that provide guidance about how to live life and how to treat others. Ascribing to these doctrines may reduce negative perspectives on stressful life events, therefore increasing positive emotions and coping ability (Koenig, 1998). When individuals abide by those rules and regulations, this reduces the likelihood of stressful life events that reduce positive emotions and increased negative ones. Research suggests that by abiding by religious doctrines certain life events may be less stressful. These events are stressors such as: divorce or separation (Wilcox & Wolfinger, 2007; Wilson & Musick, 1970), difficulties with children, financial stress, and incarceration (Regnerus, 2003; Rhoes & Reiss, 1970). Religions also usually discourage the use of substances and engaging in risky, poor health behaviors (Shiah, Chang, Chiang, Lin, & Tam, 2015; Wallace & Forman, 1998). There is an assumption through these doctrines that there is a moral responsibility to care for and nourish one's body. Disregarding those assumptions has been associated with negative mental health consequences (Hill, Burdette, Regnerus, & Angel, 2008; Laurenceau, Stanley, Olmos-Gallo, Baucom, & Markman, 2004; Strawbridge et al., 2001).

Emphasis on compassion. Lastly, most religions emphasize love for others, compassion, and altruistic acts. There are also pro-social behaviors that connect people to one another through social support. This connection to human support through religion creates a network of support for help during difficult times. Because religion encourages the helping of others and emphasizes a focus outside of the self, engagement in other-helping activities may increase positive emotions and serve to distract from one's own problems. Religion also promotes human virtues such as honesty, forgiveness, gratefulness, patience, and dependability, which help to maintain and enhance social relationships. The practice of these human virtues may also directly increase positive emotions and neutralize negative ones (Krause, 2002; Krause, 2003; Nooney & Woodrum, 2002).

Spirituality/Religion and Caregiving

According to a national poll, spirituality and religion are one of the most important coping resources for caregivers; as many as 73% report use of prayer to cope with the demands of caregiving (Caregiving in the United States, 2004). Even though the influence spirituality has on caregiver stress is under-explored, it is considered to be an important coping resource for caregivers (Marquez-González, Lopez, Romero-Moreno, Marquez-Gonzalez, M., & Losada, 2012). Research suggests that religious beliefs help caregivers make sense of their caregiving experience (e.g., Why did my loved one get sick?, Why is my loved one suffering?), find inner peace, and give them a larger sense of meaning and purpose in life (Timoshkina, 2016). Spirituality and religion may be central to the promotion of coping in the context of high in stress situations, such as the diagnosis of a chronic illness (Koenig & Larson, 2001).

Mechanisms of impact. Spirituality and religion have been found to be important and unique mechanisms in caregivers' ability to cope with the tasks of caregiving (Brady, Peterman, Fitchett, Mo, & Cella, 1999; Ehman, Ott, Short, Ciampa, & Hansen-Flaschen, 1999; Pargament, 1997; Roberts, Brown, Elkins, & Larson, 1997). Use of, or having, S/R has been shown to increase supportive social networks, and provided resources for coping that have been associated with better caregiver health outcomes (Bradley, 1995; Carver, Scheier, & Weintraub, 1989; Krause, 1995). Spirituality and religion can be a source of strength during times of stress, and as a mechanism for positive coping (Amit et al., 2001; Militiades & Pruchno, 2001; Paun, 2004). This is been done through use of faith (e.g., having complete trust in someone or something) and having religious spirituality (e.g., attending church, use of prayer, display or use of religious symbols, and reliance on God during difficult times).

Even though researchers have not fully identified the specific components of spirituality and religion that impact health outcomes, there has been consistent evidence that for caregivers, S/R as a coping resource impacts caregivers' physical health (Herbert et al., 2006; Koenig et al., 2000; Levin, 1994, 1996; Plante & Sherman, 2001) and mental health (George et al., 2000; Koenig, 1998; Larson & Milano, 1997; Lopez et al., 2012). A sense of coherence and meaning provide individuals a way to understand their role in the universe, purpose of life, and an opportunity to develop the courage to withstand suffering (George et al., 2000). A main critique of the research on S/R and caregiving is that only one dimension was studied (e.g., religious identification, belief in God), and not the relationships between the dimensions (e.g., does a belief in God have more impact on the outcome variable than the type of religion). For example, a caregiving spouse may have adopted a new religious doctrine as a result of their loved one's illness. This potentially directional relationship would be captured in the typical one dimensional examination of S/R impact on caregiving.

Family Stress and Caregiving

Few theories have been tested that examine caregiving's impact on the family unit. Family stress theory, however, may provide the most comprehensive conceptualization. Literature within stress and coping frameworks recognize the strain caregiving puts on individuals, dyads, and families, yet few studies exist that test theoretical constructs of the caregiving experience (e.g., resources, perceptions) against caregiver health outcomes.

The ABC-X Model, developed by Hill (1949, 1958), is a specific framework based on family stress theory (Cox, 2002; Crosbie-Burnett, 1989; Hill, 1949; McCubbin & Patterson 1983). This model was designed to identify "which families, under what conditions, using what resources and coping behaviors, are able to make positive adaptations to stressful situations" (McCubbin & Patterson, 1983, p. 88). It identifies family stress as an upset, disturbance, uneasiness, or added pressure that changes the steady state of the family, where protective factors such as family resources and perceptions of stressors can buffer the impact of the stressors (Boss, 2011). This model posits that an individual's ability to adapt to a situation (X) is dependent on the stressors (A) and resources (B) present, and that this process is influenced by the individual's perceptions (C) of said stressors and resources.

ABC-X Model in Research

Research utilizing the ABC-X Model ranges from families coping with military members missing in action (Bowen, Martin, & Mancini, 2013; Weins & Boss, 2006) to coping with an autistic child (Farber, Willenton, & Clymen, 2008). A review of the literature on the use of ABC-X Model and caregiving reveals a gap when applied to adult caregivers. The majority of studies using the ABC-X Model and caregiving do so from the perspective of parental caregivers of children with autism (Bristol, 1987; Dardas & Ahmad, 2015), disabled children (Kirby, White, & Baranek, 2015; Minnes, 1988), families in crisis (Hobfoll & Spielberger, 1992; Sullivan, 2015), family violence (Farrington, 1986), and poverty (Hammade, Robinson, & Clymen, 2004). Studies using the ABC-X Model with an adult caregiving population have focused on topics of elder abuse (Lee, 2009), traumatic brain injury (Masalha & Auslander, 2017; Moore, Stambrook, Peters, & Lubusko, 1991), and Alzheimer's Disease (Boss, 2016). To summarize the literature, those who have the most resources to access have better stress outcomes. Additionally, those who perceive the stressful events more positively are associated with greater outcomes.

Conclusion

Research on spirituality and religion has demonstrated associations with mental health outcomes, physical health outcomes, and caregiver health outcomes. The mechanisms of S/R are not fully understood. However, the connection can be made that the presence of S/R has an impact on caregivers' mental and physical health. Research has lacked a theoretical examination of how caregivers use spirituality and religion as a resource for coping with the stress of caregiving. For many caregivers, aspects of BPSS and Family Stress Theory may be influential in understanding how to remain mentally and physically healthy. This dissertation may help to guide clinical practice interventions and future research to strengthen knowledge on types of resources caregivers use that will in turn impact their health outcomes.

Chapter 4

Methodology

This study utilized a quantitative methodology. The Conceptual Model of Family Stress (CMFS) provided the framework, and helped guide the development of the research questions posed. Specifically, this study evaluated the following queries: (a) Do family caregivers with higher levels resources (e.g., social resources, spiritual resources, religious resources) have stronger mental and physical health outcomes 10 years later? (b) While controlling for social resources, are specific subscales of spiritual and religious resources associated with variance in mental and physical health outcomes? This study used hierarchical linear regression to test a conceptual model that represents constructs of CMFS in order to evaluate changes in caregiver health outcomes over time.

Dataset

This study used a subset of data from the Midlife in the United States Longitudinal Dataset (MIDUS). MIDUS was a national, longitudinal population-level investigation aimed at understanding factors of biological-, psychological-, social-, and spiritual-health that influence outcomes of aging. The original collection of MIDUS I was conducted in 1995/96 by the MacArthur Foundation Research Network; it included 7,108 participants ages 25-74 years old taken from a random national sample using random digit dialing. The National Institute on Aging funded the follow-up in 2004/05, called MIDUS II, which included 4,963 of the original participants ages 35-86 years old. Data collection at follow-up closely repeated baseline assessments. MIDUS II further investigated areas of cognitive functioning, optimism and coping, stressful life events, and caregiving. Participants in MIDUS II took part in a telephone interview (about 30 minutes in length) and completed two self-administered questionnaires (SAQs; each of 54 pages in length). The overall response rate for the SAQs was 81% (Barry, 2014). MIDUS III was the follow-up to MIDUS II; it was conducted in 2013 and included 3,294 of the MIDUS II participants.

Using the MIDUS II and III data, the objective of this analysis was to investigate the impact resources (social resources, spiritual resources, and religious resources) have on long-term caregivers' mental and physical health outcomes.

Sample

For this study, a subsample of MIDUS II and MIDUS III (n = 294) respondents was used. During the phone interviews of MIDUS II, participants identified as actively providing caregiving activities for family members. Participants included indicated still being a caregiver for the same family member 10 years later during MIDUS III data collection (n = 107). Fourteen participants in the MIDUS III follow-up participated in the telephone interview but did not complete the SAQ; therefore they were not included in this analysis (resulting in n = 93). Data from the MIDUS I were not included because the original study did not ask questions pertaining to caregiving responsibilities. A respondent was identified as a caregiver if s/he reported providing personal care to a family member because of a physical or mental condition, illness, or disability. Participants were also assessed extensively on six domains of spirituality and religiosity (e.g., religious support, religious identification, private religious practice, spirituality, spiritual coping, & daily spiritual experiences).

Measures

For the purpose of this study, measures were derived conceptually and in alignment with the CMFS. Each scale used is described below in detail with information from the literature about reliability and validity when available. In order to account for missing data, a minimum of half of the items used to construct each scale were required to be present for inclusion in analysis. Table 1 below provides examples of items that were used within each construct. For a thorough outline of all possible measures that can be derived from the MIDUS study, see: http://midus.wisc.edu/data/index.php.

Social Resources

A respondent's social resources were assessed by using a series of questions that were organized into three constructs (i.e., spousal support, family support, friend support). Six questions explored how supported the respondent felt by his/her spouse or partner: (a) How much does your spouse or partner really care about you?; (b) How much does he or she understand the way you feel about things?; (c) How much does he or she appreciate you?; (d) How much do you rely on him or her for help if you have a serious problem?; (e) How much can you open up to him or her if you need to talk about your worries?; and (f) How much can you relax and be yourself around him or her? Each response was coded on a four-point scale ranging from "a lot" to "none at all". Items were summed and reversed coded for higher scores to reflect more positive spousal support.

The following four questions explored how supported the respondent felt by his/her family: (a) Not including your spouse or partner, how much do members of your family really care about you?; (b) How much do they understand the way you feel about things?; (c) How much can you rely on them for help if you have a serious problem?; and (d) How much can you open up to them if you need to talk about your worries? Each response was coded on a four-point scale from “a lot” to “not at all”. Items were summed and reversed coded for higher scores to reflect more positive family support.

The following four questions explored how supported the respondent felt by his/her friends: (a) How much do your friends really care about you?; (b) How much do they understand the way you feel about things?; (c) How much can you rely on them for help if you have a serious problem?; and (d) How much can you open up to them if you need to talk about your worries? Each response was coded on a four-point scale ranging from “a lot” to “none at all”. Items were summed and reversed coded for higher scores to reflect more positive friend support.

Religious Resources

A respondent’s religious resources were assessed by using a series of questions that were organized into three constructs (i.e., religious support, religious identification, private religious practice). Religious support was assessed with four questions in order to explore how supported the respondent felt by his/her religious congregation: (a) If you were ill, how much would people in your congregation help you out?; (b) If you had a problem or were faced with a difficult situation, how much comfort would people in your congregation be willing to give you?; (c) How often do people in your congregation or spiritual community make too many demands on you?; and (d) How often do people in your congregation or spiritual community criticize you and the things you do? Each response was coded on a four-point scare ranging from “a great deal” to “none”. Items (a) and (b) were reverse coded then summed with (c) and (d). Higher scores reflect more positive support from religious congregation.

The following seven questions explored the degree to which respondents identified with their respective religious ideals: (a) How religious are you?; (b) How important is religion in your life?; (c) How important is it for your children to have religious instruction?; (d) How closely do you identify with being a member of your religious group?; (e) How much do you prefer to be with other people who are the same religion as you?; (f) How important do you think it is for people of your religion to marry other people who are the same religion?; and (g) How important is it for you to celebrate or practice on religious holidays with your family, friends, or members of your religious community? Each response was coded on a four-point scale ranging from “very” to “not at all”. Responses were summed and reversed coded. Higher scores reflected a higher degree of connection and identification to their religious ideals.

Three questions explored respondents’ frequency of private religious practices: (a) How often do you pray in private?; (b) How often do you meditate or chant?; and (c) How often do you read the Bible or other religious literature? Each response was coded on a six-point scale ranging from “once a day or more” to “never”. Responses were summed and reverse coded for higher scores to reflect a higher frequency of private religious practice.

Spiritual Resources

A respondent’s spiritual resources were assessed by using a series of questions that were organized into three constructs (i.e., spirituality, religious/spiritual coping, daily spiritual experiences). Two questions explored the degree to which the respondent identified with being spiritual: (a) How spiritual are you?; and (b) How important is spirituality in your life? Each response was coded on a four-point scale ranging from "very" to "not at all". Responses were summed and reverse coded for higher scores to reflect a stronger identification to spirituality.

Six questions explored the respondent's use of spirituality for coping: (a) I try to make sense of the situation and decided what to do without relying on God; (b) I wonder whether God has abandoned me; (c) I feel God is punishing me for my sins or lack of spirituality; (d) I look to God for strength, support, and guidance. (e) I work together with God as partners; and (f) I think about how my life is part of a larger spiritual force. Each response was coded on a four-point scale ranging from "a great deal" to "none". Responses were summed and reverse coded for higher scores to reflect a stronger sense of coping gained from spirituality.

Five questions explored respondents' frequency of daily spiritual experiences: (a) On a daily basis, how often do you experience a feeling of deep inner peace or harmony?; (b) On a daily basis, how often do you experience a feeling of being deeply moved by the beauty of life?; (c) On a daily basis, how often do you experience a feeling of strong connection to all of life?; (d) On a daily basis, how often do you experience a sense of deep appreciation?; and (e) On a daily basis, how often do you experience a profound sense of caring for others? Each response was coded on a four-point scale ranging from "often" to "never". Responses were summed and reverse coded for higher scores to reflect a higher frequency of daily spiritual experiences.

Mental Health Outcomes

Scales of depressive symptoms, generalized anxiety, and life satisfaction were created for MIDUS I survey to indicate mental health distress based on the Diagnostic and Statistical Manual of Mental Disorders–3rd Edition (American Psychological Association, 1987) and the World Health Organization (WHO) Composite International Diagnostic Interview–Short Form (Diener, Emmons, Larsen, & Griffin, 1985; Kessler, Michelson, & Williams, 1999; Spitzer, Kroenke, Williams, & Lowe, 2006; WHO, 1990).

Depressive symptoms were measured using seven items: During the last 12 months, when you felt sad, blue, or depressed, was there ever a 2-week consecutive time that you (a) lost interest in most things?; (b) felt more tired our or low on energy than usual?; (c) your appetite decreased or increased?; (d) had more trouble falling asleep than usual; (e) had a lot more trouble concentrating than usual?; (f) felt down on yourself, no good, or worthless?; and (g) thought a lot about death? Each response was coded on a two-point scale (1 = yes or 2 = no) to experiencing those symptoms during the reported upon consecutive two weeks in a 12 month period. Total number of "yes" responses were summed and reverse coded for higher scores to reflect less depressive symptoms giving a range of "1" being all symptoms of depression and a value of "8" being no depressive symptoms.

Symptoms of anxiety were measured using ten items: How often over the last 12 months were you (a) restless because of your worry?; (b) keyed up, on edge, or had a lot of nervous energy?; (c) irritable because of your worry?; (d) had trouble falling asleep?; (e) had trouble staying asleep because of your worry?; (f) had trouble keeping your mind on what you were doing?; (g) had trouble remembering things because of your worry?; (h) were low on energy?; (i) tired easily because of your worry?; and (j) had sore or aching muscles because of tension? Each response was coded on a four-point scale ranging from “most days” to “never”. Scores were constructed by taking the total of “most days” responses and reverse coding. A score of “1” indicated a majority of “most days” responses, a score of “4” indicated “no days” of experiencing anxiety symptoms.

Life satisfaction was measured by six items: (a) Using a scale from 0 to 10 where 0 means “the worst possible health” and 10 means “the best possible health,” how would you rate your health these days?; (b) Please think of the work situation you are in now, whether part-time or full-time, paid or unpaid, at home or at a job. Using a scale from 0 to 10 where 0 means “the worst possible work situation” and 10 means “the best possible work situation,” how would you rate your work situation these days?; (c) Using a scale from 0 to 10 where 0 means “the worst possible relationship” and 10 means “the best possible relationship,” how would you rate your overall relationship with your children these days?; (d) Using a scale from 0 to 10 where 0 means “the worst possible marriage or close relationship” and 10 means “the best possible marriage or close relationship,” how would you rate your marriage or close relationship these days?; (e) Using a scale from 0 to 10 where 0 means “the worst possible life overall” and 10 means “the best possible life overall,” how would you rate your life overall these days?; and (f) Using a scale from 0 to 10 where 0 means “the worst possible financial situation” and 10 means “the best possible financial situation,” how would you rate your financial situation these days? Each item was coded from 0 (the worst possible) to 10 (the best possible). Scores were constructed by calculating the mean of the items. Higher scores reflect higher levels of overall life satisfaction.

Physical Health Outcomes

Two assessments of physical health were included in the analysis. First, a global indication of self-rated physical health had respondents ranking their health on a scale from 1 to 5, with “1” representing “poor health”, and “5” representing “excellent health”. Scores were summed and reverse coded in order for a higher number to represent poorer health. Second, respondents reported the number of chronic conditions they experienced in the last 12 months; this score was a continuous variable. A summary score was created between the two measures to create a range of values. A lower total score represented better physical health.

Analytic Strategy

The hypothesized relationships between variables were tested using logistic regression. This method is appropriate when one continuous dependant variable can be predicted from a set of independent variables. For this study, there are two dependent variables (i.e., mental health outcomes, physical health outcomes), and three independent variables (i.e., social support, spiritual support, religious support). In order to answer the research questions for this study, four regression models were created.

Research question #1 aimed to determine if social resources, spiritual resources, and/or religious resources predict variance in mental health outcomes and physical health outcomes ten years later. Two regression models were created to test each predictor variable’s influence on variance of each outcome variable (e.g., Model 1 examined mental health outcomes, Model 2 examined physical health outcomes).

Dependant and independent variables were scored and summed to create a block variable. A range of scores for each block variable reflected low, medium, and high degrees of support and health. For example, within the block variable “Social Support” is three subscales, including family support, friend support, and spousal support. Each subscale has a minimum and maximum range of values (e.g., min = 14, max = 56). Scores reflected a range of support where the values 14-27 represented low social resources, values 28-42 represented moderate social resources, and ranges 43-56 represented high social resources. Table 1 shows the relationship between low, medium, and high scores for each of the block variables.

Table 1

Range of Scores for Block Variables Representing Low, Moderate, and High Degree of Severity/Impact

Block Variable	Subscales	Range of Scores	Degree of Impact			Interpretation
			Low	Moderate	High	
Social Resources	*1: Spousal Support 2: Family Support 3: Friend Support*	14-56	14-27	28-42	43-56	High scores reflect more positive social support
Religious Resources	*1: Religious Support 2: Religious Identification 3: Private Religious Practice*	14-62	14-29	30-46	47-62	High scores reflect more positive support from religious resources
Spiritual Resources	*1: Spirituality 2: Spiritual Coping 3: Daily Spiritual Experiences*	13-52	13-25	26-39	40-52	Higher scores reflect a higher degree of spirituality
Mental Health Outcomes	*1: Depression 2: Anxiety 3: Life Satisfaction*	3-22	3-9	10-15	16-22	High scores reflect stronger mental health (i.e., less mental health symptoms)
Physical Health Outcomes	*1: Self-Rated Physical Health 2: Number of Chronic Conditions*	1-NA	NA	NA	NA	Range of continuous variables where "1" represents excellent physical health

Research question #2 aimed to identify the subscale within spiritual resources (i.e., spirituality, spiritual coping, daily spiritual experiences) and religious resources (i.e., religious support, religious identification, private religious practice) that most reliably associate with stronger mental health and physical health while controlling for social resources. Two regression models were created–consistent with the previous models–where Model 3 tested for associations to mental health outcomes and Model 4 tested for associations to physical health outcomes. For these models, the full range of scores were used within each subscale in order to predict variance in the outcome variables.

Chapter 5

Results

Demographics

Table 2 summarizes demographic information of the caregiver sample. Respondents had a mean age of 69 years (born in 1948); approximately 80% were women (n = 74); White (n = 85, 91%); employed part time (n = 63, 43%); married (n = 64, 69%); and had at least some college education (n = 31, 33%). Caregivers gave on average 20 hours per week of care to their care recipient, and over half of the care recipients lived with the caregivers (n = 49, 53%). Forty-five percent of caregivers (n = 42) spent their time performing ADLs such as bathing, dressing, and physical assistance, while 62% (n = 58) performed IADLs such as medication management and transportation needs.

Table 2

Demographic Information of Sample (n = 93)

Variable	Mean	Percent
Respondents Year of Birth	1948 ($\pm$10)	
Respondent Gender		
Male	19	20.4%
Female	74	79.6%
Race/Ethnicity		
Caucasian	85	91.4%
African American	3	3.2%
Native American	2	2.2%
Other	3	3.2%
Current Employment Status (Full Time)		
Yes	40	43%
No	53	57%
Marital Status		
Married	64	68.8%
Divorced	13	14.0%

Widowed	7	7.5%
Education		
< High School	4	4.3%
High School	20	21%
Some College	31	33.3%
4 Year Degree	19	20.4%
Masters or Professional	13	14%
Hours Per Week of Giving Care		
~20	43	51.8%
20-40	20	24%
40-60	6	7.2%
>60	14	16.8%
Care Recipient Living in Household		
Yes	49	52.7%
No	36	38.8%
Some of the Time	8	8.6%
Caregiving Tasks		
ADL (Activities of Daily Living)	42	45.2%
IADL (Instrumental Activities of Daily Living)	58	62.4%

Summary of Respondents' Resources, Mental Health and Physical Health

Table 3 summarizes the mean range of scores for each of the outcome and predictor variables included in the analysis. Scores for caregiver mental health were based on a range of 3-22; higher scores reflected less depressive symptoms. Mean scores for caregivers in this sample were 17. Scores for caregiver physical health were based on a continuous range of scores. A score of 1 reflected excellent physical health; the mean score for this sample was 7 with a range of 1-21. Caregivers' social resources, spiritual resources, and religious resources all scored on the initial edge of the high range, indicating the presence of high levels of support on all constructs.

Table 3

Descriptive Statistics for Respondents' Degree of Social Resources, Spiritual Resources, and Religious Resource, Mental Health Outcomes, and Physical Health Outcomes

Variable	Mean	Range (low to high)	Interpretation
C1MHLTH (Caregiver Mental Health)	17	3-22	High: stronger mental health, less depressive symptoms
C1PHLTH (Caregiver Physical Health)	7	1-16	Moderate: A moderate amount of physical health symptoms
Social Resources	52	14-56	High = more positive social support
Spousal Support	23		
Family Support	15		
Friend Support	14		
Spiritual Resources	45	13-52	High = higher degree of spirituality
Spirituality	8		
Daily Spiritual Experiences	16		
Spiritual Coping	21		
Religious Resources	48	14-62	High = more positive religious support
Private Religious Practice	12		
Religious Support	15		
Religious Identification	21		

Impact of Social Resources, Spiritual Resources, and Religious Resources on Caregivers' Physical Health Outcomes

Table 4 explains that age and gender accounted for significant variance when added to all models. When controlling for age and gender, the three block resource variables together (i.e., social resource, spiritual resource, religious resource) do not predict any variance in physical health ($F(3,78) = 1.974$, $p < .042$) with an R^2 of .218.

Table 4

Output for Hierarchical Linear Regression #1: Controlling for Year of Birth and Gender: Impact of Social Resources, Spiritual Resources, and Religious Resources on Caregiver Physical Health Outcomes

Variables	Model 1	Model 2	Model 3	Model 4
Control Variables				
Year of birth	-.094 (.034)**	-.083 (.036)	-.087 (.037)	-.076 (.039)
Gender	2.37 (.845)**	2.57 (.885)	2.81 (.917)	2.931 (.929)
Social Resources				
Spousal Support		.000 (.001)	.000 (.001)	.000 (.001)
Family Support		.201 (.188)	.175 (.190)	.184 (.194)
Friend Support		-.147 (.168)	-.063 (.184)	-.172 (.200)
Spiritual Resources				
Spirituality			-.195 (.345)	-.278 (.385)
Spiritual Coping			-.093 (.128)	-.068 (.134)
Daily Spiritual Experiences			.033 (.150)	.068 (.153)
Religious Resources				
Religious Support				.001 (.001)
Religious Identification				.013 (.105)
Private Religious Practices				-.004 (.004)
R^2	.159	.175	.196	.218
F-change (df1,df2)	8.227(2,87)	.536 (3,84)	.717 (3,81)	.719 (3,78)

* $p < .05$
** $p < .001$

Impact of Social Resources, Spiritual Resources, and Religious Resources on Caregivers' Mental Health Outcomes

Table 5 shows that social resources and spiritual resources did not explain variance in mental health outcomes. However, in the final model, when religious resources were added, together it explained a significant amount of variance in the outcome variable. Having higher levels of religious resources is associated with better mental health outcomes ($F(3,78) = 3.435$, $p < .001$) with an R^2 of .326.

Table 5

Output for Hierarchical Linear Regression #2: Controlling for Year of Birth and Gender: Impact of Social Resources, Spiritual Resources, and Religious Resources on Caregiver Mental Health Outcomes

Variables	Model 1	Model 2	Model 3	Model 4
Control Variables				
Year of birth	-.028 (.039)	-.013 (.039)	-.014 (.040)	.007 (.038)
Gender	-.894 (.954)	-.955 (.956)	-.703 (.991)	-.357 (.902)
Social Resources				
Spousal Support		.000 (.001)	.000 (.001)	.000 (.001)
Family Support		.623 (.203)	.587 (.206)	.688 (.188)
Friend Support		.001 (.182)	.064 (.199)	-.229 (.194)
Spiritual Resources				
Spirituality			-.261 (.373)	-.201 (.374)
Spiritual Coping			-.092 (.138)	-.041 (.130)
Daily Spiritual Experiences			.110 (.162)	.162 (.149)
Religious Resources				
Religious Support				.001 (.001)**
Religious Identification				.056 (.102)**
Private Religious Practices				-.016 (.004)**
R^2	.015	.119	.143	.326
F-change (df1,df2)	.644(2,87)	3.313 (3,84)	.756 (3,81)	7.082 (3,78)

* p < .05
** p < .001

Impact of Sub-Scales within Religious Resources on Caregivers' Mental Health Outcomes

Because the constructs of religious resources showed significant variance on mental health outcomes, an additional linear regression was run. This additional linear regression determined if any subscales within the constructs (i.e., religious support, religious identification, private religious practice) showed variance in the mental health outcome variable. Religious support was entered as a composite score for its four items due to multicolinearity. Table 6 shows that when subscale items of Private Religious Practices were add to the final model, all three (pray in private, mediate or chant, read the Bible) showed significant variance in the outcome variable mental health (F(3,7, p = < .002) with a R^2 of .315.

Table 6

Output for Hierarchical Linear Regression #3: Controlling for Age and Gender: Impact of Sub-Scales within Religious Resources (i.e., Religious Support, Religious Identification, Private Religious Practice) on Caregiver Mental Health Outcomes

Variables	Model 1	Model 2	Model 3	Model 4
Year of birth	-.938 (.957)	-.948 (.966)	-.664 (.970)	-.044 (.938)
Gender	-.025 (.038)	-.024 (.039)	-.014 (.039)	-.013 (.038)
Religious Support				
Composite religious support		.000 (.001)	.000 (.001)	.000 (.001)
Religious Identification				
How religious are you			-1.317 (.564)	-1.294 (.552)
How important religion in your life			.002 (.003)	.001 (.002)
Religious instruction important for children			.797 (.514)	.647 (.482)
Identify with your religious group			.318 (.624)	-.204 (.597)
Prefer people of same religion			.572 (.591)	.704 (.544)
Important to marry same religion			-.349 (.439)	-.268 (.407)
Important to celebrate with religious community			-.010 (.004)	-.011 (.004)
Private Religious Practice				
Pray in private				.453 (.327)*
Meditate or chant				-.003 (.004)*
Read Bible or religious literature				-.010 (.005)*
R^2	.014	.114	.153	.315
F-change (df1,df2)	.6464 (2,90)	.021 (1,89)	1.911 (7,82)	6.253 (3,79)

* p < .05
** p < .001

Summary of Results

The constructs of resources in this study (e.g., social resources, spiritual resources, religious resources) did not predict variance in physical health outcomes for caregivers. One of the resources constructs (i.e., religious resources) predicted variance in mental health outcomes. Further analysis explored the subscales of religious resources (e.g., religious support, religious identification, private religious practice) and found private religious practice to predict variance in respondents' mental health. A final regression model revealed that all three subscales within private religious practice (e.g., pray in private, meditate/chant, read the Bible and/or other religious literature) significantly predicted variance in mental health outcomes. This study confirmed a predictive model indicating that long-term family caregivers who pray in private, meditate or chant, and/or read the Bible and/or other religious literature will have less reported symptoms of depression, less reported symptoms of anxiety, and have higher reported quality of life.

Chapter 6

Discussion

This dissertation built upon calls from previous research to include multiple measures known to influence caregivers' mental and physical health. An individual's availability of, and accessibility to, resources (e.g., social support, attending church) has been shown to mediate poor mental and physical health in caregiving samples (Iskender, 2009; Lopez et al., 2012). This study separated caregiver resources into three distinct categories (e.g., social resources, spiritual resources, and religious resources). It tested the three categories of resources and their association to caregivers' mental health and physical health outcomes. Two primary hypothesis were evaluated: (a) Do long-term family caregivers with higher levels of resources (e.g., social resources, spiritual resources, religious resources) have stronger mental and physical health outcomes 10 years later?; and (b) Are specific subscales of religious resources and spiritual resources associated with variance in mental and physical health outcomes?

The subsample of caregivers in this study were approximately 15 years older than representative studies, but matched much of what is known demographically about caregivers (i.e., they are women, educated, living with the care recipient, and spend around 20 hours per week providing care). Overall, this sample of caregivers had moderately good physical health, had good mental health, and had strong resources across all three domains (e.g., social, spiritual, religious). Caregiving tasks were close to equally represented with 45% caregivers providing majority ADLs and 62% providing IADLs. Based on these results, this study did not show variance in outcomes based on what other studies have shown to be a strong predictor to mental and physical health outcomes. Few studies have examined caregivers' health outcomes longitudinally. Length of time in the role of caregiver may be one potential explanation for the overall health of this sample. The longer one is a caregiver could potentially mean that the illness they are caring for may not be as severe, therefore lessening the overall stress to the caregiver. It may also be an indication of the caregivers' adaptation process(es). The use of secondary data for this study did not allow for additional time points to explore any changes that may have occurred in the predictor and outcome variables during the 10-year time span. This study also did not compare outcomes from Time 1 to Time 2; doing so may have allowed for a more detailed description of the influence predictor variables had on outcome variables over time, and the overall health of the sample at the first data collection point. Since this sample of caregivers ranked high on spiritual and religious resources, and had relatively good health, results do lend support to existing literature that states spiritual and religious people have better health.

The results of this study's two main hypothesis were partially supported. First, it was expected that one or all resource constructs (e.g., social resources, spiritual resources, religious resources) would have impacted variance in mental and physical health outcomes. The results of this study revealed that resources have no impact on the variance in physical health outcomes. However, resources did have an impact on mental health outcomes. More specifically, religious resources predicted variance in caregiver mental health outcomes. Since there were no statistically significant associations between resources and caregiver physical health, no further analysis including physical health outcomes variable was conducted. The study's second hypothesis was supported in that specific subscales within spiritual resources and/or religious resources predicted variance in outcome variables. More specifically, all three subscales within private religious practice (e.g., pray in private, meditate/chant, read the Bible) predicted variance in caregivers' mental health outcomes.

The creation of categories in this study followed previous research using the MIDUS dataset. Private religious practice could also be termed "personal spiritual practice" insofar as the variables within this construct explore what one does in private to practice religion (e.g., pray), as well as what one does in private to practice spirituality (e.g., meditate). The demonstration that personal spiritual practice is associated with variance in caregivers' mental health is partially supported by previous research (Iskender, 2009; Lopez et al., 2012). However, demonstrating that religious support (e.g., caring congregation, support by people of similar ideals) and religious identification (e.g., strong association to a particular religion, religion's high importance in a person's life) do not impact mental health is a unique result. The mechanism most frequently associated with good mental health is attendance at religious ceremonies, such as attendance at a service with a congregation of peers (Li, Stampfer, Williams, & VanderWeele, 2016). These results are contrasting with what is known by saying that what one does to practice religion and/or spirituality in private is more strongly associated with better mental health outcomes for long-term caregivers.

This author anticipated results to support spiritual resources over religious resources as a predictor to good mental and physical health. However, results from this study did not support that hypothesis. A possible explanation may have to do with the mean age of the sample. Spirituality and its concepts have been more recently adopted by younger generations, whereas individuals 65 years and older tend to identify closer with religiosity (Hebert, Weinstein, Martire, & Schulz, 2006). Another explanation could be that many studies exploring the relationship between constructs of spirituality and religion show mixed or no association to measures of well-being. It has been frequently cited that measures of spirituality and religiosity are too heterogeneous and lack specificity; therefore results are confounded by other potential factors (e.g., mental health, length of beliefs held, change in religion, loss of faith) (Bonelli & Koenig, 2013; Greenfield, Vaillant, & Marks, 2009; Koenig, 2008; Tsuang, Simpson, Tsuang, & Simpson, 2008). Implications for future research are discussed below.

Research Implications

Findings from this study continue to support suggestions for measures of spirituality and religion to be distinguished during research conceptualization, measurement, and reporting. They also support the suggestion that theory be included in the testing of concepts, as spirituality and religion are multi-dimensional in nature and would offer stronger associations to their similarities and differences (Hill & Pargament, 2003). For example, in this study, assessments for "use of daily prayer" could be further enhanced by assessing what type of prayer, from which faith background, done at what time of day, and under what circumstances. By doing so distinguishable mechanisms of impact can be further studied in subsequent exploration. Picot, Debanne, Namazi, and Wykle (1997) demonstrated that spirituality and religion's association to well-being differed when participants stated they participated in religious service, found comfort in church attendance, and used prayer. In other studies these constructs have been subsumed under one measure of "religiosity". Further purposeful distinction will only enhance the fund of knowledge currently present on this topic and help to inform clinical practice toward enhancing caregiver health.

Clinical Implications

This study has interesting implications for the design of interventions with caregivers. Although it did not support spiritual resources' association to stronger health outcomes, clinical implications can still be drawn that are born through the BPSS and CMFS models. As mentioned previously, research using constructs of spirituality/religion have been confounded by lack of distinction in measures. The BPSS Model itself does not specifically call out the difference between spirituality and religion in its constructs. Using the two frameworks that guided conceptualization of this study (CMFS and BPSS), design of clinical interventions encourages a focus on prevention care. Medical and mental health clinicians working with caregivers are encouraged to (a) assess for all types of resources present, and (b) assess for degree or use of spirituality and religion. Identifying and enhancing caregiver resources could impact caregiver mental health, as well as physical health outcomes. As previously mentioned, results from this study supported what one does in private (e.g., pray, meditate, read religious/spiritual literature) has an impact on mental health outcomes. In a clinical sense, this could be referred to "personal spiritual practice", thus lending itself useful for inclusion in a BPSS informed clinical assessment and clinical conversation tool. A handful of tools exist to help providers conduct a spiritual/religious history; the two most cited are the FICA Spiritual History Tool (Lucchetti, Bassi, & Lucchetti, 2013; Puchalski & Romer, 2000) and HOPE questions (Saguil & Phelps, 2012). In addition to use of validated instruments in a clinical conversation is the inclusion of inquiry about “meaning making”. For example, if a clinician is unsure about how to weave spirituality and religion into a clinical conversation, s/he could ask “How do you understand how your illness came to be?”; “What does it mean for you to no longer have perfect health?”. These subtleties can help to facilitate an opening conversation about spirituality, religion, and the beliefs one has attached to their experience.

A final clinical point to be made has to do with the adage of “provider, know thyself”. Research shows that when providers are asked to identify barriers to assessment of spirituality and religion, lack of time (71%) and lack of experience (59%) are cited as the main reasons (Cayley, 2015; Culatto & Summerton, 2015; Ellis, Vinson, & Ewigman, 1999). Varying views from providers’ own spiritual and religious beliefs may lead to a hesitancy or refusal to advance assessment. Scholars on the topic have suggested that it may even be ethically inappropriate to address religion and/or spirituality when clinicians and patients differ in their respective belief systems (Larimore, 2001; Weaver & Koenig, 2006). One system change that may propel the inclusion of assessment is the recommendation from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). This organization maintains that “physicians, therapists, nurses, and clinical pastoral staff should receive training on the value of spiritual assessment and the tools that should be used to assess a patient’s spirituality” and “requires organizations to include a spiritual assessment as part of the overall assessment of a patient to determine how the patient’s spiritual outlook can affect his or her care, treatment, and services” (JCAHO, 2005, p. 6). It is the provider who is responsible for doing these initial screeners. If spiritual needs are discovered, a referral to pastoral care can be made to further address needs.

Limitations

This study has several limitations that are important to consider, as they may provide opportunities (when acted upon) for future research. First, the majority of the respondents in this subsample were Caucasian women. Data collection of MIDUS II and III also corresponded with data collection of the Milwaukee Study. The Milwaukee Study added refinements to MIDUS II and III data collection that included an African American subsample (n = 592). Thus, the sample for this dissertation was homogenous and lacked diversity. Since this sample was primarily White and primarily women, future studies should prioritize the exploration of diversity with inclusion of ethnic minorities and gender. The lack of ethnic and cultural variance may have had an impact on the results. Homogeneity in the sample did not allow for concepts such as filial piety and collectivistic caregiving rituals to be discussed. A largely female sample could have also impacted the results, as females are more likely to participate in studies, potentially over report mental health outcomes, and have stronger levels of social connectedness – all for which should be considered limitations of this study.

Small sample size, self-report measures, and caregiver type also posed limitations on this study. Although partial support was found for the hypotheses, the sample size is relatively small and represents only a very small proportion of the entire MIDUS II sample. Because of the small sample size, it was not possible to determine whether the predictor variables independently influence the validity results. Due to the self-report nature of the data, associations among social resources, spiritual resources, and religious resources and health outcomes are vulnerable to inflation. Also, this research examined only one type of caregiver (e.g., long term caregivers). Caregiver outcomes vary in the research by influencing factors such as type of illness, relationship to care recipient, access to healthcare, and ethnicity to name a few. The study was also unable to discern pre-existing health conditions of the caregivers or change to mental and physical health between the two data collection points. The MIDUS dataset also did not allow for distinguishing the type of physical illness(es) the caregivers reported. Therefore, it remains unclear if caregivers' own type of illness influences predictor and outcomes variables in this study. For example, if a caregiver was diagnosed with Multiple Sclerosis in the middle of the duration of their caregiving role, they may lean on spiritual/religious support more than other disease types due to the unknown, progressive nature of the disease.

Next, while the measures used to assess mental health (e.g., depression, anxiety) were valid and reliable, they are also outdated. They were consistent with the DSM-III, which corresponds to the time frame during which data for MIDUS I were collected. Future studies should use current and up-to-date measures to assess mental health diagnosis in order for valid comparisons to be drawn across studies (e.g., PHQ-9, GAD-7). Physical health was measured by the creation of one composite score that consisted of a global self-rated perception of physical health and a sum score of the number of chronic conditions. Since the primary physical health outcome was collected via self-report, future research should incorporate objective mental and physical health outcomes, such as the International Classification of Diseases, Tenth Revision, Clinical Modification codes (ICD-10-CM).

Lastly, one strength of this study (e.g., longitudinal design) is also a limitation. With only two time points of data collection spanning 10 years, it is a challenge to capture the fluctuating patterns of stress and recovery that come with being a caregiver. It is also unclear how the trajectory changes for caregivers' use of, discontinuation of, and/or restarts of their spiritual/religious practices. Two data points also do not allow for the respondents to note if and when predictor and outcome variables have changed. For example, acute crisis may occur when a caregiver is providing a higher volume and intensity of care. Utilization of resources during acute periods may vary. This variance may in turn impact caregivers' mental and physical health for a certain period of time. Over time, long-term caregivers will return to homeostasis. Waxing and waning in outcomes for the caregiver–along with their levels of reported resources–may change quite a bit over a 10-year time span. Wright (2017) notes that in the instances of long-term stress and suffering, many individuals return to renew their faith as a means of coping. This study did not compare change in levels of spirituality or religion; therefore, this type of association was unable to be established. Future research should include data collection points that are more frequent in order to assess for variability and fluctuations in care demands.

Conclusion

Despite these limitations, this study builds upon previous research by demonstrating a longitudinal association with caregivers' private religious practices and their mental health. The link between caregiver biological, psychological, social, and spiritual factors and their spiritual/religious resources is pivotal in connecting theory to research in understand mental and physical health outcomes for long term family caregivers. This study specifically illuminates directions for future research on the topic of spirituality/religion and caregiving for a chronic illness. It also supports the need for specificity and purposeful inclusion of measures that delineate spirituality and religion, not as mutually exclusive of one another, but as a relational interplay that is dynamic over time. As research on this topic continues to grow, so too will the clinical application. Healthcare practitioners and policy makers will be able to apply concepts presented in this, and future, research supporting the clinical inclusion of relationship based screening for family caregivers of chronic illness. What was once considered to be a topic that was too private or taboo to ask (e.g., what are your spiritual beliefs, how do you think religion impacts your coping) may hold the key to unlocking potential healing and health benefits that science has yet to understand.

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