 THE RELATIONSHIP BETWEEN PRIVATE PRAYER AND RESILIENCY AMONG ALZHEIMER’S CAREGIVERS

by

SCOTT EDDIE WILKS

(Under the Direction of B. Elizabeth Vonk)

ABSTRACT

The purpose of the study was to understand the influence of private prayer, used as a coping method to caregiving burden, as a factor of resiliency among Alzheimer’s caregivers. A cross-sectional research design was employed, surveying a sample of Alzheimer’s caregivers (N=304) who attended caregiver support groups in the southeastern United States. Questionnaire items empirically measured a number of constructs, including perceived burden; use of private prayer as a coping method; frequency and importance of prayer; and perceived resiliency. Demographic characteristics of the sample were reported. Regression analysis evaluated the relationship between prayer and resiliency, controlling for demographic factors. Over three-fourths of the sample reported a high frequency of private prayer, and over 90% of those who prayed indicated importance to four general types of prayer. As hypothesized, results indicated a strong association and positive, significant relationship between the extent of prayer usage as a method of coping, and resiliency. Implications for social work practice and education are discussed.

INDEX WORDS: Alzheimer’s disease, caregiver, prayer, resiliency, social work
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DEDICATION

This dissertation is dedicated to my wife. Thank you, Sadie, for your unwavering love. Throughout my academic journey, you have exemplified the true meanings of support and encouragement. Witnessing your unselfish commitment to our life together, I can sincerely avow that this achievement is as much yours as it is mine.
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CHAPTER 1
INTRODUCTION

I knew it was going to be a good day when she squeezed my arm in the morning . . . She would put a fresh gown on me and brush my hair with such tenderness and patience . . . You can’t imagine how much it meant to me, there in that strange place . . . to be touched like that. — Wendy Lustbader, referring to an Alzheimer’s caregiver (Fazio, Seman, & Stansell, 1999)

The burden of caring for a loved one with Alzheimer’s disease (AD) is well-documented (Gwyther, 1990; Patterson & Whitehouse, 1990). Legal questions may need to be resolved, such as who should handle the care recipient’s finances or to what extent the care recipient is competent in decision making. There is the financial burden of caring for a relative with dementia. Social and emotional burdens often loom larger than financial ones. Emotional challenges include difficulty of taking control over many aspects of the care recipient’s life, and disagreements among other family members and friends regarding methods of care. Most caregivers report less time and privacy. Balancing time, effort, finances, and emotional commitment to the care recipient and other family and friends can be problematic to the caregiver’s physical health. The response to caregiving demands “requires adaptation but does not, ipso facto, lead to stress or family pathology . . . What is most remarkable in research literature is the evidence of strength and resourcefulness in responding to caregiving, often with little outside help” (Gwyther, 1990, p. 202).
The current study investigates the resiliency among AD caregivers by examining a commonly reported coping method, prayer, and its potential influence on their perception of resiliency. Findings of this research study may heighten awareness among social work practitioners and educators regarding the relevance of the caregiver’s coping strategy of private prayer, and, more specifically, its relevance as a protective factor of resiliency.

Resiliency is a familiar term used in English to describe the ability to bounce back. As a social research construct, it has been defined as overcoming the odds, adapting to high risk, and recovering from adversity by adjusting successfully to negative life events (Fraser, Richman, & Galinsky, 1999). Resiliency is a phenomenon that only recently has been emphasized in the context of scholarly research in social work and other human service professions, underscored mainly from studies conducted with children “at-risk” (Greene, 2002a; Werner & Smith, 1982). Emerging three decades ago, the focus in resiliency research centered on risk factors, or “conditions that increase the likelihood that a child will develop a problem” (Greene, p. 4). Later, prominent resiliency theorists such as Rutter (1987), Garmezy (1983), and Wolin and Wolin (1993) transformed the traditional dysfunctional or damage model of resiliency into a challenge model that emphasizes positive internal and environmental characteristics and self-protective behaviors (Greene, p. 8). In other words, research on resiliency advanced from a theoretical stance of risk and maladjustment, to a perspective of competence, productivity, and maintenance of healthy functioning (Greene & Conrad, 2002). A more detailed discussion of this paradigm shift is noted in the review of literature.

Around the same period of the aforementioned paradigm shift in resiliency, the strengths perspective rose to prominence in the social work profession, around the late 1980s and early 1990s. The strengths perspective underwent a similar paradigm transformation, as researchers
shifted the focus from reducing risk to promoting the client’s unique traits, talents and resources, i.e., strengths (Greene, 2002a, pp. 14-17). It may be easy to confuse the perspectives of strengths and resiliency, as social work researchers have often intermingled the two (e.g., Early & GlenMaye, 2000; Saleebey, 1997). Both perspectives avoid the emphasis of pathology or dysfunction in understanding and assessing the client. Both perspectives acknowledge the ecological, multisystemic influence – resources for the individual stemming from internal characteristics as well as environmental opportunities. Yet there is a distinction between the two perspectives, most evident in a linear sense. The strengths tradition encourages the practitioner to identify and promote the biopsychosocial resources that can contribute to the client’s growth and well-being (Greene & Conrad, 2002, p. 16). Resiliency extends beyond the idea of strengths (Greene & Conrad, p. 32). Recognizing the biopsychosocial resources as ‘protective factors,’ resiliency is the self-righting tendency enabled by said factors that allow the individual to respond to adversity successfully in the form of maintenance or normal development (Grotberg, 1999; Werner & Smith, 1992). Further analysis of the strengths perspective, protective factors, and resiliency is featured in the literature review.

Beyond the biopsychosocial features of resiliency, recent research has paid additional attention to the spiritual component of resiliency. In identifying the numerous individual and social characteristics of resilient children, Greene and Conrad (2002) included the spiritual elements of hope, faith, belief in God, and morality. Canda and Furman (1999) analogized the adaptive and transformational aspects of religion to the adaptive component of resiliency. Researchers have documented the interrelatedness of spirituality and resiliency among individuals, e.g., a child coping with parental death (Angell, Dennis, & Dumain, 1998), as well
as among groups and communities, e.g., African American communities coping with church burnings (Carter, 1999). As Williams (2002, p. 205) stated, 

. . . the development of resiliency is reportedly tied to the ability to have hope and find reassurance in the face of distress. For many people, this support and nurturance can be found within an organized spiritual community or within a personal relationship with a [H]igher [P]ower. (p. 205)

The research topic of spirituality and resiliency appears to be gaining popularity in recent years. There is a dearth of empirical research in social work literature, however, regarding a more concentrated understanding of spirituality, in terms of explicit spiritual expression or practice such as prayer, and its relationship to resiliency. Data from empirical and qualitative studies of caregivers (e.g., Levkoff, Levey, & Weitzman, 1999; Stolley, Buckwalter, & Koenig, 1999) have shown the practice of prayer as a successful coping strategy for caregiving burden. Yet coping, per se, is not resiliency, but rather, leads to resiliency: “Coping strategies are generally intended to help a person gain more control over a situation and experience a greater sense of competence” (Masten, 1994, as cited in Riley, 2002, p. 180). Further distinction between coping and resiliency is noted later. If prayer is a commonly reported coping strategy among caregivers, and coping influences resiliency, then is prayer related to resiliency? The current study moves beyond the recognition of prayer as a coping strategy and attempts to understand the nature of prayer as related to the overall level of resiliency.

The appropriateness of the caregiver population, from which the study’s sample was drawn, hinged upon two broad criteria. First, adversity must be present among this population. Leading adaptation and resiliency theorist Ann Masten and colleagues (1999; Masten, Best & Garmezy, 1990) argued that if there is no adversity, then resiliency cannot be demonstrated. As
covered in the literature review, the issue of adversity among AD caregivers, e.g., caregiving burden, is certain. The attendance of caregiver support groups by the study’s participants further demonstrated the existence of adversity. Second, there must be an element of prayer commonly practiced among this population. Caregivers have commonly reported the use of prayer as a frequent technique of coping with caregiving burden (National Alliance for Caregiving & American Association of Retired Persons [NAC/AARP], 1997; Stolley et al., 1999).

A more complete review of Alzheimer’s disease and AD caregivers is presented in Chapter Two.

There are several implications of the present study to social work practice. Approximately four million individuals in the United States are diagnosed with Alzheimer’s disease (American Geriatrics Society [AGS], 2001). This study adds to the current knowledge base of those that care for this growing population, particularly in terms of demographic characteristics, frequency and perceived importance of prayer, and self-perception of resiliency. Resiliency theorists and social work practitioners share the same understanding of internal and external resources that enables the individual to overcome adversity. The spiritual resource under scrutiny is prayer. The current study is an important first step in going beyond the traditional perspective of prayer as a coping mechanism, and determining whether the caregiver’s use of private prayer serves as a protective factor, or correlate (Greene & Conrad, 2002), to resiliency. Such a determination would be valuable to the social work assessment process, which includes the evaluation of a client’s coping capacity and exploration of internal and external assets (Greene & Livingston, 2002). If social workers understand what protective factors foster resiliency, then they can develop interventions with more attention being given to awareness and promotion of said factors (Greene & Livingston, p. 81). Masten (1994) summarized the overall importance of resiliency research to social work practice:
The rationale for examining resilience phenomena rests on the fundamental assumption that understanding how individuals overcome challenges to development and recover from trauma will reveal processes of adaptation that can guide intervention efforts with others at risk . . . When adversity is relieved and basic human needs are restored, then resilience has a chance to emerge. Rekindling hope may be an important spark for resilience processes to begin their restorative work. (p. 8)

In a preliminary attempt to examine the practice of prayer as a protective factor, the current study explores the empirical relationship between private prayer and resiliency among Alzheimer’s caregivers. Guided by a conceptual model (McCubbin & McCubbin, 1993) that emphasizes individual demand, factors of resiliency, and the outcome of resiliency, the purpose of this investigation was to understand the following: degree of burden, or demand, among AD caregivers; perceived importance and practice of prayer as a coping response to burden; level of resiliency among AD caregivers; and the influence of prayer, if any, on the caregiver’s perception of resiliency.
CHAPTER 2

REVIEW OF LITERATURE

The primary variables of interest in the current study are prayer and resiliency. Thus, the review of literature centers predominantly on these two concepts as they relate to the study’s population, AD caregivers. Because the process of prayer is a particular behavioral aspect of spirituality, attention will be paid to the relevance of spirituality and prayer among AD caregivers, including theoretical explication of the concepts and the use of spirituality/prayer as sources of strength and coping in times of burden. Following such, the review segues into a discussion of the study’s other central concept, resiliency, noting its recent historical rise as a research concept in human service literature; its modern paradigm shift from deficit-related to strengths-focused; and its relationship with spirituality and prayer among caregivers. The review concludes with discussion of the conceptual model, involving the aforementioned primary concepts, utilized as the basis for the current exploratory study.

As AD caregivers are the population of interest for the present study, we begin by briefly examining Alzheimer’s disease, including its symptoms, its effects on those suffering with the illness, and the often intense burden placed on caregivers, along with their common strategies of coping with this burden.

Alzheimer’s Disease

Experiencing Alzheimer’s

Before going into detail about Alzheimer’s disease and its symptoms, the terms dementia and Alzheimer’s disease should be clarified. Dementia is not a disease itself, but rather, a group
of symptoms that may accompany certain diseases or conditions (Cleveland Clinic Health System [CCHS], 2003). According to the World Health Organization (WHO, 1992), dementia is symptomatic of a disease of the brain, usually of a chronic or progressive nature in which there is disturbance of multiple higher cortical function including memory, thinking, orientation, comprehension, calculation, language and judgment. Consciousness is not clouded. The impairments of cognitive function are commonly accompanied, and occasionally preceded by deterioration in emotional control, social behaviour or motivation. (p. 1)

The most common causes of dementia include degenerative neurological diseases, vascular disorders, infections affecting the central nervous system, chronic drug use, and depression. Dementia is irreversible when caused by disease or injury, but may be reversible when caused by drugs, vitamin imbalances, or depression (CCHS, 2003). Types of dementia include Creutzfeldt-Jakob disease, Huntington’s disease, Pick’s disease, multi-infarct dementia, Acquired Immunodeficiency Syndrome (AIDS) dementia complex, and Alzheimer’s disease.

Until the turn of the 20th century, persons over the age of 65 who exhibited severe memory loss were diagnosed with Alzheimer’s disease and described as having senile dementia; those younger than 65, but still deemed older adults, pre-senile dementia (Cutler & Sramek, 1996, p. xi). In 1907, Alois Alzheimer reported the case of a 51-year-old woman with progressive memory impairment, psychotic symptoms and behavioral disturbance (Brown & Hillam, 2004). At postmortem, her brain showed signs of cerebrovascular disease at a younger age than originally presumed, leading neurologists to conclude that senile dementia could no longer be ascribed simply to the effects of aging (Brown & Hillam, p. 135). Thus, pre-senile and senile forms of the disease could not be reliably differentiated. Thus, the term Alzheimer’s
disease (AD) became used regardless of the individual’s age. AD is a degenerative neurological disorder and is the most common cause of dementia in the Western world, accounting for 50 – 70% of all dementia (Brown & Hillam, 2004; Cutler & Sramek, p. xi). There is no clear single cause of AD (National Institute on Aging [NIA], 2003a). It is likely the result of a combination of interrelated factors, including genetics, which are passed along family lines of inheritance, and environmental influences, which range from previous head trauma to educational level to one's experiences early in life.

Minor memory loss is a normal part of aging and is not cause for concern. Distinguishing normal memory loss from dementia is mostly a matter of evaluating the impact, and consistency of such, on normal functioning (Cutler & Sramek, 1996, p. x). Normal memory loss is associated with occasional forgetting, and can be compensated by writing reminder notes, increased intensity in planning, allowing more time for remembering, etc. On the other hand, memory loss associated with Alzheimer’s or other dementias is progressive, “interfering more and more with normal daily activities as time goes by” (pp. x-xi).

The first signs of AD include difficulty in remembering recent events and recently acquired information, and performing familiar, everyday activities (Brown & Hillam, 2004; Cutler & Sramek, 1996). Long term, or autobiographical, memory is usually preserved in the initial stages. The individual with early stages of AD can become less articulate and fluent. The skill required to engage in more complex motor activities, particularly those that are not part of a daily routine, will be impaired. The individual often loses motivation, initiative, or confidence to perform a daily activity that was previously familiar; as a result, quite often the onset of AD can be mistaken for depression (Brown & Hillam, 2004).
As the disease progresses in the middle phase, the affected person may experience confusion, personality and behavior changes, impaired judgment, loss of hygiene, and/or difficulty finishing thoughts and following directions (Cutler & Sramek, 1996). Memory and language function deteriorate further, as the individual’s conversation may become stilted and s/he may become increasingly repetitive (Brown & Hillam, 2004). Understanding of written material, and reading and writing skills, decline. Sufferers are likely to show time and place disorientation, often described as “living in the past” (Brown & Hillam, p. 137). Psychotic symptoms may occur during this middle phase, including visual hallucinations and delusions. Persistent psychotic symptoms often cause distress, agitation, confrontational behavior, physical aggression, and other behavioral problems (pp. 138-139).

In the most advanced stages of AD, language function deteriorates to the point that all coherent speech is lost (Brown & Hillam, 2004; Cutler & Sramek, 1996; Phinney, 2002). There is a loss of recognition of common persons and surroundings. The brain can no longer regulate body functions, and the sufferer requires assistance with all aspects of self-care. Physical symptoms are usually most prominent in the later stages, including epileptic seizures and gait apraxia, or unsteadiness with a greater risk of falls. Eventually, the sufferer becomes bed- or chair-bound. As a consequence of immobility, other physical maladies such as pressure sores and orthostatic pneumonia may occur.

In summary, the main clinical features of AD are (Brown & Hillam, 2004, p. 136): (1) memory loss, initially for recent events; (2) language impairment; (3) decline in complex motor skills; (4) disorientation; and (5) loss of recognition skills. Next, we take an aggregate view at those who suffer from this debilitating disease.
Alzheimer’s accounts for approximately 60% of all reported cases of dementia in North America (Brown & Hillam, 2004). An estimated 4.5 million Americans suffer from AD, a number that has doubled since 1980 (American Geriatrics Society [AGS], 2001; Hebert, Scherr, Bienias, Bennett, & Evans, 2003). By the year 2050, it is conservatively estimated that the number of Americans with AD will rise to over 11 million. Though there is some speculative evidence that AD is more common in women than in men, the only clearly delineated risk factor for AD is age (Brown & Hillam, 2004; Cutler & Sramek, 1996; Evans, Funkenstein, & Albert, 1989). It is estimated that half of one percent of all persons under age 70, three percent between 70-80 years of age, and eleven percent over age 80 suffer from the disease. Of all cases of AD, five percent are under age 70, thirty percent between ages 70 and 80, and sixty-five percent over the age of 80 (Brown & Hillam, 2004; Cutler & Sramek, 1996).

More than seven out of ten individuals with AD live at home. Half of all nursing home residents live with AD or other forms of dementia (National Center for Health Statistics [NCHS], 1985; Rice, 1993). According to the U. S. Congress Office of Technology Assessment (USCOTA, 1987) looking at longevity, a person with AD will live an average of eight years and as many as 20 years or more from the onset of symptoms. From the time of diagnosis, persons with AD survive about half as long as those of similar age without dementia (Larson & Shadlen, 2004). Average span of survival is affected by age at diagnosis and severity of accompanying medical conditions. For example, individuals with AD who have difficulty with their food or fluid intake are more at risk from effects of malnutrition and dehydration. Agitation and risk-taking behavior increases the risk of falls, head injury and fractures, which all influence prognosis. Persistent psychotic symptoms, as mentioned earlier, also indicate poor prognosis (Brown & Hillam, 2004).
Generally, people do not die directly from AD, per se. The most common causes of death in individuals with AD are as follows, starting with the most common (Brown & Hillam, 2004): bronchopneumonia, cardiovascular disease, and pulmonary embolism. Most individuals who die with AD are virtually immobile and many have suffered severe weight loss. AD is reported as the fourth leading cause of death among Americans over the age of 65; among all Americans, AD is the eighth leading cause of death (NIA, 2003a). Approximately 100,000 persons die each year with AD (American Health Assistance Foundation, 2004; Hepburn, 2004).

There is no magic bullet that, by itself, will prevent or cure AD (NIA, 2003a). Modern drugs, such as donepezil and memantine, can treat moderate to severe AD symptoms and assist in maintaining mental functioning over a period of time. Even with pharmacological treatment, the burden of AD is chronic; the damage spreads slowly over time and affects many different parts of the brain. At the same time, a heavy burden is also exacted on the individuals who provide care for AD sufferers. The following section focuses on Alzheimer’s caregivers, reflecting the multiplicity of burden on caregiving, and the common methods of coping reported by caregivers. We begin with a discussion of the demography of this population.

Alzheimer’s Caregivers

In the preface of Callahan’s My Mother’s Voice (2000), the author, who provides care to her mother suffering with AD, described the worth of a caregiver:

Alzheimer's caregivers are our neighbors, cousins, parents, grown children, aunts and uncles, brothers and sisters, co-workers, strangers, doctors, lawyers, custodians, gardeners, former presidents, teachers and their spouses and children. They do what they do because they want to, or because they must. Living their commitment, they give love to a person who once was like most of them well, whole, and able to care for themselves.
Courageous, loving and weary, Alzheimer's caregivers are special people who deserve our assistance and support.

As previously mentioned, there are over four million Americans with AD (AGS, 2001; Hebert et al., 2003). In addition to the diagnosed individuals suffering with this illness, AD affects family members and friends who become caregivers. For the purpose of this discussion, caregiving is defined as follows (Alzheimer’s Association/National Alliance for Caregiving [AA/NAC], 2004):

Providing unpaid care to a relative or friend who is aged 50 or over to help them take care of themselves . . . Caregiving may include help with personal needs or household chores. It might be taking care of a person’s finances, arranging outside services, or visiting regularly to see how they are doing. This person need not live with (the caregiver). (p. 2)

In early stages of AD, caregiving includes helping determine who will manage the patient’s financial and legal affairs when s/he is no longer able to, ensuring adequate funding for medical costs, and discussing with the patient and loved ones the appropriate kind of medical care (Chavkin, 1990; Cutler & Sramek, 1996). In later stages, proper caregiving involves developing a comfortable routine that includes meaningful and pleasant activities (Cutler & Sramek, 1996; Hiatt, 1990; Zgola, 1990). The most commonly reported activities of care are helping with dressing the care recipient and helping her/him get out of beds or chairs (AA/NAC, 2004).

AD has dramatic effects on the afflicted person’s family, who often provide care and make decisions on behalf of the elder when s/he can no longer function independently (Levkoff, Levey, & Weitzman, 1999). Families, especially spouses, are overwhelmingly the primary caregivers for relatives diagnosed with AD (Cutler & Sramek, 1996; NIA, 2003b). Seven out of ten AD sufferers live at home, and 90% of caregivers to these individuals are family members or
close friends who are considered family (AA/NAC, 2004; USCOTA, 1987). Three-fourths of AD caregivers are women, and one in three has children or grandchildren under age 18 living at home (AA/NAC, 2004). A national study collaborated by the NAC and American Association of Retired Persons (NAC/AARP, 1997) surveyed over 1500 English-speaking caregivers. Results revealed that the typical Alzheimer’s caregiver is a 46 year old employed woman who spends 18 hours per week caring for her mother, who lives nearby. Lisa Gwyther, director for the Center for Aging Family Support Programs at Duke University, noted that family caregiving offers a “commitment that includes a strong need to understand (their relatives), to make sense of their situations, and to garner professional validation for their heroic efforts” (1990, p. 194).

One in ten Americans report having a family member with AD (Alzheimer’s Association, 2004). The mean age of caregivers is 46 (NAC & AARP, 1997). The age cohort with the highest percentage of caregivers, almost 40%, is between ages 35-49, followed by the 50-64 cohort with 26%. Females account for almost three-fourths of all caregivers. In terms of education, 35% are high school graduates; 23% have some college education; 29% have a college degree or post-graduate education. The median annual household income of caregivers is approximately $35,000. About two-thirds of caregivers nationwide are married, 13% single, 13% separated/divorced, and 8% widowed. Almost two in three caregivers (64%) are employed: 52% full-time, 12% part-time, and 16% retired. Out of the 1509 individuals surveyed in the NAC/AARP report, 41% identified themselves as White, 20% Black, 20% Hispanic, and almost 18% Asian. Overall, more than eight in ten caregivers take care of a relative, while 15% take care of a friend and/or neighbor.

Burden of caregiving. Referring to AD caregivers, burden suggests the negative psychological, economic, and physical effects of caring for a person who is impaired (Fredman,
Daly, & Lazur, 1995). Compared to non-caregivers of similar age, AD caregivers are twice as likely to report high levels of burden, e.g., physical strain and emotional stress, as a direct result of caregiving (AA/NAC, 2004). The burden of psychological or emotional stress often stems from witnessing the slow decline of the care recipient’s health.

The impact of caregiving on the caregivers’ family time, personal time/activities, and physical and mental health is demonstrated in research (AA/NAC, 2004; Bookwala, Yee, & Schulz, 2000; NAC/AARP, 1997; Ory, Hoffman, Yee, Tennstedt, & Schulz, 1999). AD caregivers devote an average of almost 18 hours per week to giving care. AD caregivers are much more likely to have less time with family, hobbies, vacations, and other leisure activities compared to non-caregivers of similar age. Almost fifteen percent of caregivers experience a physical or mental health problem as result of caregiving. Women are slightly more likely than men to have experienced said health problems. Almost twice as many older caregivers, aged 50-64, are more likely to experience health problems as a result of caregiving than the younger cohorts. Again, the biggest emotional stressor reported by caregivers is seeing the progressive deterioration of the care recipient.

The financial burden of caregiving is also evident in recent studies (AA/NAC, 2004; Coon, Ory, & Schulz, 2003; Ernst & Hay, 1994; Ory et al., 1999; NAC/AARP, 1997; Rice, 1993; USCOTA, 1987). Seven out of ten caregivers are employed, and a majority of these employed caregivers report missing time from work, cutting back from full-time to part-time, choosing early retirement, turning down a promotion, or giving up work altogether. Caregivers are not wealthy people – one in five household incomes is below $15,000 and only 11% have incomes over $75,000. For home care, the average cost per family devoted exclusively to AD caregiving is estimated at $13,000 per year; for institutional care, $42,000 per year. The average
lifetime cost of care for an individual with Alzheimer’s is $174,000. National direct and indirect annual costs of AD caregiving are at least $100 billion.

A few studies (e.g., Arai, Zarit, Sugiura, & Washio, 2002; Grunfeld et al., 2004; Zarit, Reever, & Bach-Peterson, 1980) have used empirical measures (e.g., Zarit Burden Interview) to assess overall levels of burden. Caregivers consistently reported mild-to-moderate levels of burden, i.e., average scores between 2 – 3 on a 5-point scale.

Coping with caregiving burden. Caregivers are often referred to as the “second victims” of AD (American Academy of Family Physicians [AAFP], 2002; Cutler & Sramek, 1996, p. 76). Rolland (1994) contended that it is not only important to understand the burden of AD on the caregiver, but also just as important to understand how the caregiver and family meet and adapt to these increasing burdens. With the burdens aforementioned, caregivers often feel lonely and isolated; as the care recipients deteriorate, the demands of caregiving increase, and the changes in lifestyle often result in few social contacts (Cutler & Sramek, 1996). Effective coping mechanisms for the caregiver promote a sense of autonomy and control in understanding the biological impact of dementia, in recognizing the strengths and limitations of the care recipient and the caregiver, and in successfully navigating the health care system (Fazio et al., 1999; McDaniel, Hepworth, & Doherty, 1992). By definition, coping refers to cognitions and behaviors used by the individual in evaluating stressors and in initiating activities with the aim of decreasing or managing its impact (Lazarus & Folkman, 1984; Margalit, Raviv, & Ankonina, 1992). In his research at the Mayo Clinic, neuropsychologist Glenn Smith (2004) noted a few general methods of coping for the caregiver: (1) accepting the grief toward the care recipient and understand it as a normal process; (2) setting realistic goals and recognize that at some point it may be impossible to provide total care; and (3) taking stock in what has been accomplished and
goals that have been achieved. Cutler and Smarek (1996) provided similar sentiments, stating that caregivers can cope by understanding that there are problems out of their control; by focusing on changing what can be changed; and by being realistic about what they are capable of doing.

The Alzheimer’s Association (2004) recommends that caregivers use specific community resources to assist with coping, including caregiver support groups. Support groups for AD caregivers are often ideal settings for normalizing the burdens shared by many caregivers (AAFP, 2002; Cutler & Sramek, 1996). As Martindale-Adams, Nichols, Burns, and Malone (2002) stated, the support group for AD caregivers is a

work of mercy for those for a group of people who pay a well-documented toll with both their mental and physical health for their caregiving efforts . . . a common method of promoting supportive communication by bringing people together who are dealing with the same issue, (and to) discuss a common problem and establish nurturing bonds with one another. (p. 181)

In its tips for caregivers to prevent “burnout,” the NAC (2004) encourages caregivers to join a caregiver support group, as it helps members manage stress, locate resources, and reduce feelings of isolation. Chow, Ross, Fox, Cummings, and Lin (2000) explored Asian groups’ utilization of available AD services in California, and noted that the establishment of caregiver support groups within Asian and Pacific Islander communities may enhance the enrollment of Asian-American elders in aforementioned services. Graham, Ballard, and Shame (1997) examined three different groups of AD caregivers, only one of which was in contact with AD support groups. Graham et al. found that those caregivers in contact with support groups were the most knowledgeable on the subject of dementia. Other studies have shown that psychoeducational support groups for
Alzheimer’s caregivers reduce caregiver dysphoria and burnout (Zarit & Toseland, 1989) and can even be directly cost-effective as a deterrent to nursing home admission (Greene & Monahan, 1987).

In looking at more distinct methods of coping, research have documented the following commonly reported methods (AA/NAC, 2004; Mittelman, Roth, Coon, & Haley, 2004; NAC/AARP, 1997): talking with friends or relatives; exercising; hobbies; individual counseling; family counseling; medications; and use of alcohol. The Alzheimer’s Association (2004) reports relaxation techniques as an effective method of coping, including meditating, singing, listening to music, or taking a bath. Not surprisingly, the higher the level of burden reported by caregivers, the more likely the caregiver will employ an increasing number of aforementioned coping mechanisms.

Results from the NAC/AARP survey of caregivers (1997) revealed the most commonly reported method of coping: prayer. African American caregivers reported the highest use of prayer as a method of coping. Stolley, Buckwalter, & Koenig (1999) documented that caregivers use prayer and religious coping frequently, that they perceive prayer and trusting in God as effective coping mechanisms, and that internal religious activities help them get through the caregiving situation. Further discussion of AD caregivers and prayer, including theoretical explication as a primary construct to this study, follows in the next section.

Addressing spiritual needs can be an effective strategy for managing some of the complex emotions that are part of the day-to-day care of someone with Alzheimer's disease (Mayo Foundation for Medical Education & Research [MFMER], 2003). The following section presents a closer examination of spirituality, including the spiritual expression of prayer, as it relates to AD caregivers and their techniques for coping.
Spirituality and Prayer among Caregivers

**Spirituality**

Though spirituality is often linked with religion, it is important to note distinctions between the two constructs. Thus, the following theoretical definitions are offered (Hugen, 2001; Stuckey, 2002): *Religion* is a particular doctrinal framework that guides sacred beliefs and practices in ways that are sanctioned by a broader faith community or institution. It is a system of beliefs and practices that helps structure how people worship. *Spirituality* refers to experiences that connect persons with sacred and/or meaningful entities and emotions. These experiences may create and sustain a personal relationship with a higher source of power, defined according to her/his own beliefs; or may relate to the effort of finding purpose and meaning in life. Canda’s (1988) work reflected the existential portion of the previous definition, referring to spirituality as values, beliefs and experiences that serve a central dynamic of a person’s search for a sense of meaning and purpose, developed in the context of interdependent relationships between self, other people, the nonhuman world, and the ground of being itself. The distinction between spirituality and religion is important, as a complete understanding of spirituality includes a wide diversity of religious and non-religious expressions; in other words, depending on the individual, spirituality may or may not be mutually exclusive of religious expression.

Stuckey (2002, p. 152) noted that “it is vital that we (caregivers) preserve connections to spiritual well-being by fostering and nurturing the spiritual care of those with AD and related dementias.” Religion and spirituality are not universal tools and cannot be called on in the same manner that medications or other therapies can be called on to help persons and manage and cope with AD, but “they do have significant power, albeit ephemeral” (Stuckey, p. 163). Empirical research has shown evidence of spirituality as an effective coping mechanism among caregivers.
Qualitative research has also examined how spirituality, as a coping method, has allowed caregivers and care recipients to live meaningful lives. Caregivers often spontaneously comment on the importance of their spiritual beliefs in helping them find meaning in the drudgery of caregiving activities, and specific items included in interviews and self-report measures that pertain to the role of spirituality are frequently endorsed (Gottlieb, Thompson, & Bourgeois, 2003). Harris and Durkin (2002, pp. 176-177) highlighted common themes from interviews with AD caregivers and care recipients, including coping through a sense of spirituality: “[T]heir spiritual beliefs were a source of comfort and support, especially on their bad days . . . (and) helped these individuals to meet the challenges of living with dementia by increasing their resilience in the face of the external and internal stresses of AD.” For many caregivers, spiritual beliefs and expression facilitate coping appraisal; that is, “the process of determining the extent to which one is able to construct positive or negative meanings for any (caregiving) situation” (Gottlieb et al., p. 41). Recent studies (e.g., Brooker, Snape, Johnson, Ward, & Payne, 1997; Clair, 1996; Everett, 1996; Kahn-Denis, 2002) pointed out that expressions of spirituality such as religious practices, or activities with music, nature, art, or even aromas act as pathways of connection to someone with AD as well as to the inner self of the caregiver.

As previously mentioned, caregiving extends physical, psychological, emotional and/or financial burdens on the caregiver (Bookwala, Yee, & Schulz, 2000; Ernst & Hay, 1994; Ory, Hoffman, Yee, Tennstedt, & Schulz, 1999). AD caregivers frequently feel frustrated, anxious, tense, and angry and may appear fatigued or exhausted (Mittelman, Zeiss, Davis, & Guy, 2003). According to Mittelman et al. (p. 86), the caregiver can reduce this stress by learning stress-management techniques and successful methods of relaxation, such as “prayer or other spiritual
means of calming.” As detailed below, the process of prayer is an expression of one’s spirituality, and, in many instances, used as a function of coping with caregiving burden.

*Prayer*

Because prayer is a central construct in the current study, theoretical explication of this term is necessary. It is an extremely common yet contradictive concept, and the literature reflects the explicative breadth of this construct. Some researchers take a modest, straightforward approach to defining prayer. Deckman (2002) defined it as religious or spiritual expression. Schuller (1995) viewed prayer as the human practice of connecting with a perceived transcendent, eternal spirit. Hudgins (1999) pointed out that prayer is simply opening one’s soul and talking to God or Higher Power.

Other researchers have taken a more meaningful or in-depth approach to defining prayer. Griswold (1999) somewhat contradicted the aforementioned Hudgins assessment of verbalized prayer, stating that praying is to be deliberately and humbly present to whatever the Spirit is doing within us, which includes a profound season of silence and listening. Baud (1994, p. 70) illustrated the occurrence of prayer as “the inner experience of someone who experiences a Beyond and is reflected in the behaviors of individuals as they attempt to harmonize their lives with that Beyond.” Krause (2003) examined the phenomena of praying for others and the effects of physical health status of the prayer agent. He used a brief yet weighty explanation of prayer by William James: “Prayer is the very soul and essence of religion,” and referred to prayer as “the most common form of religious practice” (p. 377). In his review on intercessory prayer and its possible healing effects, Dossey (1997, p. 55) declared that prayer should not be linked to any particular religion or faith: “Prayer, then, often goes beyond the religious ideation and formal rituals with which it is often associated. It can be a state of being rather than a matter of doing.”
For the purpose of the current study, a more direct definition of prayer, along with classification of such, is taken from a quasi-content analysis conducted by Amy Ameling (2000). In her literature review of prayer and its role in holistic practice in nursing, Ameling defined the concept as the following:

Prayer is the simple act of turning our mind and our heart to the sacred. Although many who pray do believe in God or a Higher Power, such a belief is not a prerequisite for prayer . . . For most of us, connecting with the sacred is connecting with something larger than and outside our individual selves. In prayer, we achieve a sense, sometimes only momentary, of the transcendent. There are as many different types of prayer as there are different religions and different cultures. Prayer can be active or passive, communal or private. (pp. 42–43)

Ameling (p. 43) further classified the most common types of prayer into 7 traditional categories:

- petition – asking something for one’s self;
- intercession – asking something for others;
- confession – expressing repentance for wrongdoing and asking forgiveness;
- lamentation – crying out in distress and asking for vindication;
- adoration – giving honor and praise;
- invocation – summoning the presence of the Higher Power; and
- thanksgiving – offering gratitude.

Any of these prayer types can be performed through overt expression (e.g., oral words, sign language) and/or, as Griswold (1999) noted, through a more covert, yet conscious, unspoken thought. Both overt and covert expressions of prayer entail deliberate effort. This depiction of prayer as illuminated by Ameling appears most cogent; specifically, her classification of prayer
into the seven categories mentioned above. Note that Ameling’s explication of prayer is an expression of spirituality, but does not necessarily require the belief in a Higher Power, echoing Dossey’s (1997) declaration that prayer should not be linked to any particular faith.

Approximately 90% of Americans pray, and among this population, 97% believe that prayer is heard, and 86% believe that prayer makes them better people (Gallup Organization, 1993). Among the general population, a person’s spiritual beliefs and practices, including prayer, are often used as coping strategies. Studies (e.g., Ellison & Levin, 1998; Pargament, 1997) show that the use of prayer as a coping strategy is instrumental in defeating loneliness, promoting a sense of purpose, instilling a sense of self worth, and providing hope for the future. Several studies have shown elders to rely on prayer as a means of coping with stress (e.g., Manfredi and Pickett, 1987; Markides, 1983; Walls & Zarit, 1991). Bearon and Koenig (1990) highlighted the importance of prayer for older adults during sickness. They found that the use of prayer as a supplement to medical care was common, though the practice of prayer did vary by religion and education. The respondents did not express an expectation that God played an active role in health, yet most prayed as a coping method to health concerns on a regular basis. Some studies have even underscored the effects of prayer and other forms of spiritual coping over non-spiritual coping (e.g., cognitive problem solving) in the amelioration of stress (Maton, 1989; Pargament et al., 1990).

Religiosity and spirituality has been shown to exert significant direct effects on the well-being of individuals undergoing stress and their perceptions of such (Kraus & Tran, 1989). Spirituality may hold some explanatory power in the experiences and decisions of caregivers (Levkoff, Levey, & Weitzman, 1999). As mentioned earlier, research on AD caregivers (e.g., NAC/AARP, 1997; Stolley et al., 1999) has shown that prayer is a commonly reported method of
coping with their common stress – burden of caregiving. Levkoff et al. (1999, p. 354) noted in their qualitative study that many caregivers spontaneously mentioned the use of prayer in discussing how they handled the stress of caregiving: “If religion offered any stress relief to our participants, it may have done so on a cognitive level, through prayer.” The researchers also revealed that religious expression seemed to facilitate caregiving in that it provided emotional sustenance through prayer and reflection (p. 353). Another study examining burden and coping strategies utilized by AD caregivers (Pratt, Schmall, Wright, & Cleveland, 1985) documented that spiritual expression was a frequently utilized external coping strategy. Pratt et al. also noted that spiritual support was a significant mediator of burden, noting that the greater the use of spiritual support systems, the lower the score on their measure of caregiving burden. Burgener’s (1994) work documented a relationship between spiritual practices, such as prayer, and increased well-being among dementia caregivers. Theis et al. (2003) examined the role of spirituality among 30 Caucasian and 30 African American caregivers, along with their care recipients. Using semi-structured interviews, Theis and her colleagues addressed methods of coping (along with other issues) and discovered a common theme of formal religious expression among the caregiver sample: “Some caregivers talked about formal religion as helping them cope with caregiving . . . Formal religion included references to church and to elements of formal religion such as prayer” (p. 51). Stuckey (2001, p. 79) also examined the role of spirituality in coping with caregiving burden, noting in his findings: “Prayer was an important aspect in their coping strategies . . . it was the second most common theme among the informants.”

The scholarly literature has shown that spirituality, and specifically, prayer, is an active method of coping among many AD caregivers. Recall that coping refers to cognitions and behaviors used to evaluate stress with the aim of decreasing its impact (Margalit, Raviv, &
Ankonina, 1992). Thus, a logical question relevant to the current study arises: *If prayer is used to cope, does it work?* In other words, as a coping method, does prayer allow these caregivers to overcome their burden of caregiving successfully? Such a question strikes at the nature of this study and its other chief concept of interest, resiliency. The remainder of this review focuses on resiliency and its relevance among the AD caregiver community. We start with a brief historical perspective of resiliency as a construct in modern human service research.

Resiliency

*Origin of a Research Concept*

The word *resiliency* is Latin in origin, from *salire* (to help), changing to *resilire* (to leap back; recoil). The root sources of resiliency all display active processes; this is important to note, as resiliency is not necessarily an unconscious attribute, but a source of strength of which an individual may consciously perceive. Goldstein (1997, p. 23) argued that the concept of resiliency was not ‘discovered’ and initially refined in the human sciences, but rather, from the voices in classic literature: “[T]he novel best tells us about resilience and strength it takes to be a person. Consider the story of the coming of moral and psychological age as epitomized in, say, Dickens’ *Great Expectations* or Woolf’s *To the Lighthouse*. Resiliency and strength have been historically paired together as social constructions with a built-in vintage into the ordinary, or folk vocabulary, value laden with traits of virtue, willpower, integrity, and fortitude (Goldstein, p. 28).

Though there may be no exact chronology in the formation and rise of resiliency in social service research, literature reveals historical connections between this construct and its ancestry. It is interesting to note that a growing body of literature refers to resiliency as a theory, a model, or a perspective – and all three appear to connote the same principles, principles of which will be
explicated later in the study. For now, the discussion highlights the following theoretical precursors of resiliency, beginning with perhaps its most basic derivation – Darwinism.

Inevitably, resiliency is viewed as a tool for survival, and any historical discussion of social survival may conjure up images of Herbert Spencer and social Darwinism – survival of the fittest. Simply put, in the mid-1800s, this school of thought argued that those individuals and animals with resiliency have abilities to adapt to environmental changes, while others who lack such abilities fall by the wayside. Adaptation to one’s environment is certainly an aspect of resiliency, yet social Darwinism has long been rejected by resiliency researchers (e.g., Rutter & Rutter, 1993) due to the antiquated implication that the dominant have inherent resiliency while the subordinate do not. Rutter and Rutter (1993) pointed out that social adaptation hinges upon more than heredity or internal influences; rather, it is strongly influenced by social relationships. In sum, most resiliency researchers agree that all individuals have some level of resiliency; the variance lies either in the perception of such or the resources with which to call upon and display resiliency.

In addition to its Darwinistic foundation, resiliency appears to have roots with the concept and theory of self-efficacy. The founding father of self-efficacy, at least in nomenclature and early research, was Albert Bandura (1977). Bandura’s work centered on social learning theory, a view of human behavior as determined by an interplay between the influence of the situation, the person's behavior, and the person's cognitions and emotions. These determinants have bi-directional influence on each other; in other words, individuals have some freedom of their actions, yet some actions are directed by environmental and personal factors. Among these personal factors is perceived self-effectiveness, or self-efficacy. Bandura defined self-efficacy as expectations about one’s own ability to perform a task or given behavior successfully. These
expectations, according to Bandura’s hypotheses, help determine whether such behavior will be initiated and, if so, the amount of time and energy to be expended for the behavior. A few years after Bandura’s published work on self-efficacy, social researchers posited that self-efficacy was a significant influence on one’s ability to adjust to social barriers (Hackett & Betz, 1981; Lent & Hackett, 1987). Though not explicitly stated, the connection between self-efficacy and resiliency can be inferred. Benard (1997) further connected self-efficacy and resiliency in his examination of resiliency in schools. She observed the role of self-efficacy in promoting resiliency; in particular, a school’s expectations for academic success foster numerous positive qualities in students, including a sense of purpose, personally high expectations, and resiliency.

Beginning in the late 1970s, a movement was afoot for human service practitioners to turn away from the traditional deficit perspective of viewing clients as reactive organisms with continuing problems, weaknesses, and limited potentialities (Maluccio, 1979). The movement, later evolving into the strengths perspective, pushed for an identification of clients as “pro-active, autonomous human beings who are able to enhance their functioning and competence through the use of counseling service along with the resources operant within themselves and their social networks” (Maluccio, p. 399). The last few words of the previous passage refer to the clients’ use of internal and social resources in successful adaptation, and are clearly related to the principles of resiliency (discussed later). The strengths perspective, in practice, compels the worker to view trauma, abuse, illness, and struggle as not only injurious, but perhaps more importantly, as sources of challenge and opportunity (Saleebey, 1997a, p. 13). Such a perspective requires three basic assumptions (Saleebey, pp. 12-15): (1) every individual has strengths; (2) every environment is full of resources; and (3) professionals do not know the upper limits of the client’s resiliency, her/his capacity to cope, to change and to move beyond adversity. Goldstein
(1990, p. 267) described the strengths perspective as “more responsive to the humanistic, ethical, and political considerations that characterize the helping process.” Though it can be argued that the academic perspectives of resiliency and strengths originated from two separate disciplines, child and family development and social work, respectively, it is clear that these perspectives are distinctly similar in two major areas. First, both perspectives have histories of a paradigm shift from deficit-focused to strengths- or protective focused. Second, qualities of an individual or the environment known as ‘strengths’ observed in social work are similar, if not, identical, to protective factors of resiliency that are explained below.

Principles of Resiliency

Since the days of social Darwinism, resiliency per se was largely ignored. Instead, the resiliency centered on the traditional risk paradigm, focusing on avoidance of psychosocial risk factors that were more likely to render the individual susceptible to negative outcomes of adversity. Vance and Sanchez (1998) outlined examples of psychosocial risk factors. They included internal characteristics of the individual, such as shy temperament, repeated aggression, and intelligence quotient below 80; family characteristics, such as poverty, parents with substance abuse problems, and parents with criminal backgrounds; and family/experiential characteristics or settings, such as poor infant attachment to the mother, witnessing extreme conflict or violence, and subject to physical abuse. Vance and Sanchez emphasized that these risk factors do not customarily lead to adversity in the individual’s life, but rather, increase the probability that such problems will occur. Werner and Smith (1989) accentuated this point in their longitudinal study of resiliency with Hawaiian children, stating that for a child to have four or more risk factors substantially increased the likelihood of later negative psychosocial outcomes.
Historically, resiliency was researched in medical and social sciences in a risk vacuum, of sorts; resiliency, or lack thereof, was a product of risk indicators – environmental factors that have been shown more likely to render failure (West, 1982; West & Farrington, 1973). A growing dissatisfaction emerged with this deficit model of resiliency and provided impetus for a new generation of researchers who emphasized the role of positive, protective factors or processes, rather than risks/weaknesses, in the individual’s ability to overcome adversity. Rutter (1987) is deemed by many as the pioneer researcher in this paradigm shift of resiliency and child development. His views on resiliency were shaped largely by his research with at-risk children. In a longitudinal study with his colleague, Norman Garmezy (1983), Rutter focused on more than 200 children in urban American settings. They noted a similar pattern over time: As these children grew into adulthood, the majority developed into healthy, successful adults – despite the high risk environments in which they grew up.

The aforementioned research led Rutter (1990) to define resiliency as “. . . the positive pole of the ubiquitous phenomenon of individual difference in people’s responses to stress and adversity” (p. 181). Note the word positive in his theoretical definition of resiliency; a simple yet noticeable shift in perspective compared to the historical risk model. In effect, his research had a significant impact on the way society, at least the academic community, viewed resiliency. Rutter viewed protective factors, or internal and external correlates to resiliency, not exclusively as inherent or constant, but rather, stemming also from the dynamic, active role of the individual. People negotiate their protective factors based on varying environmental circumstances, and the success of this negotiation – rather than the minimization of failure – identifies the individual’s level of resiliency. Successful negotiation of environmental demands, in turn, may change the individual’s perspective of those demands and enhance later success in similar circumstances.
Based on Rutter’s understanding of the cyclical pattern of effect between environmental circumstances and protective factors of resiliency, the ecological perspective is evident in the modern perspective of resiliency.

Rutter (1990) defined a factor or process as *protective* if it moderates a risk. He classified protective factors into four general types: (1) those that reduce an individual’s exposure to risk; (2) those that reduce negative subsequent reactions (chain-reactions) that follow the negative experience; (3) those that promote self-esteem and self-efficacy through accomplishment; and (4) new relationship opportunities that provide needed resources or direction in life. Protective factors can be grouped into internal assets, such as social competence and problem solving skills; and external assets, such as consistent support from family, school, and peer systems. Rutter noted that the more protective factors are present, the more likely the individual will display resiliency. Other studies of children (Garmezy, 1983; Vance and Sanchez, 1998) have elaborated on these protective factors and classified them into three general categories: (1) qualities of the individual, e.g., optimistic temperament, sense of humor, and empathy; (2) characteristics of the family, e.g., secure mother-infant attachment, inductive and consistent parental discipline, and established routines in the home; and (3) social support outside the family, e.g., support from friends, school and work. The aforementioned research often deem qualities of the individual as internal assets, while family and social support are referred to as external assets.

Modern resiliency researchers, such as Rutter (1990) and Garmezy (1983), continued to maintain that risk factors exist, yet their foci emphasized positive, protective factors that encourage or support resiliency. There is some ambiguity in literature as to the exclusivity in the set of risk factors and set of protective factors. The question is whether a risk factor can be transformed into a protective factor by adjustment or removal of said risk factor. For example, if
a child’s parent is involved in substance abuse, a risk factor, and such abuse is later abstained, does the lack of parent’s substance abuse then become a protective factor for the child? In their study of resiliency among 1000 seventh grade students, Moon, Jackson and Hecht (2000) found that risk and resiliency constitute separate sets of factors. By contrast, Vance and Sanchez (1998) emphasized various vehicles for change that may convert risk factors into protective factors. For example, the researchers pointed out that, with the assistance of mentors and teachers, ‘social drift’ can be converted into competencies and confidence. Yet, because the paradigm of resiliency in social research has shifted away from risk to protective factor promotion, the significance of addressing the nature of exclusivity among sets of risk and protective factors appears nominal.

Advancing Rutter’s perspective on positive, protective factors and resiliency, Werner and Smith (1982; 1992) conducted a more comprehensive, longitudinal study of high-risk children. They studied over 600 persons in Kauai, Hawaii, from their births until the age of 32. As children, the participants were designated as high risk because they experienced a number of resiliency risk factors, including being born into poverty, moderate to severe degrees of perinatal stress, and/or a family environment troubled by discord, divorce, parental alcoholism, or mental illness (1992, pp. 191-192). Werner and Smith found that one out of three high risk children . . . grew into competent young adults who loved well, worked well, played well, and expected well. None developed serious learning or behavior problems in childhood or adolescence. As far as we (Werner and Smith) could tell . . . they succeeded in school, managed home and social life well, and expressed strong desire to take advantage of whatever opportunities came their way when they finished high school. (p. 192)
Werner and Smith concluded that protective factors, specifically positive social relationships, appeared to have a more profound impact on the individual’s ability to overcome obstacles compared to specific risk factors. They added another important note germane to the current study (1992, p. 71): “Nearly half of the resilient women and one out of five among the resilient men relied on faith and prayer (emphasis added) as an important source of support in times of difficulties.”

The vast majority of resiliency studies, as those mentioned above, have been conducted with child participants. Such is the case with research of Ann Masten (1999; 2001; Masten, Best & Garmezy, 1990), a leading researcher in the field of adaptation and resiliency. Masten defined resiliency as phenomena characterized by positive outcomes despite serious threat to adaptation or development. She further defined resiliency as an inferential construct with two criteria: (1) there must be demonstrable risk to the individual; in other words, if there is no adversity, then resiliency cannot be demonstrated; and (2) the assessment of the quality of adaptation as ‘good’ or ‘positive.’ Masten admitted that both of these criteria are highly subjective. In any particular context, who decides the definition of risk? Who decides the outcome standard as ‘positive’ or otherwise? Masten’s first criterion is important to the selected population of caregivers in the current study, as noted in the introductory chapter.

Masten suggested that resiliency is not a remarkable attribute, but rather, an ordinary phenomenon that may result within any person from the operation of basic human adaptive processes; in her words, the power of the ordinary. According to Masten, resiliency is not a mysterious or unique quality. It is the maintenance of important resources – often, positive social relationships – representing basic protective systems in human development that adapt to and
overcome obstacles (Masten & Coatsworth, 1998). The retention of said resources suggest potential for future resiliency.

Masten (1999; 2001) outlined two major approaches in resiliency studies aimed at explaining the variation of outcomes among at-risk children. Variable-focused approaches use multivariate statistics to test for correlations among measures of risk or adversity, protective factors, and outcome. Such approaches appear to be associated with quantitative designs. Person-focused approaches compare people with different profiles on sets of criteria to ascertain what separates resilient children from other groups. These approaches, that capture noticeable patterns in the lives of real persons, seem best suited to qualitative designs. As demonstrated by its empirical methodology using multivariate analyses, the current study incorporates Masten’s variable-focused approach in analyzing the potential correlate of resiliency, prayer, among AD caregivers.

In the 1980s and early 1990s, due in large part to modern resiliency research pioneers such as Michael Rutter, Emmy Werner, Ruth Smith, and Ann Masten, the understanding of resiliency advanced from an exclusive individualistic quality within only the strong to a more social characteristic that can be nurtured and heightened in any individual through social relationships. The modern paradigm of resiliency focuses on the large proportion of those who succeed despite difficult experiences. Resiliency researchers examine the factors that cause or support resiliency, not adversity, and seek to heighten awareness of it or reproduce it.

Given the aforementioned research, it is apparent that protective factors, whether internal or external assets, can significantly influence the person’s ability to overcome stress. These factors include problem solving skills, and social support from family and friends. The following section revisits the discussion on spirituality, shifting from its sole function as a coping
mechanism to its additional role as a protective factor of resiliency among many individuals, including AD caregivers.

Resiliency and Spirituality

Within the last decade, notable research attention has been paid to resiliency and its possible connection with spirituality. In one of the few resiliency studies conducted with adults, Steven and Sybil Wolin (1993) worked with survivors of troubled families. Drs. Wolin defined resiliency as the capacity to rise above adversity and forge lasting strengths in the struggle. They compiled a list of seven resiliency factors that are typical of survivors of adversity. These attributes include independence, a sense of humor, creativity, a sense of connection with others, and morality. The researchers pointed out that embedded in morality is a value system based on spiritual principles, along with a faith in something greater than oneself (as cited in Ortberg, Gorsuch, & Kim, 2001).

Documented largely in recent literature (e.g., Cook, 2000; Gibbs, 1989; Larson & Dearmont, 2002; Tebbi, Mallon, Richards, & Bigler, 1987), the role of religion and spirituality as a resource, i.e., spiritual capital (see Friedli, 2001), in enhancing resiliency and unity has been noted in diverse families and communities across the American demographic spectrum, including rural farm communities; lower income, urban inner-city communities; cancer survivors; and survivors of major natural disasters. Spiritual and religious beliefs have been documented as a catalyst for renewed sense of purpose in life for parents raising children with intellectual disabilities (Gardner & Harmon, 2002).

Reports of resiliency as a benefit of spiritual beliefs and/or practices go beyond American borders. The following studies are examples of how the apparent link between spirituality and resiliency represents a worldwide phenomenon. Studies of civilian war survivors, particularly
Hiroshima (Lifton, 1968) and the Holocaust (Greene, 2002b), revealed that faith and spiritual rituals were key adaptive mechanisms for these individuals in such horrific circumstances. Hegland (2003) noted that spirituality and ties to family and the religious community strengthen the resiliency within Shi’a Muslim women in tightly gender-controlled northwest Pakistan. Roer-Strier and Sands (2001) qualitatively studied mothers and adult daughters in 15 South African families and noted a common theme. The daughters attributed the maintenance of good relations and strengthening of family resiliency to religious, Jewish values. Hannah and Morrissey (1987) employed regression analysis to uncover correlates to psychological hardiness, synonymous to resiliency in literature, among Canadian adolescents. Among other factors, spiritual beliefs were a significant correlate to psychological hardiness and happiness.

In all of the aforementioned studies on resiliency and spirituality, it appears that one’s sense of or beliefs in spirituality acts as a protective factor, or encompasses various protective assets, for the individual. For example, in the studies of Hiroshima (Lifton, 1968) and Holocaust (Greene, 2002b) survivors, faith reportedly served as a sense of hope and comfort with something greater, while spiritual rituals served not only as a means of expressing such hope, but also as a method of strengthening the kinship with others during times of immense adversity. The Gardner and Harmon study (2002, p. 67) discussed how parents’ belief in a Higher Power helped them find meaning in life and in other people. Other aforementioned studies linked spiritual beliefs with family unity (Roer-Strier & Sands, 2001) and strengthening emotional resolve within individuals, families and communities (Friedli, 2001). All of these documented characteristics associated with beliefs and/or expression of spirituality – hope, kinship with others, desired meaning in life, sense of purpose, relationships among family and community members – ring a resounding bell as protective factors of resiliency, mainly through social
connections with others. The individual’s relationship with a Higher Power is reported not only as a vehicle for relational support with others sharing the same spiritual beliefs and circumstances (e.g., Holocaust victims), but also as direct relational support perceived from the person’s Higher Power (Siegel & Schrimshaw, 2002).

Referring back to the discussion of spirituality specifically among AD caregivers, most studies have focused on caregivers’ spirituality, and in particular, prayer, as a resource of coping (e.g., Ellison & Levin, 1998; Pargament, 1997). There is a noteworthy distinction between coping studies, which emphasize management of stress (in this case, caregiving burden), and resiliency studies, which emphasize the ability to overcome burden successfully. While a number of studies (e.g., Mittelman et al., 2003) have focused on the coping method, there is a scarce amount of published studies given to resiliency as an outcome variable among the AD caregiver population. The dearth of such studies may be due, in part, to the novelty of resiliency as a research concept. Examples are the following: In a brief exploratory and descriptive study of family caregivers, Ross, Holliman, and Dixon (2003) gave a brief survey instrument, the Caregiver Resilience Instrument, to informal AD caregivers, mostly female, in the rural Southeast. The instrument was used to identify a small sample of ‘resilient caregivers’ (N=23) in order to obtain data from open-ended questions related to role(s) as caregiver, difficulties and benefits of caregiving, and methods of coping with said difficulties. Based on the samples’ utilization of a number of coping strategies, including physical exercise, use of social support systems, and religious beliefs, Ross et al. (p. 90) concluded that the caregivers demonstrated a high level of resiliency. Schulz et al. (2003) studies the longitudinal effect of bereavement on 217 family caregivers of persons with dementia. The researchers assessed levels of caregivers’ distress before the death of the care recipients and afterward at four separate intervals. Though
the outcome measure was based on a depressive symptoms inventory, the CES-D, Schulz et al. (p. 1936) concluded that the caregivers exhibited “remarkable resilience” due to the significant decreases in scores at each interval. These two examples are indicative of the seven published research studies (based on review below) on resiliency among AD or other dementia caregivers and were identified because, though diverse in sample sizes and methodology, they reflect the attention paid to resiliency descriptively and/or with analysis of broad protective factors, such as religion or spirituality, already studied in previous research (e.g., Garmezy, 1983; Vance and Sanchez, 1998). Based on this author’s extensive review of literature among databases housing peer-reviewed publications in human service journals, including Academic Search Premier, MEDLINE, PsycARTICLES, PsycINFO, Psychology and Behavioral Sciences Collection, Religion and Philosophy Collection, Social Services Abstracts, Social Work Abstracts, and Sociological Abstracts, there are no published studies to date that empirically analyze the specific protective factor of prayer with an outcome variable of resiliency among AD and other dementia caregivers.

To iterate, AD caregiver studies with prayer as a means of coping are plentiful; with prayer as a factor of resiliency, non-existent. The current investigation intends to redress this oversight. The purpose of the present study is an attempt to identify whether a specific, common element of spirituality, prayer as a coping method, is a protective factor of resiliency against the caregiving burden among AD caregivers by examining the relationship between prayer and resiliency with said population. With this purpose in mind, the following conceptual model was selected as the guide for the current study.
McCubbin and McCubbin (1993) developed the *resiliency model of stress, adjustment and adaptation* (RMSAA) to study resiliency among families with immediate stress or crises. This resiliency model was developed to explain why some families are more resilient than others and are better able to adjust and adapt to stress, distress and crises by examining the family system as a unit (McCubbin & McCubbin, 1993; Tak & McCubbin, 2002). There are three main features in the RMSAA, as illustrated in the Figure 1 below:

![Resiliency Model of Stress, Adjustment, and Adaptation (RMSAA)](image)

The researchers defined *family demand* as a stimulus or condition that could threaten the family's integrity and well-being over time; it produces or calls for change in the family system. Demand may be a cumulative effect, over time, of pre- and postcrisis stressors and strains, such as financial problems, health statuses of members, changes in parents' work role or environment, and family life cycle changes. McCubbin and McCubbin (1993) assumed a capability in families for managing the demand, depending on the resources available and utilization of such. Second, *resiliency factor* referred to those resources available to the individual or family, whose presence may explain why persons experience higher levels of life stresses and strains but do not show high levels of distress (Tak and McCubbin, 2002); in short, protective factors. Many of the modern resiliency studies (e.g., Constantine, Benard, & Diaz, 1999; Vance and Sanchez, 1998)
segregated these factors into (1) internal characteristics or assets and (2) external assets or social support. Because McCubbin and McCubbin’s (2002) hypotheses centered on effects of perceived social support, the ‘resiliency factor’ in their model was appropriately narrowed to the protective factor of social support. The model’s final feature, outcome, referred to whatever is used to evaluate the system’s capability to manage, reduce, or overcome its demands. McCubbin and McCubbin used family coping as its outcome, measured by *The Coping Health Inventory*.

For the present study, McCubbin and McCubbin’s (1993) model of family resiliency has been adapted to reflect the specific differences in unit of analysis, protective factor, and outcome. The model contains the same general features as McCubbin and McCubbin’s model: demands, resiliency factor, and outcome. The relationship between the concepts is the same. The system’s factor(s) of resiliency acts as an intervening or mediating variable, influencing the effects of the demand(s) on the outcome (Tak & McCubbin, 2002). The model’s three main features are amended for the current study as illustrated in Figure 2 and explained below:

![Figure 2. Caregiver Model of Resiliency Adapted from the RMSAA](image)

Because the unit of analysis in the current investigation is the AD caregiver, the demand is appropriately identified as *individual demand*. Specifically, the demand is the burden of caregiving. As described earlier, demand is any or all of the following types: physical burden, including problems with lifting the care recipient and inability to sleep consistently;
psychological and emotional distress (e.g., Ernst & Hay, 1994; Ory et al., 1999), including depression and/or anxiety stemming from witnessing the chronic deterioration of the care recipient; and financial burden, including the lofty cost of continued care and devoting time away from employment for caregiving. The characteristic of burden is relevant to the current study by its existence. As Masten (1999; 2001; Masten, Best & Garmezy, 1990) emphasized, in order to infer resiliency, one criterion is a demonstrable risk to the individual; in other words, if there is no adversity, then resiliency cannot be demonstrated. Burden among AD caregivers involved in the current study was appraised using a self-reported measure, the Shortened Zarit Burden Interview (Bedard et al., 2001), detailed in the Methodology discussion following this chapter.

As mentioned earlier, a resiliency factor is a protective factor of resiliency, those internal and environmental resources available to the individual or family whose presence may explain why persons experience higher levels of life stresses and strains but do not show high levels of distress (Constantine et al., 1999; Tak and McCubbin, 2002; Vance and Sanchez, 1998). To repeat, the purpose of the present study is to recognize whether a commonly reported method of coping among AD caregivers, prayer (e.g., Pargament, 1997), is related to, or positively influences, the caregiver’s resiliency or perception of such, thereby lending prayer as a protective factor. Thus, the independent variable examined in the present study is the coping method of prayer. As such, prayer as coping is entered as the resiliency factor in the model. Assessment of this concept was based on an empirical measure of such – the Using Private Prayer as a Means of Coping scale (Ai, Peterson, Bolling, & Koenig, 2002) – described in the next chapter. An empirically significant relationship between prayer as coping and a resiliency outcome, described below, would lend further credibility of the benefits of prayer as a protective asset.
In the McCubbin and McCubbin model (1993), the outcome feature in the RMSAA is based on the measure used to evaluate the system’s capability to reduce or manage its demands. The outcome variable in the current investigation is AD caregivers’ perceived level of resiliency. Again, the model examines whether the resiliency factor for AD caregivers, the coping method of prayer, influences their resiliency given the existence of caregiving burden. The question is not whether resiliency exists among AD caregivers, or, for that matter, any population. As Masten (1999; 2001) noted, resiliency is an ordinary phenomenon that may result within any person from the operation of human adaptive resources. In this study, the question of resiliency among AD caregivers lies in their perception of such. Perceived level of resiliency was assessed by a quantitative, self-report measure of resiliency, the CD-RISC (Connor & Davidson, 2003), explicated in the following chapter.

Research Questions

The purpose of the present study was to understand the nature of the relationship between the use of prayer as a means of coping, and resiliency among AD caregivers. Given the existence of caregiving burden, the study examines a measure of private prayer as a response to managing adversity, and its ability to predict the caregiver’s perceived capacity to negotiate adversity successfully. With this purpose in mind, and guided by McCubbin and McCubbin’s (1993) conceptual model, the current investigation proposes the following research questions:

1. What is the level of burden among AD caregivers?
2. What is the extent to which AD caregivers utilize prayer as a means of coping with caregiving burden?
3. What are the perceived levels of resiliency among AD caregivers?
4. Is there a relationship between prayer as a coping method and resiliency among AD caregivers?

5. Do demographic characteristics of the caregiver, if any, exert extraneous influence on the relationship between prayer and resiliency?

The aforementioned research questions examine specific conceptual relationships within the adapted theoretical model, but do not necessarily attempt to validate the model as a whole. Validation of this nature is beyond the scope of this exploratory investigation, which is meant to lay the foundation for future evaluations of the relationship between perceived level of resiliency and the spiritual practice of prayer as a protective factor, particularly among AD caregivers.

Hypothesis

Derived from relationship of interest in the research questions above, the hypothesis in the current study is as follows:

*Based on statistically significant, converse scores on the UPPMC and the CD-RISC, the greater extent of the use of private prayer as a coping method, the higher the level of perceived resiliency among the sample of AD caregivers.*

Note that the hypothesized relationship indicates converse scores because lower scores on the prayer measure reflect a greater extent of prayer usage as a coping method. The relationship can be theoretically viewed as ‘positive;’ hypothetically, as the extent of prayer usage to cope with burden increases, so should the perceived level of resiliency.
CHAPTER 3

METHODOLOGY

Research Design

Research design is the structure of the study, the plan of systematic inquiry that defines the number and types of variables to be studied and their presumed relationships to each other (Trochim, 2001). As the current exploratory study attempted to examine a phenomenon at one point in time, a correlational, or cross-sectional, research design was employed (Rubin & Babbie, 2001). In particular, a survey method in the form of self-administered questionnaires were used to collect data. As follows, a number of logistical issues in data collection influenced the researcher’s selection of the aforementioned design.

Lack of direct accessibility to population of interest. As explained further in the Sampling section, the population of interest constituted AD caregivers involved in a caregiver support group program. The directors of said programs advised the current researcher against direct dissemination of questionnaires to participants. Reasons included the potential for social desirability bias (Rubin & Babbie, 2001, p. 179), or the desire of the participant to respond according to perceived expectations of the researcher; and, more importantly, program policies of anonymity, as explained below.

Anonymity. Because the researcher is not an caregiver or family member and is not a member of any AD caregiver support group utilized in the current study, the identity of the individuals in such groups who volunteered to participate in the study could not be exposed (personal communication, director S. Carson, Alzheimer’s Association – Atlanta Chapter,
December 19, 2003). As such, observation of said individuals by the researcher was not allowed, and alternative methods of administering the questionnaire, e.g., interviews and telephone surveys, were impermissible because of the threat to anonymity. Identifying information of group facilitators are also remain anonymous, as many facilitators were caregivers and chose to participate in the study.

_Nature of variables._ Two of the variables of interest are somewhat longitudinal in nature. Resiliency is demonstrated by the individual who faces adversity and subsequently, over some course of time, and exhibits successful adaptation to the environmental demand(s). The measure of prayer as a coping method assumes the respondent recalling coping with caregiver burden over a past course of time, up to the present. Because of the inaccessibility and anonymity issues mentioned above, the process of tracking and observing the participants over time was deemed implausible. A questionnaire asking for recalled, self-reported information from anonymous participants was a more viable method of data collection.

_Resources._ Survey research is advantageous in terms of economy and the amount of data that can be collected (Rubin & Babbie, p. 385). The relatively inexpensive nature of questionnaires, combined with the potential to collect data from a large sample, were relevant factors in choosing the survey method.

Taking all of these issues into consideration, a correlational design with a survey technique appeared to be the logical methodological approach in the present exploratory study. Further elaboration of the sampling method for the participants in the study and measures utilized is detailed below.
Sampling

As mentioned earlier, the population of interest for the current study was comprised of AD caregivers participating in an AD caregivers support group program. Specifically, caregivers in support groups under the auspice of the Alzheimer's Association, with chapters located in a southeast region of the United States, who had the opportunity to complete the questionnaires constituted the sampling frame. The sample was recruited through a nonprobability, purposive sampling technique (Rubin & Babbie, 2001, pp. 254, 401). The researcher intentionally selected the aforementioned support group program primarily because of its substantial membership and accessibility through its administrative offices; thus, lending itself as a large sampling frame and a potentially substantial sample size. Compared to a small sample size, a larger sample yields noteworthy benefits (Rubin & Babbie, p. 401): (1) a more comprehensive understanding of the subject of study; and (2) a fairly representative portrayal of the phenomenon under investigation, the possible relationship between prayer and resiliency among caregivers. The geographical area was chosen because of its relative proximity to the researcher, thereby increasing accessibility and reducing time and financial expenditure.

Upon permission of The University of Georgia Institutional Review Board, packets of questionnaires, with a cover letter attached to each questionnaire explaining the intent of the study and voluntary nature and anonymity of participation, were distributed to program directors who oversee the AD caregivers support groups in their particular region. Self-addressed, postage-paid envelopes were included in the packets. The directors, in turn, disseminated the questionnaires and envelopes to the facilitators of their respective caregiver support groups, along with a letter advising the group facilitators as to the purpose and methodology of the study. Subsequent to distributing and collecting the questionnaires from caregivers during the support
group session, the facilitators mailed the completed questionnaires back to the researcher. No additional follow-up mailings occurred, in order to prevent duplication of responses by previous participants and to avoid intrusiveness upon the work conducted by support group members and facilitators. Similar methodology – cross-sectional surveys with anonymous participants in group settings – is prevalent in recent literature, such as studies with victims of domestic violence (Bradley, Smith, Long, & O’Dowd, 2002; McCauley, Kern, Kolodner, Derogatis, & Bass, 1998).

Satisfactory return rate is paramount for any investigation utilizing the mailed survey method. According to Rubin and Babbie (2001, p. 368), “a response rate of at least 50 percent is considered adequate for analysis and reporting…60 percent is good…70 percent is very good.” Based on this rule-of-thumb, the objective of the current study regarding return rate was at least a good return rate, or 60% of AD caregivers attending the support groups during the time of data collection. To determine the response rate, group facilitators documented the total number of attendees per support group during the time of data collection, e.g., the sampling frame. The total number of attendees in all support groups was measured against the total number of completed questionnaires, e.g., the actual sample size, thus yielding a response rate.

A fairly large sample size was needed to reduce the probability of committing Type II error; that is, the probability of saying there is no significant effect when there really is one (Rubin & Babbie, 2001). By reducing probability of Type II error, statistical power increases. In order to obtain a satisfactory level of power (.80) in the current study while maintaining an adequate strength of correlation between prayer and resiliency, the sample size had to be approximately 90 cases or higher (Cohen, 1988). With input from Alzheimer’s Association program directors involved with the study, the strategy was to increase the response rate by facilitators’ encouragement during group sessions, rather than allowing participants to complete
questionnaires outside of session. This strategy is reinforced by Rubin and Babbie (2001, p. 364): “. . . when the research worker delivers the questionnaire, picks it up, or does both, the completion rate seems higher than for straightforward mail surveys.” The strategy proved successful. There were 430 caregivers present in support groups during the time of data collection; 304 completed the questionnaires (N = 304). Accordingly, the response rate for the current study was approximately 70%.

Measures

As stated above, data were collected via survey method through mailed questionnaires to AD caregivers. The two-page instrument was comprised of items pertaining to five general sections: demographic characteristics, burden, prayer, spirituality, and resiliency. The following discussion addresses the composition of each section, beginning with demographics, followed by properties of the remaining questionnaire elements. Appendix A displays all items except those in the resiliency scale. Appendix B describes the content of the resiliency measure.

Demographic Characteristics

The questionnaire solicited demographic information from AD caregivers participating in the study. Items in this section of the questionnaire included: gender, race, marital status, age, and relationship to care recipient. Justification for employing these specific demographic items in the questionnaire is detailed below.

Several recent studies have noted significant gender differences regarding opinions and practices of prayer (e.g., Mirola, 1999; Schoenberger, Matheis, Shiflett, & Cotter, 2002; Thwalla, Pillay, & Sargent, 2000); likewise for differences in marital status (Chatters, Taylor, & Lincoln, 1999; MacLean et al., 2003). In terms of race/ethnicity, a nationwide survey by Kraus (2003) noted racial differences in the frequency of intercessory praying among older persons.
Particularly, older African Americans are more likely to pray for others than older Caucasian persons. Lastly, as mentioned earlier, family members, particularly spouses, are the principal AD caregivers (Cutler & Sramek, 1996; NIA, 2003b). Relationship to care recipient was included in the questionnaire to determine if any differences existed between the predominant group of caregivers, spouses, and other family members or friends.

**Burden**

To assess empirically the level of burden among AD caregivers in the current study, the *Shortened Zarit Burden Interview* (ZBI; Bedard et al., 2001) was included in the questionnaire. The scale assesses how participants feel about the stresses and strains of taking care of another person, based on a 5-point Likert-type response format ranging from *never* to *nearly always*. Examples of items included: “Do you feel strained when you are around your relative?” “Do you feel that you have lost control of your life since your relative’s illness?” “Do you feel stressed between caring for your relative and trying to meet other responsibilities?” Scores on the Shortened ZBI ranged from 0 – 48, with higher scores indicating a higher degree of burden.

Since 1980, most researchers have used the original, 22-item version of the ZBI (Zarit et al., 1980) due, in part, to its excellent psychometric properties: internal reliability ranging from .89 to .91; correlated total scores with the Brief Symptom Inventory, i.e., evidence of concurrent validity, $r = .71$ (Gallagher, Rose, Rivera, Lovett, & Thompson, 1989; Zarit, Antony, & Boutselis, 1987). The length of the original ZBI, however, is a deterrent to its use in many clinical and research environments (Bedard et al., 2001). Because caregivers in the current study were devoting a segment of their support group time to completing the questionnaire, the 12-item Shortened ZBI was a more prudent option. Bedard and his colleagues tested the Shortened ZBI among 413 caregivers of cognitively impaired older adults. Correlations between the Shortened
ZBI and the original ZBI ranged from .92 to .97, indicating exceptionally strong concurrent validity (Bedard et al., 2001). Cronbach’s alpha coefficients for the Shortened ZBI range from .70 to .90, indicating strong internal consistency among its 12 items.

Researchers (Zarit et al., 1980) computed estimates of the degree of burden for the original ZBI. Based on its range of scores from 0-88, the degree of burden were segregated into four range-comparable groups: (1) score of 0-20, little or no burden; (2) 21-40, mild to moderate burden; (3) 41-60, moderate to severe burden; and (4) 61-88, severe burden. No such degrees of burden have been published with the Shortened ZBI. Based on the classification of degree of burden from the original ZBI, using four range-comparable groups, the degrees of burden for the Shortened ZBI are estimated as follows: (1) score of 0-12 = little or no burden; (2) 13-24 = mild to moderate burden; (3) 25-36 = moderate to severe burden; and (4) 37-48 = severe burden.

Prayer

The primary measure of prayer in the questionnaire is Ai et al.’s (2002) scale, Using Private Prayer as a Means of Coping (UPPMC). Participants were asked about the extent to which they agreed with statements relating to importance of prayer in one’s life; the benefit of prayer in coping with burden; and the use of prayer as a means of coping with burden of caregiving. All three items were asked on a 4-point Likert-type format ranging from strongly agree to strongly disagree, with total scores ranging from 3 – 12. Lower scores indicate a greater extent to which the respondent uses private prayer as a means of coping. This is a newly constructed measure of prayer, the first of its kind (to date) in explicitly gauging private prayer as a means of coping (A. Ai, personal communication, April 1, 2004). In the lone published study (Ai et al., 2002) utilizing this instrument with cardiac surgery patients, the only psychometric property reported was its sound reliability: Cronbach’s alpha coefficient for the
internal consistency of the three items at .85. Because of the relative novelty of this instrument, further assessment of its psychometric properties is involved in the current study.

To complement the data obtained by the aforementioned measure and add further understanding of prayer among AD caregivers, other measures of prayer were included in the questionnaire. Frequency of private or solitary prayer was assessed, using a 4-point Likert response format adapted from Meisenhelder and Chandler’s (2001) study, ranging from never to daily. Private prayer, rather than prayer among other individuals or groups, was assessed because the current study’s unit of analysis was at the individual level, the AD caregiver.

Along with frequency, specific purpose of prayer was appraised. Participants were asked about the importance of various types of prayer, with Likert-type responses ranging from very important to not important at all. Four purposes of prayer were listed, taken directly from Ameling’s (2000) classification system of prayer. Although Ameling’s explication of prayer grouped purpose or motive of prayer into seven categories – petition, intercession, thanksgiving, adoration, lamentation, invocation, and confession – several of these categories appear to be related. For example, petition, or asking something for oneself, is reasonably similar to intercession, or asking something for others. Thus, for the sake of brevity and to avoid potential confusion from the respondent, Ameling’s seven purposes of prayer were restructured into four: petition/intercession, thanksgiving/adoration, lamentation/invocation, and confession. Specifically, responses for this item on the questionnaire are presented in an explanatory manner, respective of the four purposes mentioned above: (1) asking something for oneself or others; (2) offering gratitude, honor, and/or praise; (3) expressing pain and/or asking for help; and (4) expressing repentance for wrongdoing and asking forgiveness.
For the purpose of a future study, participants had the opportunity to complete an open-ended question regarding the relationship between prayer and resiliency in their caregiving experiences. The description of resiliency in this item was based on previously mentioned explications of resiliency, where researchers depicted the concept as successful adjustment to life’s challenges, i.e., positive adaptation despite exposure to stressful life events (Masten, 1999; Masten, Best, & Garmezy, 1990; Werner & Smith, 1992). Upon a contingent response of yes to a preceding question on the existence of such a relationship, the open-ended question asked how the process of prayer is related to the participant’s ability to successfully overcome stressful events. The general motive behind the open-ended question was to probe the meaning of views depicted by the empirical measures (Rubin & Babbie, 2001, p. 383). Because the current study is an empirical approach, data from this item are excluded. In a future study, the qualitative results will be reported, as narrative data were expected to enhance the empirical findings (Royse, Thyer, Padgett, & Logan, 2001).

**Spirituality**

Hodge’s (2003) Intrinsic Spirituality Scale (ISS) was included in the questionnaire for the purpose of assessing validity for the UPPMC scale (Ai et al., 2002). As previously mentioned, the UPPMC is a relatively new instrument with no published properties of validity at the time the current study was conducted. The ISS is a six-item instrument that assesses the level of intrinsic spirituality, or the degree to which spirituality serves as a master motive, within and outside of religious frameworks (Hodge, 2003). In other words, it evaluates the level to which individuals tap into their internalized, spiritual commitment (Burris, 1999; Hodge, 2003). The ISS’s responses are on a continuum from zero, where spirituality answers no questions about life, to ten, where spirituality answers absolutely all questions about life. Items included: “In terms of
the questions I have about my life, my spirituality answers . . .” and “When I think of things that help me to grow and mature as a person, my spirituality . . .” Higher total scores indicated a greater sense of intrinsic spirituality. The psychometric properties for the ISS are sound (Hodge, 2003). For internal consistency, Cronbach’s alpha coefficient was measured at .96. Concurrent validity of the ISS was obtained through correlations with scores on similar measures (see Allport & Ross, 1967; Miller, 1998): significant, positive correlation with intrinsic religion ($r = .911, p < .001$); and significant, inverse correlations with alcohol use ($r = -.489, p < .001$), frequency of binge drinking ($r = -.464, p < .001$), and tobacco use ($r = -.376, p < .001$).

Previous studies have shown that the level of spirituality is often positively related with the person’s reliance on prayer as a means of coping with distress (e.g., Henderson, Gore, Davis, & Condon, 2003; Tatsumura, Maskarinec, Shumay, & Kakai, 2003). Thus, total scores from the ISS were correlated with total scores from the UPPMC scale. Remember that lower scores on the UPPMC indicate a greater extent of use of prayer for coping. A significant correlation between the UPPMC and the ISS, with at least a moderate strength of association (e.g., .50 to .70) would lend credence to concurrent validity with the prayer measure (see Rubin & Babbie, 2001, pp. 194-195). At the same time, the strength of association should not be extremely strong, e.g., higher than .80, because the two scales were not measuring identical constructs.

Resiliency

Resiliency is labeled as ‘perceived’ in the current study because the construct is assessed via a self-report questionnaire. The measure of resiliency utilized in the questionnaire is a recently constructed and tested empirical instrument entitled the Connor-Davidson Resilience Scale, or CD-RISC (Connor & Davidson, 2003). Developed by physicians Kathryn Connor and Jonathan Davidson, the CD-RISC is a “new rating scale to assess resilience . . . comprise(d) of
25 items, each rated on a 5-point scale” (Connor & Davidson, p. 76). A 5-point Likert-type response format on the CD-RISC ranges from not true at all to nearly true all of the time. Participants are asked to respond according to how they have felt over the past month. Items included: “I am able to adapt when changes occur.” “I tend to bounce back after illness, injury, or other hardships.” “I am not easily discouraged by failure.” Total scores range from 0-100, with higher scores indicating a greater the level of perceived resiliency (Connor & Davidson, p. 78).

The CD-RISC was selected for this study for several reasons. First, the majority of its content was conceptually related to characteristics of resiliency drawn from Rutter’s work (Rutter, 1985), as theoretically explicated earlier in the literature review. In particular, much of the CD-RISC’s content features (Connor & Davidson, p. 77) are characteristic of Rutter’s perspective of resiliency identified by the individual’s social support, secure attachments to others, goal orientation, self-efficacy, past successes, sense of humor, action-orientation, and adaptability, which also appears to be linked with Masten’s (1999; 2001) work on resiliency and adaptation.

The second reason for the utilization of the CD-RISC is the diversity of sample subjects from which the instrument was tested (Connor & Davidson, 2003). In contrast to other resiliency scales previously tested on relatively homogenous populations (e.g., Dispositional Resilience, Bartone, Ursano, Wright, & Ingraham, 1989; Resilience Scale, Wagnild & Young, 1993), the total sample of 828 individuals from which the CD-RISC was originally tested included five diverse groups of subjects, including a general population, primary care outpatients, and individuals diagnosed with post-traumatic stress disorder (Connor & Davidson, p. 78). Also, the
mean age of the entire aforementioned sample, 43.8, is comparable to the mean age of AD caregivers, 46, as noted in a recent national survey (NAC & AARP, 1997).

Thirdly, as explained earlier, brevity in scale length was an important issue in the current study. The 25-item CD-RISC is shorter than, or as short as, other empirical measures of resiliency in recent literature, such as the 25-item Wagnild and Young (1993) Resilience Scale; the 49-item Jew, Green, and Kroger (1999) Resiliency Scale; the 45-item Dispositional Resilience Scale (Bartone et al., 1989); and the 45-item Resilience Scale for Adults (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003).

Finally, the CD-RISC has demonstrated sound psychometric findings (Connor & Davidson, 2003, pp. 78-80). For internal consistency, Cronbach’s alpha coefficient was measured at .89 for the full scale. Test-retest reliability was assessed in 24 subjects. The comparability in mean scores at time one, 52.7, and time two, 52.8, demonstrated a high level of agreement, with an intraclass correlation coefficient of .87. Connor and Davidson (pp. 79-80) examined the CD-RISC’s concurrent validity, or the degree to which the scale’s operationalization is similar to other operationalizations to which it should be theoretically similar (Trochim, 2001). Concurrent validity was measured against the Kobasa hardness measure (KHM; Kobasa, 1979), the Sheehan Social Support Scale (SSS; Sheehan, 1993), the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983), and the Sheehan Stress Vulnerability Scale (SVS; Sheehan, Raj, & Sheehan, 1990). CD-RISC scores showed significant positive correlation with the KHM (Pearson $r = 0.83, p < .0001$) and the SSS (Spearman $r = 0.36, p < .0001$), while scores were significantly negatively correlated with the PSS (Pearson $r = -0.76, p < .001$) and the SVS (Spearman $r = -0.32, p < .0001$). Thus, as prior research has indicated (e.g., Rutter, 1990; Vance & Sanchez, 1998; Waysman, Schwarzwald, & Solomon,
higher resilience is associated with greater hardiness and social support, while associated with less perceived stress and stress vulnerability.

In addition to concurrent validity, Connor and Davidson (2003, p. 80) also examined discriminant validity, or the degree to which operationalization of the CD-RISC is not theoretically similar to other operationalizations. Discriminant validity was assessed by correlating CD-RISC scores with the Arizona Sexual Experience Scale (ASEX; McGahuey, Gelenberg, Laukes, Moreno, & Delgado, 2000). As expected, the CD-RISC was not significantly correlated with the ASEX ($r = -0.30$, $p = .21$), demonstrating a marked theoretical contrast between the two instruments.

**Statistical Analyses**

Descriptive analysis, which includes distribution (aggregate percentages) as well as central tendency and dispersion, was used to report the demographic characteristics of the sample; responses on the caregivers’ burden measure; responses on the UPPMC scale, along with frequency and purpose of prayer items; scores on the spirituality measure; and scores on the resiliency measure. For cross-tabulation purposes with other measures in the study (e.g., level of burden), age was also converted into a dichotomous variable: younger adults below age 60, and older adults aged 60 and above. Although these groupings were subjective, a number of credible sources have identified adults as older or younger based on the aforementioned age groupings (e.g., Stafford & Krell, 1997; Weinstein-Shr, 1995).

Psychometric properties of Ai et al.’s (2002) UPPMC scale were assessed. Reliability, or the internal consistency among the scale’s items, was determined using Cronbach’s alpha coefficient. Concurrent validity, as mentioned earlier, was examined by correlating the total scores on the UPPMC scale with total scores on two measures of spirituality, the ISS (Hodge,
2003) and frequency of prayer. Significant, inverse correlations with both measures would indicate evidence of concurrent validity, implying that greater extent of prayer usage in coping is directly related to a higher perceived sense of spirituality based on the aforementioned measures.

Multiple regression was used to test the study’s hypothesis. Multiple regression analysis shows the overall correlation between each of a set of independent variables and an interval- or ratio-level dependent variable (Rubin & Babbie, 2001). Thus, regression analysis examined the relationship between the primary independent variable, use of prayer for coping, as a predictor for the study’s outcome variable, perceived level of resiliency, along with the inclusion of demographic variables to test for extraneous influence on the outcome. Regression was the chosen method of analysis because it is generally considered a more appropriate method with interval/ratio independent and dependent variables (see Babbie, Halley, & Zaino, 2000, pp. 263; 315). Both principal variables in the study’s hypothesis contain interval/ratio data. The hypothesis was tested at the .05 level of significance, implying that there is still a .05 risk of committing a Type I error.
CHAPTER 4

RESULTS

Descriptive Statistics

Sample Characteristics

In total, 304 AD caregivers participated in the study. Female caregivers, 233 (76.6%), constituted over three-fourths of the sample. Among the 297 respondents who disclosed their age, the average was 62.7 (SD=13.53), and ranged from ages 20 to 93. In terms of race, the majority respondents, 261 (85.9%), identified themselves as White. All but one respondent in the sample (n=303) disclosed her/his marital status; as expected, most caregivers, 240 (79.2%), were married. Respondents were also asked to reveal the nature of their relationship to the care recipient. Not surprisingly, the highest number of caregivers, 131 (43.1%), were spouses of care recipients, followed by children of recipients, 118 (38.8%). Table 1 reveals the information on the demographic characteristics of the 304 caregivers. According to the data in Table 1, the average caregiver in the sample was a 63-year-old White female, who was married to the care recipient. Next, we examine the descriptive data from the remaining measures on the questionnaire.

Burden

Addressing the first research question, the level of caregiving burden was measured using scores from the Shortened ZBI scale (Bedard et al., 2001). All but one respondent in the sample (n=303) disclosed her/his level of caregiving burden. Caregivers averaged a score of 19.1
Table 1.

Demographic Characteristics of the Sample (n=304)

<table>
<thead>
<tr>
<th>Variable/Label</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>233</td>
<td>76.6</td>
</tr>
<tr>
<td>Male</td>
<td>71</td>
<td>23.4</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Older adults (age 60+)</td>
<td>175</td>
<td>57.6</td>
</tr>
<tr>
<td>Younger adults (below age 60)</td>
<td>122</td>
<td>40.1</td>
</tr>
<tr>
<td>Missing</td>
<td>7</td>
<td>2.3</td>
</tr>
<tr>
<td>Ethnicity</td>
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<td></td>
</tr>
<tr>
<td>African American</td>
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<tr>
<td>Hispanic</td>
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<td>0.7</td>
</tr>
<tr>
<td>White</td>
<td>261</td>
<td>85.9</td>
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<td>Multiethnic</td>
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<td>0.3</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>14</td>
<td>4.6</td>
</tr>
<tr>
<td>Married</td>
<td>240</td>
<td>78.9</td>
</tr>
<tr>
<td>Divorced</td>
<td>31</td>
<td>10.2</td>
</tr>
<tr>
<td>Widowed</td>
<td>14</td>
<td>4.6</td>
</tr>
<tr>
<td>Single-cohabitating</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Relationship to Care Recipient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>131</td>
<td>43.1</td>
</tr>
<tr>
<td>Child</td>
<td>118</td>
<td>38.8</td>
</tr>
<tr>
<td>Friend</td>
<td>13</td>
<td>4.3</td>
</tr>
<tr>
<td>Other</td>
<td>42</td>
<td>13.8</td>
</tr>
</tbody>
</table>

(SD=7.84), with scores ranging from 0 to 42. Based on estimates of degree of burden (see Methodology chapter), the aforementioned average score by the entire sample indicated a mild-to-moderate level of burden. Every group among the demographic factors averaged in this range, as well.
Female caregivers averaged slightly higher scores on the burden measure. Older adults, aged 60 and above, averaged burden scores similar to those of younger adults below the age of 60. Burden scores from every ethnic group averaged mild-to-moderate levels. White respondents averaged higher levels of burden, followed by African American respondents, then multiracial respondents, and Hispanic respondents. In terms of marital status, divorced caregivers averaged the highest scores of burden, 22.7, nearing the level of moderate-to-severe; caregivers who identified their marital status as single/cohabitating scored lowest burden average, 17.8.

Considering the relationship to care recipients, children of care recipients reported the highest scores of caregiving burden, while friends of care recipients reported the lowest level of burden. Table 2 illustrates scores on the burden measure, categorized by demographic factors.

Table 2.
Means, Standard Deviations of Shortened ZBI Scores (n=303)

<table>
<thead>
<tr>
<th>Variable/Label</th>
<th>M</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>19.7</td>
<td>7.73</td>
<td>232</td>
</tr>
<tr>
<td>Male</td>
<td>17.1</td>
<td>17.14</td>
<td>71</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Older adults</td>
<td>18.5</td>
<td>7.55</td>
<td>174</td>
</tr>
<tr>
<td>Younger adults</td>
<td>19.9</td>
<td>8.00</td>
<td>122</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>17.7</td>
<td>7.13</td>
<td>40</td>
</tr>
<tr>
<td>Hispanic</td>
<td>13.0</td>
<td>15.56</td>
<td>2</td>
</tr>
<tr>
<td>White</td>
<td>19.4</td>
<td>7.90</td>
<td>260</td>
</tr>
<tr>
<td>Multiethnic</td>
<td>17.0</td>
<td>0.00</td>
<td>1</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>20.9</td>
<td>6.71</td>
<td>14</td>
</tr>
<tr>
<td>Married</td>
<td>18.6</td>
<td>7.75</td>
<td>239</td>
</tr>
<tr>
<td>Divorced</td>
<td>22.7</td>
<td>7.79</td>
<td>31</td>
</tr>
<tr>
<td>Widowed</td>
<td>18.4</td>
<td>7.88</td>
<td>14</td>
</tr>
<tr>
<td>Single-cohabitating</td>
<td>17.8</td>
<td>12.97</td>
<td>4</td>
</tr>
</tbody>
</table>
Relationship to Care Recipient

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Spouse</th>
<th>Child</th>
<th>Friend</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17.8</td>
<td>20.7</td>
<td>16.2</td>
<td>19.5</td>
</tr>
<tr>
<td></td>
<td>7.34</td>
<td>7.75</td>
<td>10.51</td>
<td>7.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>131</td>
<td>117</td>
<td>13</td>
<td>42</td>
</tr>
</tbody>
</table>

Prayer

The entire sample of AD caregivers responded to the question of frequency of prayer. An overwhelming majority, 236 respondents (77.6%), reported engaging in private prayer on a daily basis. Forty-seven (15.5%) pray on a weekly basis, and five respondents (1.6%) do so on a monthly basis. Sixteen participants (5.3%) reported that they never engage in private prayer.

To assess specific purpose of prayer among caregivers, four general types of prayer (see Ameling, 2000) were listed, with Likert-type responses of very important (VI), important (I), of little importance (LI), and not important at all (NI). Two hundred eighty-eight participants responded to these items. Table 3 displays the frequency and percentages of responses for each purpose. Responses indicated that 95.1% of respondents believed that petition/intercessory prayer was important, 98.3% reported that prayer of thanksgiving/adoration was important, 92% indicated that prayer of lamentation/invocation was important, and 92.1% specified that confessional prayer was important. These percentages were calculated from the sum of proportion of caregivers who checked one response of four important or not important categories for each statement.

Addressing the second research question, the UPPMC (Ai et al., 2002) scale measured the extent to which caregivers use private prayer to cope with caregiving burden. Total scores range from 3-12, with lower scores indicate a greater extent to which the respondent uses prayer
Table 3.

Specific Purposes of Prayer and their Perceived Importance (n=288)

<table>
<thead>
<tr>
<th>Variable/Label</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petition/intercession</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very important</td>
<td>166</td>
<td>57.6</td>
</tr>
<tr>
<td>Important</td>
<td>108</td>
<td>37.5</td>
</tr>
<tr>
<td>Of little importance</td>
<td>13</td>
<td>4.5</td>
</tr>
<tr>
<td>Not important at all</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Thanksgiving/adoration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very important</td>
<td>203</td>
<td>70.5</td>
</tr>
<tr>
<td>Important</td>
<td>80</td>
<td>27.8</td>
</tr>
<tr>
<td>Of little importance</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>Not important at all</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Lamentation/invocation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very important</td>
<td>161</td>
<td>55.9</td>
</tr>
<tr>
<td>Important</td>
<td>104</td>
<td>36.1</td>
</tr>
<tr>
<td>Of little importance</td>
<td>21</td>
<td>7.3</td>
</tr>
<tr>
<td>Not important at all</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Confession</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very important</td>
<td>177</td>
<td>61.5</td>
</tr>
<tr>
<td>Important</td>
<td>88</td>
<td>30.6</td>
</tr>
<tr>
<td>Of little importance</td>
<td>18</td>
<td>6.3</td>
</tr>
<tr>
<td>Not important at all</td>
<td>5</td>
<td>1.7</td>
</tr>
</tbody>
</table>

as a coping method. Again, 288 participants completed the items on this measure. The mean of the use of prayer as a means of coping was 4.18 (SD=1.42), with scores ranging from 3 to 9.

Table 4 reveals the frequency and percentages of responses per item. Responses from the UPPMC scale indicated that 98.6% of the caregivers believed that private prayer was important in their lives, 92.3% had faith in the efficacy of using prayer in coping with stress, and 97.2% indicated their intention to use private prayer to cope with difficulties associated with caregiving burden.
Table 4.

Distribution of Responses on the UPPMC  (n=288)

<table>
<thead>
<tr>
<th>Variable/Label</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private prayer was important in one’s life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly agree</td>
<td>216</td>
<td>75.0</td>
</tr>
<tr>
<td>Agree</td>
<td>68</td>
<td>23.6</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>1.4</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Faith in the efficacy of using prayer for coping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly agree</td>
<td>172</td>
<td>59.7</td>
</tr>
<tr>
<td>Agree</td>
<td>94</td>
<td>32.6</td>
</tr>
<tr>
<td>Disagree</td>
<td>19</td>
<td>6.6</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Intention to use prayer to cope with caregiving burden</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly agree</td>
<td>181</td>
<td>62.8</td>
</tr>
<tr>
<td>Agree</td>
<td>99</td>
<td>34.4</td>
</tr>
<tr>
<td>Disagree</td>
<td>8</td>
<td>2.8</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Data from the UPPMC scale were also analyzed for further assessment of its psychometric properties. All three items were asked on a 4-point Likert-type scale ranging from 1- strongly agree to 4- strongly disagree; lower scores indicated greater extent of the use of prayer for coping. Cronbach’s alpha coefficient for the internal consistency of these three items was .78 in the sample, suggesting reasonable reliability. Scores from the UPPMC were correlated with scores from two other measures of spirituality to assess the UPPMC scale’s ability to vary directly with a measure of a similar construct. As expected, UPPMC scores showed a significant, inverse correlation with the ISS (see below), a measure of intrinsic spirituality (Pearson r=-.781, p<.0001). Also, UPPMC scores showed a significant, inverse correlation with frequency of prayer (Spearman r= - .493, p<.0001). Correlations with both measures indicated moderate-to-strong associations and evidence of concurrent validity.
**Spirituality**

As shown above, data from the ISS (Hodge, 2003) was used primarily for psychometric purposes with the UPPMC scale. Because caregivers’ use of prayer, an expression of spirituality, is an important element in the current study, it is noteworthy to report the data from this measure of spirituality. Recall that scores ranged from 0-10, with higher scores indicating a greater extent of intrinsic spirituality. The mean score on the ISS was 7.6 ($SD=2.15$). Females indicated slightly higher ISS scores than males. African Americans reported higher scores of intrinsic spirituality than other ethnic groups (*multiethnic* group excluded, considering only one respondent identified as such on this measure). Table 5 illustrates scores on the ISS, categorized by demographics.

**Resiliency**

Addressing the third research question, scores from the *CD-RISC* (Connor & Davidson, 2003) were examined to assess perceived levels of resiliency among AD caregivers. Note that total scores theoretically range from 0-100, with higher scores reflecting a greater level of perceived resiliency. The mean score on the CD-RISC was 73.4 ($SD=13.35$), with scores ranging from 4 to 100. Table 6 shows scores on the CD-RISC, categorized by demographic groups. Resiliency scores among gender groups are comparable, as well as those among groups of marital status, and relationship to care recipient. Younger adults reported higher resiliency ($M=75.5$) than older adults ($M=72$). Among ethnic groups, African Americans averaged the highest level of resiliency ($M=76.4$), while Hispanic respondents reported the lowest resiliency scores ($M=67.5$). Again, *multiethnic* was excluded because of one respondent identified as such on this measure. The remaining discussion of results addresses the final two research questions and hypothesis.
### Table 5.

**Means, Standard Deviations on ISS Scores (n=298)**

<table>
<thead>
<tr>
<th>Variable/Label</th>
<th>M</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>7.8</td>
<td>2.08</td>
<td>227</td>
</tr>
<tr>
<td>Male</td>
<td>7.1</td>
<td>2.30</td>
<td>71</td>
</tr>
<tr>
<td>Age</td>
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<td></td>
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<td>Older adults</td>
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<tr>
<td>Younger adults</td>
<td>7.8</td>
<td>2.13</td>
<td>119</td>
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<tr>
<td>Ethnicity</td>
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<td></td>
</tr>
<tr>
<td>African American</td>
<td>8.6</td>
<td>1.81</td>
<td>40</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6.9</td>
<td>3.66</td>
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</tr>
<tr>
<td>White</td>
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<td>2.16</td>
<td>255</td>
</tr>
<tr>
<td>Multiethnic</td>
<td>9.7</td>
<td>0.00</td>
<td>1</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Single</td>
<td>6.6</td>
<td>2.84</td>
<td>13</td>
</tr>
<tr>
<td>Married</td>
<td>7.6</td>
<td>2.17</td>
<td>236</td>
</tr>
<tr>
<td>Divorced</td>
<td>8.3</td>
<td>1.71</td>
<td>31</td>
</tr>
<tr>
<td>Widowed</td>
<td>7.4</td>
<td>1.28</td>
<td>13</td>
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<tr>
<td>Single-cohabitating</td>
<td>7.3</td>
<td>3.03</td>
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<tr>
<td>Relationship to Care Recipient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>7.3</td>
<td>2.23</td>
<td>128</td>
</tr>
<tr>
<td>Child</td>
<td>7.9</td>
<td>1.91</td>
<td>116</td>
</tr>
<tr>
<td>Friend</td>
<td>8.0</td>
<td>1.80</td>
<td>13</td>
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<tr>
<td>Other</td>
<td>7.5</td>
<td>2.54</td>
<td>41</td>
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</tbody>
</table>

### Table 6.

**Means, Standard Deviations of Caregiver Resiliency Scores (n=303)**

<table>
<thead>
<tr>
<th>Variable/Label</th>
<th>M</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>73.7</td>
<td>12.87</td>
<td>232</td>
</tr>
<tr>
<td>Male</td>
<td>72.5</td>
<td>14.92</td>
<td>71</td>
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</table>
Regression Analyses

Addressing the fourth research question and hypothesis, a linear regression analysis was conducted to evaluate the prediction of CD-RISC scores from scores on the UPPMC scale for caregivers. The regression line on the scatterplot for the two variables, as shown in Figure 3 below, illustrates that the two variables are linearly related such that as the overall UPPMC scores decrease, the overall CD-RISC scores increase. The regression equation for predicting the overall resiliency score is

\[
\text{Predicted CD-RISC score} = -4.998 \text{ UPPMC score} + 94.832.
\]

The correlation between the two variables was as follows: Pearson \( r = -.555, F(1,286) = 127.307, p < .0001 \). Approximately 31% \( R^2 = .308 \) of the variance in the resiliency scores was accounted for by its linear relationship to prayer as coping scores. Scores on the use prayer as a means of coping were significantly, inversely related to perceived level of resiliency, indicating a positive
Figure 3. Scatterplot of UPPMC and CD-RISC Scores
relationship between extent of prayer usage as a coping method and resiliency. Therefore, tested at the .05 level of significance, the study’s hypothesis is not rejected.

For the final research question, a multiple regression analysis was later conducted to evaluate how well UPPMC scores predicted CD-RISC scores with the inclusion of the demographic factors. Thus, the predictors in the current model, e.g., full model, included UPPMC scores and five demographic factors: gender, age, ethnicity, marital status (ms), and relationship to care recipient (rcr). The regression equation for predicting the overall resiliency score in the full model is

\[
\text{Predicted CD-RISC score} = -4.98 \text{ UPPMC score} + 1.34 \text{ gender} - .12 \text{ age} - 1.31 \text{ ethnicity} + 1.02 \text{ ms} - .11 \text{ rcr} + 98.51.
\]

The linear combination of the six predictor variables was significantly related to the CD-RISC scores, \( F(6,273)=21.337, p<.0001 \). The multiple correlation coefficient was .565, indicating that approximately 32% \( R^2 = .319 \) of the variance of the CD-RISC scores can be explained by the linear combination of the aforementioned six predictor variables.

Table 7 presents the indices of the relative strength of the individual predictor variables. Considering the full model, the data indicate only two significant bivariate correlations: UPPMC scores and age. As expected, the association between UPPMC scores and resiliency scores was moderate and significant \( (Pearson r=-.552, p<.001) \), while the strength of association between age and resiliency was slight but still significant \( (Pearson r=-.122, p<.05) \). Similarly, controlling for all other predictor variables, the same relationships were significant: the correlations between UPPMC scores and resiliency \( (Pearson r=-.551, p<.001) \) and between the age of caregivers and resiliency \( (Pearson r=-.123, p<.05) \). Incidentally, because prayer and caregivers’ age were both significant factors of resiliency, analyses of variance (ANOVA) were conducted to determine
Table 7.

Bivariate, Partial Correlations of the Predictors of Resiliency

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Bivariate Correlation</th>
<th>Partial Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPPMC scores</td>
<td>-.552**</td>
<td>-.551**</td>
</tr>
<tr>
<td>Gender</td>
<td>-.057</td>
<td>.051</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.066</td>
<td>-.001</td>
</tr>
<tr>
<td>Marital status</td>
<td>.053</td>
<td>.070</td>
</tr>
<tr>
<td>Age</td>
<td>-.122*</td>
<td>-.123*</td>
</tr>
<tr>
<td>Relation to care recipient</td>
<td>.075</td>
<td>-.009</td>
</tr>
</tbody>
</table>

*p<.05, **p<.001

any significant relationship between the two aforementioned factors. Relationships between (1) the I/R variable of age and prayer and (2) the categorical variable of age (older vs. younger adults) were analyzed. Neither ANOVA indicated any significance: I/R age and prayer, $F(56,224)=1.379, p>.05$; categorical age and prayer, $F(1,279)=.129, p>.05$. 
CHAPTER 5
DISCUSSION

Summary of Results

The study examined a measure of private prayer as a coping response and its ability to predict perceived level of resiliency among AD caregivers. Among the 430 caregivers who had the opportunity to participate in the study, 304 (70%) completed the questionnaires. Over three-fourths of the sample were married females, mirroring the gender demographic in previous research with caregivers (AA/NAC, 2004). The average age was 63. A great number of caregivers in the sample, 86%, were White, while 13% were African American. Given results from previous caregiver studies (e.g., AARP, 2001; NAC/AARP, 1997; Walker, 2001) on a national scale showing least one-third of all caregivers as non-White, it was a bit surprising to observe the current sample’s ethnic composition as only 14% non-White. Almost 82% of the caregivers were providing care for their spouses or relatives; again, reflective of prior research (American Society on Aging, 2003; NAC/AARP, 1997) with caregivers’ relationships to care recipients.

Scores on the Shortened ZBI indicated that, as a whole, the sample experiences a mild-to-moderate level of overall caregiving burden. Contents of the ZBI elicited views of physical, psychological, and emotional burden. The mild-to-moderate level (scores between 2-3 on a 5-point scale) of burden in the current sample was indicative across all levels of every demographic factor in the study. The sample’s average level of burden parallels previously
mentioned studies (Arai et al., 2002; Grunfeld et al., 2004), whose results revealed similar levels among caregivers.

Almost 95% of the sample (288 caregivers) reported that they engage in private prayer, while more than three-fourths did so on a daily basis. Such a high frequency of prayer is comparable to past research on caregivers (Stolley et al., 1999) that showed an exceptionally high frequency of prayer. As revealed in the Results section, over 90% of those caregivers who prayed attributed importance (i.e., response of important or very important) to four general types of prayer (Ameling, 2000): petition/intercessory (95.1%), thanksgiving/adoration (98.3%), lamentation/invocation (92%), and confession (92.1%). Previous studies with other populations (e.g., cardiac surgery patients, Ai et al., 2002) have assessed importance of various types of prayer; yet, based on the author’s extensive review of literature, the current study is the first to examine prayer in this manner among caregivers.

Understanding frequency of prayer and types of prayer important to caregivers provided supplemental knowledge to the results from the UPPMC scale. Three different scores from the UPPMC are worth repeating to appreciate caregivers’ use of prayer as it relates to coping with burden: the grand mean and scores from two items within the scale. The sample’s mean of 4.2 suggested a great extent of prayer usage for coping. Over 90% of those who prayed agreed with UPPMC item #2, reporting faith in the efficacy of prayer for coping; and 97% of respondents who prayed agreed with item #3, intention to use private prayer to cope with caregiving burden. These numbers revealed an even higher usage of prayer as a coping tool than expected, given the initial understanding that about 8 in 10 caregivers cope through prayer (NAC/AARP, 1997; Stolley, Buckwalter, & Koenig, 1999).
According to scores on the CD-RISC, the sample demonstrated a fairly high degree of perceived resiliency, averaging 74 on a scale ranging from 0-100. This prominent level of resiliency was somewhat anticipated, given its correspondence to results from studies previously discussed. The sample of AD caregivers in Ross et al.’s (2003) study showed a high level of resiliency based on their reported use of multiple coping strategies. Likewise, results from Schulz et al.’s (2003) study noted a marked decrease in stress related to bereavement over an 18-month period, leading the researchers to conclude a remarkable level of resiliency among their sample.

Implications

Descriptive results of a population are important in order to maintain an up-to-date understanding of the size, composition, and trends, if any, of that particular population. Such is the case with the current study’s descriptive findings with AD caregivers. Adding to the knowledge base of the AD caregivers in terms of its magnitude and demographic structure allows social service professionals in various arenas, including practitioners, researchers and lobbyists, to formulate interventions or policies that are beneficial to the active dimensions of this population. Prior research (e.g., NAC/AARP, 1997; Pratt et al., 1985) has shown that the majority of AD caregivers are mostly married women, in their early-to-mid 50s, providing care for a spouse or other relative. Demographic results from the current study are mostly consistent with these findings. Though no remarkable demographic changes existed among this study’s AD caregivers, these results are worth mentioning to bring clarity to the composition of the sample. The mean age in the sample, 63, was slightly higher from a previous national caregiver survey (NAC/AARP, 1997) and was the only noticeable difference of demographics from previous research. As detailed later, the age of the caregiver holds implications for the social service
professional in reference to understanding and working with the caregiver’s self-perception of resiliency.

The current study revealed a great extent of prayer usage as a response to coping with caregiving burden. Again, these results show consistency from previous studies among caregivers who frequently used prayer as method of support or coping with adversity (e.g., Levkoff et al., 1999; Stolley et al., 1999). In addition to the extensive use of prayer in coping, caregivers in the study also placed a high level of importance four general types of prayer (see Summary of Results above for types). Again, this is consistent with previous research (Gottlieb et al., 2003) on caregivers, who often comment on the importance of their spirituality in helping them find meaning in the labor of caregiving activities.

Findings from the regression analyses indicated that there was a significant relationship between prayer and resiliency among the sample of caregivers. Such a relationship suggests that the greater the extent of using prayer as a coping response to caregiving burden, the more likely the caregiver perceived a greater sense of resiliency. Taking into account all demographic factors among the sample, the only significant variable exerting extraneous influence on the caregiver’s level of resiliency was age. The age of the caregiver was negatively related to resiliency; that is, the older the person, the more likely the perceived level of resiliency decreased. In other words, the older caregiver in the sample was more likely to perceive less resiliency compared to the younger caregiver. Further analysis implied comparability in the extent of prayer usage as a coping method irrespective of age. This should alert the social worker to the possibility that the caregiver/client of an older age may sense a decreasing level of resiliency influenced by issues of aging. The worker should avoid conjecture, however, that the caregiver’s use of prayer as a coping skill or resource is inadequate and serves as explanation for a diminished perception of
resiliency. There is little previous research to support the notion that, as caregivers age, their resourcefulness declines (Grant & Whitell, 2000). Their situations are far more complex than that. It can be argued that “age” as a variable is irrelevant in any case since the real interest lies in experiential variables, as well as neuro-maturational factors and their interplay. The effect of age on resiliency may be attributable to a number of age-related confounding issues, including a decline in the caregiver’s physical health, cognitive functioning, and lack of family support (Baronet, 2003; Caswell et al., 2003; Yoon, 2003). This may justify, at least in part, why the inclusion of age, along with other demographic factors in the study, had a minimal impact on the variance in resiliency compared to the initial effect size, increasing by only 1%.

**Implications for Social Work Practice**

*Prayer and coping.* How can the practitioner translate this knowledge into enhanced efficacy in practice with this population, considering that caregivers rarely say that any specific intervention has substantially mitigated their psychological distress or their feelings of loss (Gottlieb et al., 2003)? The answer may be that, even in light of the previous statement, caregivers see their spirituality, and expressions of such, as a source of strength. Remember that *coping* denotes management of a stressor. The general manner in which caregivers manage their burden through the strength of prayer is twofold (Mittleman et al., 2003; Pratt et al., 1985): (1) as a direct method of managing or alleviating the burden experience, in which prayer acts as an agent of support with one’s transcendent power and/or with a larger community (e.g., faith based community), or as a source of calming; and (2) by augmenting an optimistic outlook on a particular circumstance, including adversity, thereby influencing the caregiver’s cognitive appraisal of that circumstance as more optimistic or tolerable.
Realizing the strength of prayer as a strength of coping is critical in the worker-client (in this case, client = caregiver) relationship. This is predicated on the client’s voluntary admission of prayer as some integral aspect of her/his caregiving. The social work practitioner should recognize prayer as an important coping technique if indeed the client recognizes and discloses it as such. Ignoring any element of a client’s routine life experience or culture, which s/he deems important, is antithetical to the holistic approach to practice advocated by the social work profession. On the other hand, encouraging any client to pray, regardless of its potential benefits, without initial introduction of the subject by the client raises concern of manipulating the client into being proselytized (Miller, 2001). Such an intrusive effort by the practitioner undermines the ethical standard of client self-determination.

Assuming the caregiver voluntarily raises the subject of prayer in a practice setting, the practice implications raised with the study’s results of prayer and coping (prayer frequency and importance measures, and UPPMC scores) lie with the worker’s ability to address the caregiver’s process of prayer as an active, healthy means of stress management, similar to other common processes such as deep breathing, physical exercise, or listening to music. Within and/or away from a professional setting, the caregiver may choose to pray as a direct coping response to burden, i.e., as a therapeutic tool in itself, or may pray as a supplementary tool (Frame, 2003) alongside mental health treatment or services to augment the effectiveness of the therapeutic process. The role of the worker in this situation is not so much to attempt to explain the therapeutic benefit of prayer, e.g., by a mind-body connection, transcendent healing, or placebo effect; but rather, the role of the worker is to believe in this process – or suspend disbelief – through the client’s belief in it, regardless of any personal religious or spiritual biases. Suspension of disbelief is a common, ethical practice among social workers who internally
disagree with clients on a particular issue, especially if the client considers the issue sincere and relevant to her/his well-being. Clients’ understandings of reality are no less real than the social constructions of reality of the professionals assisting them (Cowger, 1997).

As the review of literature highlighted, coping strategies for the AD caregiver have been linked with a sense of autonomy and control in understanding the biological impact of dementia, in recognizing the strengths of the care recipient and the caregiver, and in successfully utilizing health care resources. Thus, practitioners must be able to assess coping strategies of AD caregivers, including prayer, and reinforce these strategies through a strengths-based perspective. Strengths assessment is a process of helping clients to define their situations and assisting clients in evaluating and giving meaning to those factors that affect their situations, particularly in a resourceful manner (Cowger, 1994). The worker must believe the client, or at least suspend disbelief; listen to the client and discover what s/he wants; and then move the assessment toward personal and environmental strengths. In this case, the personal strength is the caregiver’s ability to cope with burden via her/his use of private prayer. The worker should identify this ability and create or find situations to use such ability in the achievement of personal goals. Inferring from results of the current study, the caregiver may already be aware of the benefits of prayer and the context in which it achieves her/his goal of coping with burden. If such is the case, the worker’s role may simply be to affirm this process with the caregiver through the extension of encouragement and support.

Prayer and resiliency. The principle findings related to the study’s hypothesis bear several implications among the social work professional community and its work with AD caregivers. Iterating from the literature review (Lazarus & Folkman, 1984; Margalit et al., 1992), coping denotes the evaluation of stressors and initiation of activities to manage its impact. By
definition, coping is a *durational* strength; that is, the ability to alleviate or manage during burden. On the other hand, resiliency denotes phenomena characterized by positive outcomes despite serious threat to adaptation or development (Masten, 1999; 2001; Masten et al., 1990). By definition, resiliency is an *outcome* strength; that is, a characteristic of effect observed or perceived post-burden, usually resulting from successful coping. In the case of caregivers, post-burden does not necessarily mean beyond the totality of the burden, e.g., death of care recipient. Post-burden also represents the following of any periodic caregiving stressor, including a stage of AD, a particular financial difficulty, an episodic state of depression, etc. As discussed throughout this study, the majority of the research focused on prayer (or spirituality) and caregiving burden (e.g., Stolley, Buckwalter, & Koenig, 1999; Theis et al., 2003) has centered on the caregiver’s ability to cope. Though this pattern of research is critical to understanding the management of caregiving burden, it does little to expand upon whether prayer, already linked as a factor of successful coping, is a factor of resiliency. This distinct, important difference between coping and resiliency provided impetus for this study.

The aforementioned clarification between coping and resiliency invites social workers to recognize the difference between the two concepts, including the consideration that coping and resiliency are not invariably linked. The current results provide evidence of a connection between the particular coping strategy of prayer and resiliency; however, they do not imply a broader linkage between other coping strategies, or coping in general, and the caregiver’s perception of resiliency. Upon assessment of the caregiver’s coping strategies, the worker should avoid the inference of a particular high level of resiliency based strictly upon observance of a successful coping strategy. The assumption is fallacious, for example, if the caregiver demonstrates ability to manage specific burden(s) but feels weakened or less resilient later (post-
burden). Unless consistent empirical evidence, additional to the current investigation, proves otherwise, the worker should be cautious in automatically linking the two. The current study’s major findings do indeed provide notice to the social service profession of an association between coping and caregiver resiliency, albeit strictly on the basis of one coping practice, private prayer. Though optimistic, expectation of further coping strategies and a relationship with higher perceived resiliency among caregivers is speculative.

Accounting for almost one-third of the variance in resiliency in the study, the positive effect of private prayer on the caregiver’s self-perception of resiliency adds to the implications mentioned above with prayer and coping. As documented in the literature review, prayer can be interpreted as an element of *spiritual capital* (Friedli, 2001), or spiritual resource influencing resiliency, among the caregiving sample. Again, using a strengths approach, it is central for the social worker to assess the caregiver’s coping strategy, in this case, prayer, in order to reinforce it as a valuable management tool amid the duration of burden. Based on current findings, the worker can raise further awareness and underscore the caregiver’s resiliency as consequently, positively associated with said coping strategy. This is a significant step beyond strengthening the use of prayer as a resource of “day-to-day mediation” during challenging times, and moves toward mutually (worker-caregiver) identifying and appreciating how prayer influences the caregiver’s hardiness, the resourcefulness of having already activated successful negotiation of burden and the potential to continue doing so. This process may be therapeutic for the caregiver by heightening her/his sense of accomplishment both in retrospect and in future perspectives: the relief or gratification of overcoming past caregiving burdens, influenced in part with the use of prayer; and upon this appraisal of resiliency, the knowledge that past successes can be indicative of impending ones.
Another suggested intervention strategy is having the client articulate narratives of caregiving that highlight her/his strength through prayer. Narratives help a person shape her/his evolving construction of reality, sense of self, perception of the world, and one’s ability to lead a successful life (Laird, 1994). By having the caregiver share an area of spiritual strength, an altered, therapeutically beneficial construction of reality, and one’s place in such reality, is fostered (Hodge, 2001). This is a resiliency heightening process, as the new self-perception may enable the caregiver to alleviate burden by providing a new inner vocabulary that depicts them as capable individuals who have the resources and abilities to solve the complexities of caregiving. Workers can help clients ameliorate their problems by positively reflecting, e.g., reinforcement, on their resiliency – their ability to overcome adversity via their capabilities, resources, and strengths (Saleebey, 1997b).

The above practice implications center on identification and assessment of prayer as a coping strategy, and, through a strengths based approach, reinforcement of this strategy as a factor of the caregiver’s perceived resiliency. Suggested earlier, these implications are nested within the context of the caregiver’s use of private prayer as either a direct method of personal therapy or as an ancillary benefit to professional services. Based on results from the current study and past research, observing the influence of prayer as a positive factor of coping and resiliency may logically lead to ethical questions regarding the contexts of prayer engaged by the practitioner (Frame, 2003). The discussion below briefly addresses the following general contexts: (a) praying for clients outside of the therapeutic session; and (b) praying with clients in the session.

Praying for the caregiver (or any client) outside of the session offers two potential benefits for the practitioner (McCullough & Larson, 1999; Richards & Bergin, 1997). First, the
practitioner may gain insight of her/his client by personally experiencing a practice similar to
that disclosed as therapeutic by the caregiver in session. Second, prayer may be considered a
positive coping strategy for the practitioner for any personal burden in session, such as working
with a client perceived as demanding or difficult to like. In either context, no professional,
ethical quandaries arise given the qualification of the client’s unawareness to this practice. Often,
the practitioner represents a role model to the client. The practitioner disclosing her/his use of
prayer for the client in session may present undue influence on the client to do the same, thereby
manipulating (however unintentional) the client’s self-determination. Praying for the client
outside of sessions, without the client’s knowledge, is a simply a matter of the social worker’s
personal and religious/spiritual preference.

If disclosure of the practitioner’s use of prayer for the client is ethically dangerous, then
it is clear that praying with one’s clients in session is rare (Jones, Watson, & Wolfram, 1992) and
extremely controversial for a number of ethical concerns. Offering prayer is usually an activity
associated with the role of spiritual leader; thus, a practitioner who prays with clients risks
crossing boundaries and professional role confusion. As Hodge (2001) noted, workers should
avoid falling into the role of spiritual directors in which they assume the role of a spiritual expert
directing consumers in their spirituality. Also, because of this role issue, praying in session may
potentially allow for clients’ unhealthy transference toward the practitioner of negative feelings
about priests or clergy (Richards & Bergin, 1997). Lastly, praying with clients may impose
practitioner values on the client, again detrimental to the client’s right of self-determination.

Though this discussion has focused predominantly on the positive, coping aspects of
prayer, there is an issue of spirituality as potential hidden sources of confusion or conflict for the
caregiver (Gotterer, 2001). One example may be the client’s lack of ego strength that leads to
religious fervor bordering on fanaticism (Joseph, 1988). Further examples of the client’s sense of spirituality or religion as potentially problematic include a rigid inhibition for change or feelings of unnecessary guilt or shame. Prayer may be a successful method of coping inasmuch as it provides strength or influences resiliency for the caregiver; yet, at the same time, it may lead to passivity and resistance to meaningful change with the stance of leaving it all in “God’s hands” (Gotterer, 2001). The social worker must be cognizant to the possibility of the caregiver maintaining a firm belief in the benefit of prayer against burden, while the worker identifies such a process as harmful if the caregiver uses the coping strategy (consciously or otherwise) as justification for negligence to essential caregiving responsibilities. In such an aforementioned situation, Gotterer (2001) reminds the profession that “it is not the social worker’s responsibility to change a client’s beliefs, but rather to help clarify them so that the client can adopt ones that support growth” (p. 189).

It is imperative to repeat that implications from this study’s results on prayer and resiliency are based on the caregiver’s private use of prayer. Implications of prayer engaged by the practitioner, either personally or collaboratively with clients, should be derived from other studies (e.g., Jones et al., 1992) and should not be inferred from current results.

Implications for Social Work Education

The effective integration of the caregiver’s spirituality, which includes the coping method of prayer, into the assessment and strengths-promoting processes of practice is contingent upon social workers developing a degree of competence in these areas (Hodge, Cardenas, & Montoya, 2001). Evidence suggests, however, that social workers do not have the necessary training to address spiritual dimensions in a spiritually sensitive manner. Spiritually sensitive implies recognition of the client’s spiritual beliefs, values, and practices, and the competence to
implement interventions that are congruent with such (Hodge, 2004). Results from an extensive, exploratory report of 208 MSW students on the topic of spirituality revealed that almost two-thirds of the respondents (65%) reported receiving little or no education in the area of spiritually-oriented interventions (Sheridan & Hemert, 1999). Asked about their satisfaction with the amount of education in this area, almost twice as many students reported some level of dissatisfaction compared to those who reported satisfaction. The aforementioned lack of education is startling when one considers the common use of said interventions in practice. A survey of 109 randomly selected licensed clinical social workers exposed the commonality of employment of spiritually-oriented interventions: 95% knew their client’s religious or spiritual backgrounds; 67% helped clarify clients’ religious/spiritual backgrounds; 65% used religious/spiritual language or concepts; 33% recommended participation in religious/spiritual programs to their clients; yet 82% reported that spirituality-related content was “rarely” or “never” presented in their clinical graduate education (Sheridan, Bullis, Adcock, Berlin, & Miller, 1992). A survey of 340 practitioners and members of the National Association of Social Workers (NASW) revealed similar findings: 92% of respondents have considered spiritual issues in practice; 55% reported the need to work with the client’s spirituality; yet 73% reported receiving no content on religion or spirituality in their graduate social work education (Derezotes, 1995).

Implications from the current study buttress the concern addressed in the studies above. The spiritual practices of AD caregivers, including prayer, should be addressed explicitly in social work curricula. AD caregivers are a rapidly growing population, with five million families currently providing care for an afflicted family member (NAC/AARP, 1997). This population merits attention in various social work courses, especially those associated with issues of aging.
The failure of social work curricula to examine caregivers’ use of prayer and its effect is an incredible act of academic neglect to students, considering that prayer is the most commonly reported coping response to caregiving burden among the population. The research has shown that most students will eventually recognize and address elements of clients’ spirituality in practice, regardless of level of education and training in this area; with caregivers as clients, this is an appropriate practice given the previous statement as well as the current study. The efficacy of this practice depends on the level of interest and training set forth in the social work classroom and fieldwork, as reflected by the sentiments of Dr. Hugo Kamya (2000), associate professor of social work at Boston College:

   Just as social work students need to enhance their multicultural attitudes, skills and sensitivity to issues of gender, race, and other aspects of diversity, they also have an obligation to develop their multicultural attitudes and increase their skills and sensitivity to issues of spiritual well-being – their own and that of their clients. (p. 240)

Limitations

Caveats need to be applied to the findings of the present study in some respects. The larger population of this study was identified: AD caregivers in the United States. Because enumerating every AD caregiver is impossible, a purposive sampling technique (see Rubin & Babbie, 2001, p. 254) was employed for self-selecting caregivers in support groups across the southeast region of the country. Purposive sampling carries the same limitations as most nonprobability sampling techniques. According to Rubin and Babbie (p. 259), there is less likelihood that a nonprobability sample will be representative (or as representative) of the population from which it is drawn compared to a probability sample. Nonprobability samples are generally less reliable than probability sampling methods. Yet, as discussed in the Methodology
chapter, there were a number of reasons for employing the purposive sampling technique. Primarily, selecting the sample specifically from Alzheimer’s Association caregiver support groups yielded assurance of a considerable sample size, thereby raising the comprehensiveness of understanding the subject of study (Rubin & Babbie, p. 401) and increasing the levels of power and effect size with hypothesis testing.

There are disadvantages to the self-administered survey. First, although support group facilitators were present to disseminate and collect the questionnaires, there was no guarantee of available assistance every respondent. Bias to the results based on the participant’s inability or partial inability to understand any particular questionnaire item poses a validity threat (Grinnell, 1997). Second, the questionnaire is useful only with those respondents who have the physical capacities to complete it. Issues relating to visual difficulties or illiteracy again may threaten the validity of the results. Third, survey research can seldom deal with the context of social life (Rubin & Babbie, 2001, p. 381). Although the questionnaires obtained data relating to burden, coping methods (prayer), and resiliency among AD caregivers, survey research seldom, if ever, captures the total life situation of the respondents that could be acquired through direct observation. In other words, empirical data rarely reveal a deeper, richer understanding of AD caregivers that can be encapsulated through a qualitative or mixed method approach.

Another limitation to the study is the possibility of social desirability bias – the tendency of people to say or do things that will make them or their reference group look good (Rubin & Babbie, 2001, p. 178). There is the potential for any sample, including caregivers, to distort responses on a questionnaire in a manner that will reflect positively on themselves or care recipients. A prime example in the current study is responses on the ZBI, the measure of burden. A low score of burden from a particular respondent may depict an accurate portrayal of her/his
burden; on the other hand, a low score may stem from guilt resulting from the caregiver’s perception that a high score looks disparagingly on the care recipient, or on her/his role as caregiver, or both. The promise of anonymity to respondents may have curbed any social desirability effect. Yet, the caregivers participated within a support group setting, and responding to questionnaire items amidst their peers and confidants may have triggered some degree of social desirability.

There was an additional threat of validity within the context of the support group setting, relating to its potential effect on the caregiver’s emotional state at the time of data collection. Referring back to the discussion of caregiver support groups in the literature review, these groups often reduce members’ dysphoria from caregiving burden by normalizing the burdens openly disclosed by many other caregivers (AAFP, 2002; Cutler & Sramek, 1996; Zarit & Toseland, 1989). The aforementioned support group process may have skewed the results to reflect its positive effect on the caregiver, e.g., lower burden scores or higher level of resiliency, during completion of the questionnaire.

The potential for a *Hawthorne effect* in the setting of data collection – caregiver support groups – existed. A phenomenon in group-based observational research, the Hawthorne effect is described as an improvement in a process by the stimulus of being singled out and made to feel important (Free Software Foundation, 2002). In other words, the attention given to research participants may lead to participants’ awareness that they are a part of a study that can lead to improved efforts of the people involved; in turn, this knowledge may create a distortion of results. Participating caregivers received knowledge of the current study’s purpose via the cover letters attached to questionnaires. Though the researcher was not present in caregiver support groups during data collection, the presence of facilitators’ in their brief assumption to the role of
research assistants may have encouraged an atmosphere of positive responses (e.g., high resiliency score) on the survey measures.

The demographic composition of the sample suggests another limitation – a lack of diversity. The sample was predominantly made up of White, female caregivers. Though the size of the sample is substantial, generalization of results to the larger caregiver population is somewhat limited due to the lack of gender and ethnic diversity in the sample. As previously discussed, the majority of AD caregivers in this country are White females who care for a spouse or other relative. Nonetheless, the United States holds a substantial number of African American and Hispanic caregivers, approximately 13% and 4%, respectively (Fredman et al., 1995; NAC/AARP, 1997). Even though the sample reflects a fairly accurate ethnic proportion to the larger population, the limited number of cases in the sample from ethnic minorities inhibits an application of the results to these minority groups, and thus, a thorough understanding of their caregiving experiences. African American caregivers reported a higher level of resiliency and a lower degree of burden compared to White caregivers, though the differences were not statistically significant. These differences are worth mentioning because they imitate results from past studies (e.g., Aranda & Knight, 1997; Connell & Gibson, 1997; Roth, Haley, Owen, Clay, & Goode, 2001) that have suggested that African Americans may experience less vulnerability to adverse consequence of caregiving because of family role expectation, prior experience to stress, spiritual beliefs, and other factors related to the African American culture.

There was a lack of male cases in the sample, important to note as past research has documented heterogeneity in caring for dementia patients (Gwyther & George, 1986; Sommers & Shields, 1987). It should be noted that variance in resiliency scores among gender groups was not significant. The reader should infer this statistical information with caution due to the low
number of cases of males and persons of ethnic minority backgrounds in the study. Also, no assessment was given to whether the care recipient was institutionalized or community-dwelling. The living arrangements of care recipients may have had some influence on responses to questionnaire items, though a previous study revealed that such a variable had no significant influence on the caregivers’ perceptions of burden or use of coping strategies (Pratt et al., 1995). Lastly, the sample was drawn from support groups located in the southeast United States. Generalization of results to caregivers in other areas of the nation is tenuous, provided any differences in caregiver perspectives exist influenced by any geographical effect.

Two scales in the questionnaire are recently created measures, and thus, their properties have not been tested over an extended time or with a large number of samples. As mentioned in the Methodology chapter, the UPPMC is the first instrument to gauge prayer as a coping response to burden, and was thus deemed as a measure germane to the study’s principle independent variable. Reliability of the prayer measure was evident in Ai et al.’s (2002) original study, as well as in the current investigation, along with indication of its validity. Sound psychometric properties were derived from both studies. The resiliency measure, CD-RISC (Connor & Davidson, 2003) is a new instrument, as well. Justifications for using the CD-RISC were outlined in the Methodology chapter, including its internal consistency and validity, and brevity of scale length. Nevertheless, additional testing of the UPPMC and CD-RISC with diverse samples is needed to assure longitudinal consistency of their properties.

Future Research

The shortcomings of the current study are worthy of attention. They generate stimulus for future studies that attempt to advance the knowledge uncovered by the current investigation. Some directions for future research follow.
The current study’s sample of caregivers (N=304) were selected within the southeast region of the country. Future studies can enhance the generalization of results with an even larger sample size and drawn from a broader geographical scope, especially nationwide. The current study drew results from an overwhelming majority of White, moderately older caregivers. Future studies with attention to diversity among their samples would add to the understanding of caregivers from disenfranchised ethnic groups, as well as from marginalized or vulnerable caregivers (Grant & Whitell, 2000), including lone caregivers, men, young and inexperienced caregivers, and caregivers on low or fixed incomes.

Like the current study, most empirical research on caregivers are cross-sectional, with data observed from one fixed point in time. Analyses of caregivers’ resiliency, longitudinally designed with assessment at various chronological stages of burden and coping strategy(-ies), would eliminate a “selection” threat of validity and may provide a more ingenuous glimpse into the day-to-day caregiver experience. Because prayer is tremendously varied among any population in perception and process, studies utilizing additional measures of prayer correlated with resiliency would expose a more comprehensive understanding of its protective qualities to resiliency.

The unit of analysis in the current study was the individual caregiver; hence, the measure of prayer was squarely placed on the individual’s private process. Changing the unit of analysis to the family, and thus changing the operational strategy to reflect family prayer (see Murphy, Johnson, Lohan, & Tapper, 2002) and family resiliency (see de Haan, Hawley, & Deal, 2002), may consider a more complete picture of the intra-systemic effect of caregiving on the entire family.
Issues relating to the caregiver’s particular religious faith affiliation were not addressed in the current study. Instead, examination of the behavioral act of praying, common across all caregivers who reported its use as a coping method, was the intent. Inclusion of faith affiliation as an intervening variable on the caregiver’s use of prayer and/or level of resiliency may be more suited for theologically driven studies. Lastly, future studies should explore the possible interaction effect between prayer and the caregiver support group, both employed as coping methods, on caregiver resiliency. Professionals should not discount the potential value of caregiver support groups. Effective community intervention programs, such as caregiver support groups, will engender information about AD and community resources, offer emotional support, and increase caregivers’ confidence in problem solving and their ability to redefine problems (Pratt et al., 1985). In doing so, these programs may offer significant effect on the caregiver’s choice of coping strategies and sense of self-efficacy.

Conclusion

Approaching the AD caregiving experience based on a risk paradigm often focuses on the “deficiencies” of the caregiver that result in negative outcomes. On the other hand, addressing protective factors of resiliency is beneficial because they provide clues to the caregiver’s strength and self-efficacy, even in times of burden (Hodge et al., 2001). The modern resiliency paradigm underscores the self-esteem and self-efficacy of the caregiver by converging on the different kinds of caregiver strengths, like personal knowledge and expertise of the illness; support networks, e.g., caregiver support groups; and resources and coping strategies.

The giving of care to a loved one suffering with dementia brings more than just burden. This study would be remiss if it failed to mention some of the rewards of caregiving, in addition to a prospective heightened sense of resiliency. The relationship between caregiver and care
recipient carries the potential for numerous positive outcomes for both parties, including: a sense of mutual respect; the enjoyment of each other’s company; a sense of pride in working together; personal growth; a deepening sense of self-awareness; a heightened sense of empathy; and satisfaction of shared accomplishments (Greenberg, Greeley, & Benedict, 1994; Winefield & Harvey, 1994). Alzheimer’s is not a disease that affects only the diagnosed. The pain is felt by all of those who provide care for these individuals. The burden is persistently fought, and provides challenging opportunities to the caregiver during and after the life of the care recipient. The rewards of caregiving are understated appreciation to each person and her/his ability to care.

In this paper, the author has attempted to describe in some detail the Alzheimer’s caregiver population, and the factors and behaviors that contribute to their perceived levels of resiliency. The conceptual model in the current study related that under the existence of burden, a protective factor of the caregiver influences her/his self-perception of resiliency. The factor observed was the coping strategy of private prayer, and indeed, the strategy proved positively influential to the caregiver’s reported level of resiliency. It is hoped that information from this study will be of practical use to social workers who have regular contact with Alzheimer’s caregivers, and to educators who examine the complexities of caregiving with their students.
Bibliography

A number of sources contributed to the content in the current study. Those sources that warranted specific citations in text are listed in the reference list following this bibliographical section. The following sources, though not used for explicit referencing in text, provided background information to the researcher while conducting the study. Thus, they merit attention and are recognized below.


REFERENCES


Cook, K. V. (2000). You have to have somebody watching over your back, and if that’s God, then that’s mighty big: The church’s role in the resilience of inner-city youth. *Adolescence, 35*, 717-730.


In N. Mace (Ed.), *Dementia care: Patient, family and community* (pp. 231-242). Baltimore: The Johns Hopkins University Press.


Murphy, S., Johnson, L., Lohan, J., & Tapper, V. (2002). Bereaved parents’ use of individual, family, and community resources 4 to 60 months after a child’s violent death. *Family and Community Health, 25*, 71-82.


APPENDIX A

CAREGIVER QUESTIONNAIRE

(excluding the CD-RISC)

1. **Gender**: _____ Female  _____ Male

2. **How do you describe yourself?** (check more than one if multiracial)
   - _____ American Indian or Alaska Native
   - _____ Hispanic or Latina(o)
   - _____ Asian
   - _____ Native Hawaiian or other Pacific Islander
   - _____ Black or African American
   - _____ White

3. **Current marital status**:
   - _____ Single, never married
   - _____ Married
   - _____ Divorced
   - _____ Widowed
   - _____ Unmarried, cohabitating

4. **Age**: _____ (fill in the blank)

5. **Relationship to Alzheimer’s care recipient**:
   - _____ Spouse of recipient
   - _____ Friend of recipient
   - _____ Child of recipient
   - _____ Other

6. **How often do you engage in solitary or private prayer?** (circle one option)
   - 0-Never
   - 1-Daily
   - 2-Weekly
   - 3-Monthly

** If you answered *never* to the previous question, skip Items #7 – #15. Otherwise, please answer the remaining items. **
Please indicate how much you agree/disagree with each of the following statements:  
(check one option per item):

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Prayer is important in my life.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>8. Prayer does not help me cope with difficulties and stress in my life.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>9. I use private prayer to cope with difficulties and stress associated</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>with care-giving.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please indicate how important each purpose is to you when you pray alone:  
(check one option per item):

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Very Important</th>
<th>Important</th>
<th>Of Little Importance</th>
<th>Not at all Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Asking something for myself or for others.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>11. Giving thanks, honor, and/or praise.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>12. Expressing pain and/or asking for help.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>13. Expressing regret and/or asking forgiveness for wrongdoing.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

14. Does praying help you successfully adjust to or overcome life’s challenges?  
___ Yes  ___ No

15. If yes, please explain how prayer helps you successfully adjust to or overcome life’s challenges
The following is a list of statements which reflect how people sometimes feel when taking care of another person. Next to each statement, indicate how often you feel that way. There are no right or wrong answers.*

<table>
<thead>
<tr>
<th>DO YOU FEEL . . .</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Quite frequently</th>
<th>Nearly always</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. that because of the time you spend with your relative, you don’t have enough time for yourself?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>17. stressed between caring for your relative and trying to meet other responsibilities?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>18. angry when around your relative?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>19. that your relative currently affects your relationships with family members or friends in a negative way?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>20. strained when you are around your relative?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>21. that your health has suffered because of your involvement with your relative?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>22. that you don’t have as much privacy as you would like because of your relative?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>23. that your social life has suffered because you are caring for your relative?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>24. that you have lost control of your life since your relative’s illness?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>25. uncertain about what to do about your relative?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>26. that you should be doing more for your relative?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>27. that you could do a better job in caring for your relative?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

*The Shortened Zarit Burden Interview was used and reprinted with permission of the publisher.
Please circle the number along the continuum that best reflects your initial feeling. For these six items, **spirituality** is defined as one’s relationship to God or whatever you perceive to be your Higher Power.

### 28. In terms of the questions I have about life, my spirituality answers . . .

- no questions
- absolutely all of my questions

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>

### 29. Growing spiritually is . . .

- of no importance to me
- more important than anything else

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>

### 30. When I am faced with an important decision, my spirituality . . .

- plays absolutely no role
- is always the overriding consideration

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>

### 31. Spirituality is . . .

- the master motive of my life, directing every other aspect of my life
- not part of my life

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>

### 32. When I think of things that help me to grow and mature as a person, my spirituality . . .

- is the most important factor in my personal growth
- has no effect on my personal growth

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>

### 33. My spiritual beliefs affect . . .

- no aspect of my life
- absolutely every aspect of my life

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
</table>
APPENDIX B

CONTENT OF THE CD-RISC*

<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Able to adapt to change</td>
</tr>
<tr>
<td>2</td>
<td>Close and secure relationships</td>
</tr>
<tr>
<td>3</td>
<td>Sometimes fate or God can help</td>
</tr>
<tr>
<td>4</td>
<td>Can deal with whatever comes</td>
</tr>
<tr>
<td>5</td>
<td>Past success gives confidence for new challenge</td>
</tr>
<tr>
<td>6</td>
<td>See the humorous side of things</td>
</tr>
<tr>
<td>7</td>
<td>Coping with stress strengthens</td>
</tr>
<tr>
<td>8</td>
<td>Tend to bounce back after illness or hardship</td>
</tr>
<tr>
<td>9</td>
<td>Things happen for a reason</td>
</tr>
<tr>
<td>10</td>
<td>Best effort no matter what</td>
</tr>
<tr>
<td>11</td>
<td>You can achieve your goals</td>
</tr>
<tr>
<td>12</td>
<td>When things look hopeless, I don’t give up</td>
</tr>
<tr>
<td>13</td>
<td>Know where to turn for help</td>
</tr>
<tr>
<td>14</td>
<td>Under pressure, focus and think clearly</td>
</tr>
<tr>
<td>15</td>
<td>Prefer to take the lead in problem solving</td>
</tr>
<tr>
<td>16</td>
<td>Not easily discouraged by failure</td>
</tr>
<tr>
<td>17</td>
<td>Think of self as strong person</td>
</tr>
<tr>
<td>18</td>
<td>Make unpopular or difficult decisions</td>
</tr>
<tr>
<td>19</td>
<td>Can handle unpleasant feelings</td>
</tr>
<tr>
<td>20</td>
<td>Have to act on a hunch</td>
</tr>
<tr>
<td>21</td>
<td>Strong sense of purpose</td>
</tr>
<tr>
<td>22</td>
<td>In control of your life</td>
</tr>
<tr>
<td>23</td>
<td>I like challenges</td>
</tr>
<tr>
<td>24</td>
<td>You work to attain your goals</td>
</tr>
<tr>
<td>25</td>
<td>Pride in your achievements</td>
</tr>
</tbody>
</table>

* Connor-Davidson Resilience Scale © 2001, 2003 Kathryn M. Connor, MD, Jonathan R. T. Davidson, MD. All rights reserved