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Differences in Health Outcomes Among Four Groups of Religiously-Involved African
American Caregivers: An Exploration of Moral Community Theory

A DISSERTATION

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By

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Differences in Health Outcomes Among Four Groups of Religiously-Involved African American Caregivers: An Exploration of Moral Community Theory

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By 2050, the nation's elderly population will increase to over 88 million. The number of African American elders will expand to 9.9 million. Family members will likely provide the bulk of care to this increasing population of frail Black elders, as African Americans are much less likely to utilize formal caregiving services for their elderly loved ones. The associated health burden of eldercare is well documented. It is also widely known that religion has been fundamental in the lives of many African Americans for decades.

Guided by moral community theory, this study conducted a secondary analysis of a cross-sectional survey research design and examined differences in health outcomes among four groups of religiously involved African American caregivers ($n = 262$). The original study utilized a purposive, non-probability sample. Eligible participants were at least 18 years old and provided unpaid care to a loved one age 50 or older. The purpose of the study was to investigate how differences in organizational and personal manifestations of religious involvement impact caregiving stress, social support, physical health, and depression among African American caregivers. The independent variable was a composite variable comprised of two measures, organizational religiosity and personal religiosity, which permitted the formation of four groups.

One-way ANOVA and Discriminant Function Analysis (DFA) were utilized to test four bivariate hypotheses and one multivariate hypothesis. Bivariate results only yielded a statistically significant difference in depression scores among the four groups.

Similarly, statistically significant findings from the DFA noted that depression scores alone delineated the four groups and produced relatively high correct classification rates among participants in the two groups with either high or low levels of both organizational and personal religiosity. Results suggest that combined involvement in organizational religiosity and personal religiosity can positively impact the mental health of African American caregivers, which gives credence to moral community theory and provides an expanded application of this theory to health outcomes among a caregiving population. This research will aid the social work profession and faith community in developing the most appropriate services for addressing mental health needs among African American caregivers, grounded within moral community connectedness.

This dissertation by Jeronda T. Burley fulfills the dissertation requirement for the doctoral degree in Social Work, approved by Michael J. Sheridan, Ph.D., as Director, and by Joseph J. Shields, Ph.D., and Alfred A. Owens, Jr., D.Min. as Readers.

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DEDICATION

This work is dedicated to my parents who taught me the power of knowledge and continually instilled in me the value of education, while unknowingly cultivating an insatiable love of learning that I will always pursue.

“If you have good sense, instruction will help you to have even better sense. And if you live right, education will help you to know even more.”

Proverbs 9:9 (Contemporary English Version)

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Chapter I: Introduction to the Study

Statement of the Problem

There are more elderly persons living in the United States than ever before (Administration on Aging, 2003, 2009; US Census Bureau, 2008). In 2007, it was reported that nearly 38 million adults were age 65 and older (Administration on Aging, 2009). By 2010, this number is expected to reach 40 million. This same report suggested that persons who reach age 65 have an average life expectancy of an additional 19 years. Not only has the number of America's 65 and older group increased substantially, but the number of persons 85 and older has also expanded (Administration on Aging, 2009). According to the Administration on Aging, in 2000, there were just over four million Americans aged 85 and older. In 2010, the number is expected to increase to 5.7 million and then to 6.6 million by the year 2020. By 2050, the nation's emerging elder population is expected to expand from 37.9 million to over 88 million (Administration on Aging, 2009; U.S. Census Bureau, 2009).

The life expectancy of Americans has increased drastically within recent decades and is paving the way for record numbers of elderly persons. Several factors are attributed to this increased life expectancy for Americans, such as improved healthcare and life-sustaining medications. There have been numerous advancements in medical research, which has resulted in medicines and various technologies able to extend life and to reduce the spread of deadly diseases. Better purification methods, sanitized drinking water, and newly developed and improved vaccines have greatly reduced the spread of infectious diseases. Revolutionary medical technology has also found ways to slow the onset and/or progression of chronic and terminal diseases. Early detection of fatal health

issues has also been conducive to extended life expectancies for Americans. Improved prenatal care and more adequate nutrition have also contributed to longer life spans for most American people. Overall, numerous medical advances have developed ways to extend the human life span for many U.S. citizens (Goldman et al., 2009).

With these advancements, Americans are living longer and healthier compared to previous generations. However, this aging population and its multiple health concerns have presented challenges to the U.S. economy. In 2008, the United States spent \$2.4 trillion in healthcare costs, with costs expected to rise exponentially in the coming decades (National Coalition on Healthcare, 2009). With millions more Americans living beyond age 65, the economic impact to the U.S. healthcare system will be substantial, with many elders of all races experiencing multiple chronic health conditions requiring formal or informal care (Administration on Aging, 2009; Boufford & Lee, 2001; National Center for Health Statistics, 1996).

Background of Problem

African Americans and Health

As noted above, the modernization of America has ushered in an era full of medical and technological advances, which have greatly attributed to sustained aging of the entire country, impacting all racial groups. As the majority population lives longer, so does the minority population. Not only are minority populations living longer, but their numbers have also increased. Specifically, the number of African Americans has increased substantially in recent years. The Office of Minority health reported that in 2007, African Americans were the second largest minority group, with Latinos/Hispanics being the largest. This same office further reported that 40.7 million Americans were

African American, comprising 13.5% of the civilian, non-institutionalized persons in the United States. As part of the nation's expanding minority population, the African American population is expected to increase from 40.7 million to 65.7 million by 2050, and the number of Black elders will increase from 3.1 million to 9.9 million (Administration on Aging, 2009; Bowles & Kington, 1998; U.S. Census Bureau News, 2008).

Although the number of African Americans in the United States is steadily increasing, they continue to have the lowest life expectancy of any group, with an average life expectancy of 70.2 years, compared to 76.5 years for all other groups (U.S. Census Bureau News, 2008). Statistics also consistently indicate that while African Americans are living longer, elderly Blacks report substantially higher rates of poor health than Whites (Administration on Aging, 2009; National Center for Health Statistics, 1996). Not only do medical data reveal that Black elders have greater concerns than aging White Americans, but African Americans in general experience poorer health and die younger (Davis et al., 2008). There are numerous diseases that are far more prevalent in the Black community, including heart disease, diabetes, cancer, stroke, asthma, and HIV/AIDS. African Americans also have higher rates of infant mortality and increased numbers of homicides than the White community (Davis et al., 2008).

Healthcare disparities, health behaviors, socioeconomics, and psychosocial stress are but a few of the reasons that African Americans experience more health issues than Whites. Research confirms that Blacks have unequal access to healthcare, and when healthcare is received, it is often inadequate in comparison to their White counterparts (Davis et al., 2008; Dressler, 1993). African Americans also engage in self-destructive

behaviors such as smoking, drinking, and drug use. Participation in these harmful behaviors is reportedly driven in part by an attempt to cope with the psychosocial stressors of racism and discrimination, which many African Americans face on a daily basis (Drentea & Goldner, 2006; Dressler, 1993). The burdens that African Americans face on a day-to-day basis at work, at home, and in the community are multi-layered and sometimes detrimental to one's health. As African American adults deal with their own chronic health issues and psychological distress, many are also faced with caring for their aging parents, spouse, or other family member. This caregiver role entails an enormous responsibility that can be likened to having a part-time or full-time job along with other responsibilities such as employee, parent, or spouse. By definition, a caregiver is a person at least 18 years or older who provides unpaid care for another adult 18 years or older (National Alliance for Caregiving & AARP, 2004).

African Americans and Caregiving

The increasing numbers of Black elders often remain at home as they battle chronic and terminal illnesses. Immediate and extended family members will likely provide the bulk of care for these frail aging African Americans (Administration on Aging, 2003; Bowles & Kington, 1998). Studies have shown that although caregivers do choose to utilize formal settings, such as nursing homes or assisted living facilities to care for their elderly loved ones, African Americans were much less likely to make use of these formal caregiving services and have a greater preference for home care by a family member (Belgrave, Wykle, & Choi, 1993; Foley, Tung, & Mutran, 2002; Greene & Ondrich, 1990; Sudha & Mutran, 1999). Lower income Blacks and Whites were both found to have stronger leanings toward home care for their frail elders (Foley, Tung, &

Mutran, 2002). Research has revealed that when African Americans have chosen to utilize formal caregiving facilities, the quality of care provided has been found to be grossly inadequate (Howard, et al., 2002), which may contribute to the reluctance to use such care among this population.

Caring for a parent or elderly relative at home is often anticipated within the African American community and some experience a sense of accomplishment and fulfillment from such a dutiful task. When compared to Caucasians, data suggested that African Americans have a much more positive view of their caregiving experience and related stressors that come along with home care for their Black elders (Chadiha, Rafferty & Pickard, 2003; Dilworth-Anderson et al., 2002; Haley et al., 1996; Haley et al., 2004). Obligation and loyalty are some reasons that African Americans care for their Black elders at home, as noted in research conducted by Foley, Tung, and Mutran (2002). These authors found that African Americans reported a sense of moral obligation to care for their aging loved ones, which was also revealed as a protector factor against the negative impact of caregiving on one's mental health (Foley, Tung, & Mutran, 2002). Researchers indicated that not only were African Americans more likely to care for their elders at home, but Black caregivers also reported less self-loss and greater self-gain because they felt they were doing what was expected (Foley, Tung, & Mutran, 2002).

The negative impact of caregiving stress on caregivers' mental and physical health is well documented (Brown et al., 2009; Cannuscio et al., 2002; Haug, Ford, Stange, Noelker, & Gaines, 1999; Schulz & Beach, 1999). African Americans are already at greater risk for numerous health problems such as hypertension, cardiovascular disease, asthma, diabetes, high cholesterol, depression, and higher mortality and Blacks

are often overwhelmed with daily life stressors such as racism, discrimination, poverty, financial difficulties, inadequate education, substandard housing, and under-and unemployment (Bowles & Kington, 1998; Drentea & Goldner, 2006; Dressler, 1993). It is likely that the additional strains associated with elder care, coupled with other life stressors, may lead to increased vulnerability for physical and mental health problems among African American caregivers.

African Americans and Religion

For decades, religion has been fundamental in the lives of African Americans (Chatters, Taylor, & Lincoln, 1999; Lincoln & Mamiya, 1990) and has been found to be a viable coping mechanism for stressors common to the Black community (Billingsley & Caldwell, 1991; Ellison, Musick, & Henderson, 2008; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005). Traditionally known as a people of faith, African Americans have been described as a highly religious group and as a result have held firmly to their religious traditions. Substantial numbers of African Americans report high levels of religious involvement, both organizationally and personally, with Black women demonstrating greater religiosity than Black men (Chatters & Taylor, 1989). Subsequent research by Chatters, Taylor, and Lincoln (1999) revealed that Black women attend religious services more often than Black men, married persons attend church more than single persons, and African Americans living in the Southern region of the United States attend religious services more than Blacks from any other region. This same study found a positive relationship between educational levels and religious service attendance.

Additional studies have found a relationship between religious involvement and mortality for African Americans (Dupre, Franzese, & Parrado, 2006; Marks, Nesteruk,

Swanson, Garrison, & Davis, 2005). Qualitative data further illuminated quantitative research holding that African Americans who attend weekly worship services or more live significantly longer (Marks, Nesteruk, Swanson, Garrison, & Davis, 2005). These researchers documented several themes, one of which suggested that regular worship attendance keeps older African Americans engaged and active. Another theme from this qualitative research suggested that the social support gained from one's church family is vital. These data attributed the longevity of some African Americans to their regular church involvement. Further examination of African American's religious involvement revealed that attending church once a week or more was critical to longevity, particularly for older adults (Dupre, Franzese, & Parrado, 2006).

The Black Church

Attending church for many African Americans is more than just a religious experience. The Black church is the bedrock of the African American community (Lincoln & Mamiya, 1990) and for many it serves not only as a religious entity, but the Black church simultaneously acts as an educational institution, a financial institution, a political organization, a social service provider, and a center for social connections (Billingsley & Caldwell, 1991; Chaves & Higgins, 1992; Lincoln & Mamiya, 1990). The Black church is not a single church, but rather it is an affectionate term that is used to refer to a collection of Christian denominations with predominantly African American congregations. Black churches, although varied in denominational affiliation, hold the Judeo-Christian Bible as their central guiding religious text (Barnes, 2005). The communities of churches that represent the Black church share a unique history, culture, and role in Black life (Douglas & Hopson, 2001). The Black church is an autonomous

and distinct institution in that it is one of few Black institutions that remain essentially free from White control (Billingsley & Caldwell, 1991; Douglas & Hopson, 2001; Lincoln & Mamiya, 1990).

As an important institution, the Black church has been widely studied in research on African Americans, particularly as it relates to religion, social support, stress, and health. Many African Americans turn to their faith in order to deal with daily stressors and the Black church provides a venue for relief, while serving as the center of the community providing a range of community-focused activities to address the spiritual, physical, mental, financial, and social needs of the people (Billingsley & Caldwell, 1991). The Black church has been the supportive vehicle through which many African Americans have found support in dealing with daily stressors and societal obstacles (Ellison, Musick, & Henderson, 2008; Kip, Peters, & Morrison-Rodriguez, 2002; Lincoln & Mamiya, 1990; Taylor, Chatters, & Levin, 2004). This church-based social support had a positive impact on the stress, mental health, and physical health of African Americans and has been linked to improved health outcomes (Jang & Johnson, 2003, 2004; Krause, 2002; Krause & Chatters, 2005; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005; Taylor, Lincoln, & Chatters, 2005).

The remaining portion of this chapter provides an overview of the author's interest in the problem, a description of the study's purpose, and a discussion of research's significance to the field of social work. The chapter also delineates the study's research question and hypotheses. The chapter concludes with a description of the remaining chapters in the dissertation.

Interest in Problem

The author's specific interest in African American caregiving was peaked while serving as a research assistant on the original study from which this secondary data were conducted. The author was selected to participate on the African American caregiver project because of years of research on issues related to African Americans and religion and the Black church. A passion of this researcher is the sometimes underestimated, yet viable, contributions of the African American faith community. For decades the Black church has provided an array of faith-based social services to its congregations and to the surrounding communities. It has mostly done so at no cost and with little to no financial support of outside agencies. African Americans are known to be people who hold firmly to their religious faith. For many in this group, religion is not merely a Sunday activity, but it involves nearly every aspect of their lives. The Black church is an extension of the family and a place where one can gain spiritual, financial, educational, mental, physical, and social support.

As a social worker, a licensed minister, and a person of color, the author is particularly interested in matters of faith within the Black community. Working on the African American Caregiver project brought an even greater awareness and concern about the burden that many caregivers reportedly experience as they take on the responsibility of care for themselves, their immediate family, and their extended family members. A year of weekly interviews with these dedicated caregivers gave a great impression and made an indelible mark on the author's social work journey. Through over a hundred timely quantitative and qualitative interviews, the author could not help but consider the likely caregiving responsibilities that might soon become a personal

reality. Overwhelmed at hearing about the struggle of study participants who most often willingly and readily took on the enormous task of caregiving, and also struck by the mere thought of this becoming a forthcoming personal reality, with personal religious convictions and faith-based allegiances in mind, the author thereby made a commitment to conduct further research in the area of caregiving and its impact on African Americans.

Purpose of Study

The current study conducted a secondary data analysis to examine differences in health outcomes among four groups of religiously involved African American family caregivers. The purpose of this research was to investigate the impact of varying levels (high vs. low) of organizational and personal religious involvement on caregiving stress, social support, physical health, and depression among this population. A substantial body of research previously has explored the relationships between religion and health; African Americans and religion; African Americans, stress, and religion; and African Americans, health, and religion. Previous research on the role of organizational religiosity versus personal religiosity has not been extended to caregiver stress, social support, and physical and mental health among African American caregivers. Therefore, this study represents the first research to examine varying aspects of religious involvement on caregiving stress, social support, depression, and physical health among this vulnerable population. Findings from this research will inform both the social work profession and the faith community regarding factors supportive of caregiver health and well-being.

Research Question

This study investigated the following research question: What are the differences between four groups of religiously involved African American caregivers on caregiving stress, social support, physical health, and depression? Scores on both organizational and personal religiosity measures defined the four groups: 1) high organizational/high personal (HO/HP); 2) high organizational/low personal (HO/LP); 3) low organizational/high personal (LO/HP); and 4) low organizational/low personal (LO/LP). Classification as “high” or “low” was determined using the median score on each measure.

Hypotheses

The following four bivariate hypotheses were tested:

- Hypothesis 1: Participants identified as having high organizational/high personal (HO/HP) religious involvement will report the statistically significant lowest levels of *caregiving stress*, highest levels of *social support*, lowest levels of *depression*, and lowest number of *physical health* problems.
- Hypothesis 2: Participants identified as having high organizational/low personal (HO/LP) religious involvement will report statistically significant lower levels of *caregiving stress*, higher levels of *social support*, lower levels of *depression*, and lower number of *physical health* problems.
- Hypothesis 3: Participants identified as having low organizational/high personal (LO/HP) religious involvement will report statistically significant higher levels of *caregiving stress*, lower levels of *social support*, higher levels of *depression*, and higher number of *physical health* problems.

- Hypothesis 4: Participants identified as having low organizational/low personal (LO/LP) religious involvement will report the statistically significant highest levels of *caregiving stress*, lowest levels of *social support*, highest levels of *depression*, and highest number of *physical health* problems.

A multivariate hypothesis also will be tested, which explores the predictive power of the four dependent variables to correctly identify group membership. Specifically, it is hypothesized that caregiving stress, social support, physical health, and depression will significantly discriminate between the four groups, with the HO/HP showing the most positive profile, followed by the HO/LP, LO/HP, and LO/LP groups.

Significance of Research to Social Work

These study findings will aid the social work profession and faith community in developing the most appropriate services for African American caregivers in order to maintain moral community connectedness, which may in turn reduce caregiver burden and support the well-being of family caregivers. The current research expands the use of the moral community theory beyond its usual focus on research on substance abuse and other deviant behavior to look at the possible utility of the theory for maintaining health and well-being among individuals often served by social work practitioners. By exploring the proposition that caregivers who are more connected to their religious, moral communities will have less caregiving stress, greater social support, better physical health, and less depression, the current research makes a significant contribution to the social work knowledge base. This study's expansion of the moral community theory to the realm of family caregiving is also an innovative contribution to the field.

The findings from this research have several implications for social work practice. Social workers are increasingly working more with faith-based organizations on various issues that affect local and national communities. Resultant data from this study will better inform the services social workers provide to faith communities and have the potential to forge new and improved collaborative efforts with religious institutions, particularly within the African American community. This research can stimulate thinking on ways that social workers can collaborate with religious organizations in order to build new and strengthen existing partnerships with Black churches and other African American organizations within the faith-based community. Social workers already provide unparalleled support to family caregivers and care recipients. From this research, social workers will be able to glean additional insight to aid in the development of new social work based programs designed to reduce caregiver burden and caregiving stress.

This study is also significant to social work education because it offers social workers new information concerning the influence and impact of religion in the Black community, specifically as it relates to caregiving. These research findings can be used to enhance social work courses that address gerontology issues and the expanding role of caregivers. These data will provide cultural relevance to aging content within the social work curriculum, particularly as it applies to African American caregivers. This study also provides knowledge concerning the important role of religion and spirituality and caregiving and other issues related to African Americans and religion. The findings lend empirical support to efforts to address the growing needs of African American caregivers. Additionally, this research has the potential to increase cultural sensitivity and relevance for social work practice by highlighting the specific role of faith for Black community.

Finally, this study has implications for policy because it can aid in the development of new faith-friendly policies, especially for African American caregivers and perhaps for other races of caregivers for whom religion is important. These findings illuminate the role that the Black church can fill in regards to African American caregivers and care recipients. Data will highlight the economically prudent assistance that faith organizations can offer to African American caregivers. This may subsequently help to reduce the economic burden to the United States healthcare system by reducing caregiving related costs. Findings from this study can also support the National Association of Social Workers and its efforts to close the gaps in eldercare services by lobbying for policies that will enhance the welfare of caregivers and care recipients.

Chapter Summary

This chapter introduced an increasing concern facing social workers, which is an expanding elderly population in need of care. Of equal concern is the simultaneously growing number of caregivers. Estimates suggest that there are 44.4 million caregivers in the United States (National Alliance for Caregiving & AARP, 2004). It is not uncommon for family member to assume the primary responsibility of caring for their frail relatives, particularly within the African American community. As the numbers of African American elders rise, so will the numbers of family caregivers. These Black caregivers face a daily barrage of stressors such as those related to work, finances, marriage, health, and parenting. For all Americans, particularly African Americans, the inevitable pressures of caregiving generate added responsibilities that can ultimately have a detrimental affect on one's financial, social, mental, and physical health.

Many African Americans turn to their religious faith as a primary vehicle to help them cope with the strains associated with caregiving. Therefore, the current study engaged a sample of various levels of religiously involved African American caregivers to determine the differences in caregiving stress, social support, physical health, and depression. The next chapter of this dissertation, Chapter Two, will include an overview of the study's theoretical framework and a thorough review of the literature informing the author's research. Chapter Three provides an overview of the study design, study population and sampling plan, variable measurement, and details of data analysis. Chapter Four includes descriptive data on sample characteristics, estimates of reliability for each of the study's measures, and findings from univariate, bivariate, and multivariate analyses. The dissertation concludes in Chapter Five with a summary of major findings and implications of these findings for social work practice, discussion of study limitations, and recommendations for future research.

Chapter II: Review of the Literature

The majority of the articles included in this literature review were identified by electronic searches of the following databases: Social Work Abstracts, Encyclopedia of Social Work, Sociological Abstracts, Social Service Abstracts, Academic Search Premier, CINAHL Plus with Full Text. Most of the studies reviewed were conducted within the last 10 years. However, the theoretical portion of literature spanned several decades in order to include seminal works in the field that are critical to the foundation of this study. The following six bodies of literature were reviewed: moral community theory, religiosity, caregiving stress, social support, physical health, and depression.

Moral Community Theory

The theoretical framework guiding this study is the moral community theory, which emerged from investigative research by Durkheim, considered to be the originator of the theory, and various researchers who continued to explore the theory's validity. This review will present a body of literature that includes 17 empirical investigations of moral community theory (Albrecht, Chadwick, & Alcorn, 1977; Burkett & White, 1974; Cochran & Akers, 1989; Cornwall, 1989; Durkheim, 1897, 1915; Elifson, Peterson, & Hadaway, 1983; Ford & Kadushin, 2002; Higgins & Albrecht, 1977; Hirschi & Stark, 1969; Johnson & Mullins, 1990; Regenerus, 2003; Richard, Bell, Carlson, 2000; Shields, Broome, Delany, Fletcher, & Flynn, 2007; Stark, 1996; Stark, Doyle, & Kent, 1982; Welch, Tittle, & Peete, 1991). These studies will be discussed within three sections. First, two seminal studies by Emile Durkheim are reviewed, which laid the groundwork for the original development of moral community theory. Next, eleven studies that highlight the original and widely recognized contemporized version of moral community

theory, are presented, along with several replication studies. Most of these articles provide a further critique of the unexpected findings from Hirschi and Stark's 1969 study on religion and delinquency. In three of these works, Stark revisits his 1969 landmark research and offers an alternative perspective to the findings. In the final section, four studies detail research that expands the use of moral community theory to include substance abuse treatment outcomes.

Foundational Works of Emile Durkheim

Moral community theory is rooted in the early work of the French sociologist, Emile Durkheim. One of Durkheim's earliest and seminal works was a book titled *Suicide: A Study in Sociology*, which he wrote in 1897. In this landmark project, Durkheim conducted a sociological study that explored suicidal rates among Catholics and Protestants in countries throughout Western Europe. His research found that Catholics had lower rates of suicide than Protestants, which he attributed largely to stronger social control within this religious group.

Durkheim (1897) held that the level of attachment people maintained with their respective groups impacted social control. He termed these levels "group attachment or social integration." As defined by Stark and Bainbridge (1969), this group attachment or social integration is an individual and collective shared willingness to conform to a set of norms or rules that define what is considered proper interaction. This proper interaction gives definition to the moral order of the group. Durkheim (1897) noted that Catholics greatly frowned upon the act of suicide, viewed it as a mortal sin, and considered it as being in great opposition to the norms and rules of what Catholicism regarded as proper interaction. Additionally, Catholics reported what Durkheim held to be normal levels of

attachment to their faith, resulting in normalized levels of social integration. While Protestants also disagreed with suicide, they were more forgiving of suicide than Catholics. Durkheim further purported that Protestants had abnormally high or abnormally low levels of social integration, which he believed contributed to increased suicide rates. Therefore, Durkheim attributed these differences in suicide rates among Catholics and Protestants to varying levels of social integration or group attachment.

Durkheim further explicated his views on moral order in his second foundational work on the study of religion, published in *Elementary Forms of Religious Life* (1915). Like other social scientists of the 18th century, Durkheim believed that religion reinforced moral order. He maintained that the extent of a person's moral nature was closely connected to the degree that he or she was socially connected. His subsequent analysis of religion regarded this as a social phenomenon. While Durkheim was not a religious man, he did believe that the imminently social nature of religion was the key to sustaining moral order (Stark & Bainbridge, 1996). As such, he suggested that there was an integrative function to religion whereby its uniting power bound the followers to what he termed a moral community (Durkheim, 1915). In this seminal work on religion, Durkheim defined religion as "a unified system of beliefs and practices relative to sacred things" (as cited in Stark & Bainbridge, 1996, p. 54). He reported that these beliefs and practices united those who adhered to them, thereby forming this moral community. For Durkheim, moral communities were ones in which religion permeated social life and where there was an overwhelming amount of religious consensus and homogeneity (Stark & Bainbridge, 1996). Because religion was practiced within the confines of a church,

Durkheim equated the moral community with the church community as a social institution.

Moral Community Theory and Delinquency

Durkheim's foundational study on religion and the development of the moral community perspective has largely impacted the body of research on deviant human behavior and delinquency. The extant literature is replete with studies that have examined the link between religion and delinquency (Burkett & White, 1974; Cochran & Akers, 1989; Cornwall, 1989; Elifson, Peterson, & Hadaway, 1983; Ford & Kadushin, 2002; Higgins & Albrecht, 1977; Hirschi & Stark, 1969; Johnson & Mullins, 1990; Regnerus, 2003; Richard, Bell, & Carlson, 2000; Shields, Broome, Delany, Fletcher, & Flynn, 2007; Stark, 1996; Stark, Kent, & Doyle, 1982; Welch, Tittle, & Petee, 1991). Nine of these studies revealed that religious institutions or moral communities have the ability to exert substantial influence over the behavior of its followers (Cochran & Akers, 1989; Cornwall, 1989; Elifson, Peterson, & Hadaway, 1983; Higgins & Albrecht, 1977; Johnson & Mullins, 1990; Regnerus, 2003; Stark, 1996; Stark, Kent, & Doyle, 1982; Welch, Tittle, & Petee, 1991). The correlation between the moral climate or religious context and deviance was highlighted in several of these studies, as indicated by reportedly fewer delinquent acts such as alcohol use, marijuana use, theft, or vandalism committed by those who reside within a religious community or have higher rates of church attendance (Cochran & Akers, 1989; Higgins & Albrecht, 1977; Stark, 1996; Stark, Kent, & Doyle, 1982). Additionally, researchers found that personal religiosity and religious commitment were linked to a reduction in delinquent behavior (Cornwall,

1989; Elifson, Peterson, & Hadaway, 1983; Johnson & Mullins, 1990; Regnerus, 2003; Welch, Tittle, & Petee, 1991).

Hirschi and Stark (1969) conducted the most widely replicated research on the relationship between religion and delinquency. This landmark study was titled “Hellfire and Delinquency.” These researchers took note that judges would routinely require juvenile offenders to attend church in an effort to develop their moral character, which was believed to cause a reduction in deviant behavior. Consequently, Hirschi and Stark (1969) sought to further understand the impact of church attendance on juvenile delinquency, since many religious leaders of the time blamed increased crime on immorality. This research included a sample of 4,077 junior and senior high school students in California. The students completed a questionnaire that requested self-reports of delinquent behaviors such as larceny, vandalism, and assault. Police records were also used to determine the amount of delinquent acts. Hirschi and Stark developed a measure of religiosity that evaluated the level of church attendance by participants in the student sample. In addition, the “Supernatural Sanctions Scale” measured whether or not students believed in life after death and/or the devil.

Contrary to the widely held belief that religious beliefs and church attendance reduced deviant behavior and delinquency, Hirschi and Stark (1969) found that religious youth were no less likely to commit delinquent acts than nonreligious youth. The authors highlighted the fact that the church was not the only institution to condemn deviant behavior. School officials, the media, politicians, and a host of others all condemned delinquency; therefore, the researchers were not astonished by the findings which suggested that churchgoers were no more likely to commit delinquent acts than others

who were less religious. However, Hirschi and Stark did find a strong negative relationship between adherence to basic moral values and acceptance of conventional authority and delinquency among this sample of high school students. This relationship between religious commitment and delinquency did exist, but the relationship was not related to religious participation. Similarly, the belief in supernatural sanctions was related to religious participation, but it was not related to delinquency.

While these 1969 findings were accepted for several years, this research was later met with critique and even re-examination by its original authors, as researchers in the field were surprised to learn of the debunked relationship between religion and delinquency (Burkett & White, 1974; Cochran & Akers, 1989; Elifson, Peterson, & Hadaway, 1983; Higgins & Albrecht, 1977; Stark, 1996; Stark, Kent, & Doyle, 1982). Several researchers replicated the Hirschi and Stark (1969) study in attempts to better understand the seemingly contradictory results of this research (Burkett & White, 1974; Cochran & Akers, 1989; Higgins & Albrecht, 1977). The findings from these studies are presented below.

Replication Studies

In 1974, Burkett and White distributed an anonymous questionnaire to an all-Caucasian sample of 855 high school seniors from three Pacific Northwest high schools. Researchers used three scales to measure the respondents' acceptance of certain moral values, acceptance of worldly authority, and belief in the possibility of supernatural sanctions. Each scale was comprised of items identical to those used by Hirschi and Stark in their 1969 study on religion and delinquency, with the exception of some minor revisions to the wording of certain items. The Burkett and White study also measured

student involvement in larceny, vandalism, and assault. These study findings reconfirmed the Hirschi and Stark (1969) results. Additionally, researchers found a moderately strong negative relationship between religion and the use of marijuana and alcohol. These results gave pause to blanket generalizations regarding the relationship between religious participation and delinquency, which suggested that the impact of religion on delinquency varied by delinquent behaviors.

Higgins and Albrecht (1977) conducted another replication of the 1969 Hirschi and Stark study. These researchers distributed a questionnaire to 1,383 10th graders in Atlanta, Georgia. The authors included religious affiliation in their religious measure and, like Burkett and White (1974), they also included marijuana use as an additional variable. The Higgins and Albrecht (1977) study yielded different results than the Hirschi and Stark findings, demonstrating a moderate negative relationship between religion and delinquency. A likely explanation for these findings was believed to be the contextual factor of the rural Southern sample, an area known to be largely religious. Additionally, like Burkett and White, the researchers also found a strong negative relationship between religion and marijuana use. Further, this research revealed that religiosity was positively linked to respect for the juvenile justice system, and subsequently negatively related to delinquency. These results further contradicted study results by Hirschi and Stark (1969) and Burkett and White (1974).

Later in 1977, Albrecht and colleagues also attempted to replicate the original Hirschi and Stark (1969) study. This replication included a sample of Mormon youth from wards located in southern Idaho, Utah, and Los Angeles. Similar to Burkett and White (1974) and also Higgins and Albrecht (1977), these researchers also found a

considerable negative relationship between religiosity and delinquency. Data from this study and previous replication studies merely added to the questions concerning the results found by the original 1969 Hirschi and Stark study, which suggested that there was no relationship between religious participation and delinquency. Subsequent studies (Cochran & Akers, 1989; Elifson, Peterson, & Hadaway, 1983; Stark, Doyle, & Kent, 1982) continued to re-examine this landmark research by Hirschi and Stark (1969) by expanding the sample types to further evaluate apparent contextual differences that were emerging in study results.

Studies Examining Contextual Factors

The differing findings in the literature on religion and delinquency led Stark, Doyle, and Kent (1982) to investigate the relationship between religious commitment and delinquent behavior within both religious and secular communities. The researchers interviewed a national sample of 16-year old boys from 87 high schools within a largely religious Mormon community in Provo, Utah and also within a largely secular community in Seattle, Washington. The study's measure of religiosity included a religious values index, importance of religion, and frequency of church attendance. Respondents noted the frequency of delinquent acts and the total number of delinquent behaviors committed out of a list of 26 acts. These researchers maintained that when no religious effect was found in previous studies, it was likely because the research was conducted on a largely secular and non-religious sample. They further noted that previous studies demonstrating a religious effect were within largely religious samples. These observations led Stark, Doyle, and Kent to specifically consider the impact of a religious ecology on delinquency. As predicted, their 1982 study found a very significant

negative relationship between religious commitment and delinquency in schools where there were a majority of religious students, but did not reveal a significant relationship in secular communities. Based on these findings, the authors maintained that when the surrounding community is dominated by religious beliefs and concerns, the religiosity of the individual would impact delinquent behavior. In contrast, the researchers held that if the surrounding community were highly secular, religiousness would have a limited effect on delinquency. These findings led Stark, Doyle, and Kent to conclude that it was the moral climate of the community that determined the impact of religion on delinquency. These findings gave credence to Durkheim's moral community theory, which holds that the religiosity within the culture influences an individual's religious commitment, which consequently has an impact on social control.

After Stark, Doyle, and Kent's (1982) research on religion and delinquency was published, further critique of Hirchi and Stark's "Hellfire and Delinquency" (1969) findings continued. Cochran and Akers (1989) evaluated the original research, subsequent replications, and study variations of the original research. These authors also conducted their own research on an all-Protestant and all-Caucasian convenience sample of 3,065 adolescents in grades 7-12. They measured self-reported marijuana and alcohol use among the religious adolescent sample. In addition to its self-reported drug use measures, Cochran and Akers also added a measure of religious commitment and religious context to the participant questionnaire. The researchers found only slight contextual effects for religiosity and drug use among their all-Protestant sample, despite the fact that the schools sampled were in highly religious areas. Similarly, Elifson, Peterson, and Hadaway (1983) also claimed to identify only slight contextual effects

among their random sample of 600 adolescents from a public school in Dekalb County, Georgia. One-hour, home-based interviews were conducted with this adolescent sample. The researchers developed a scale to measure delinquency and church attendance and the study also included a measure of morality. The findings revealed a weak negative relationship between church attendance and delinquency. Both of these studies (Cochran & Akers, 1989; Elifson, Peterson, & Hadaway, 1983) gave rise to questions about the moral community theory since both samples were substantially religious.

Like others, Stark (1996) again revisited his “Hellfire and Delinquency” research in order to better understand the contextual differences that emerged from the study findings in order to explain the impact of religion on deviance. In his own replication study, Stark (1996) used contextual theory to examine the ecological relationship between religion and delinquency. He conducted a secondary data analysis of a national sample of 11,995 high school seniors from the 1980 Study of High School and Beyond. This research noted that the East, Midwest, and South had a 60% rate of church membership, the highest in the country. These regions also reported strong correlations between religion and delinquency. Stark found a strong negative correlation between alcohol and church attendance, particularly for Protestants. A similar result was found between church attendance and marijuana use. Based on these findings, Stark concluded that consideration must be given to the social context and social structures in order to fully understand why some studies found no religious effects on delinquency for samples within the Pacific Northwest and Mountain regions of the country. Stark’s 1996 replication confirmed earlier intriguing findings (Stark, Kent, & Doyle, 1982), which held that religion did constrain delinquent behavior and caused sanctions to the normative

system, but only where the individual's religious convictions were reinforced by their social environment or moral community.

Impact of Individual Religiosity and Group Religiosity on Behavior

Cornwall's (1989) investigative efforts sought to give further explanation of the idea of moral community and its contextual impacts, with research aimed at examining the impact of religious communities on behavioral expectations and the development of a religious worldview. This study sample was comprised of adults within 27 Mormon wards throughout the United States. Respondents completed a 32-page questionnaire, which examined their religious behavior, personal community relationships, religious belief and commitment, and religious socialization. The path analysis revealed that religious commitment had the strongest direct effect on religious behavior, with belief, personal community relationships, and religious socialization having an indirect effect on behavior. The belief and commitment variables were most strongly correlated with religious behavior. Similar to Stark's thesis (Stark, 1996; Stark et al., 1982), Cornwall concluded that individual belief in and also commitment to the norms of a religious group were stronger predictors of behavior rather than imposed sanctions by the group for non-compliance or behavior that the group deems unacceptable.

Other researchers have noted differences between individual or private religiosity and group or community religiosity on delinquent behavior (Regnerus, 2003; Stark & Bainbridge, 1996; Welch, Tittle, & Petee, 1991). In Stark and Bainbridge's 1996 book, *Religion, Deviance, and Social Control*, they reported that it is the combined impact of individual and group religiosity that influences deviant behavior and not individual commitment alone. Regnerus (2003) reported that moral community theory recognizes

the impact of religious contextual influences on individual behavior, but also posited that being surrounded by highly religious people would likewise influence individual behavior. Regnerus conducted a secondary analysis of data from the National Longitudinal Study of Adolescent Health from students in grades seven through twelve. The sample for this multi-level school-based study included 9,234 cases for county-level analyses and school-level analyses. Study measures included a researcher-developed index of theft and a record of minor delinquencies, past and present. The research also examined individual-levels of religiosity (e.g. church attendance, identification as born again). Additionally, the study included a measure of contextual variables of religiosity at the county and school-levels (e.g. percentages of church membership, weekly attendance, and those who consider themselves to be born again). Data revealed a reduction in theft and minor delinquencies within conservative Protestant homogeneity within schools and county contexts. The study concluded that religious or moral communities do influence individual behavior and should be considered in the social organization of communities.

Welch, Tittle, and Petee (1991) found slightly different results in their study. These researchers conducted a study to test the moral communities theory within a Catholic sample of 2,667 adults that were surveyed as part of the Notre Dame Study of Catholic Parish Life. Welch and colleagues developed measures of self-reported probability of future deviance for tax evasion, excessive drinking, and unauthorized use of employer equipment for personal gain. A researcher-developed tool to evaluate the degree of private devotion measured private religiosity. These authors found general support for the moral community theory. The data suggested that the level of religiosity

within a given social context affects projected deviance. While results evinced a negative relationship between living in a religious community and deviance, Welch, Tittle, and Petee did not find a significant correlation between private religiosity and community religiosity, as related to its impact on projected deviance.

In their 1996 book, Stark and Bainbridge reviewed and compared findings from their previous research (Stark, 1996; Stark, Kent, & Doyle, 1982), which examined the ecological context and religious climate of the communities studied. A review of results from previous research suggested that deviant behavior was most impacted by the combined influence of private and group religiosity, such that the effect of individual religiousness on delinquency is contingent on the moral climate surrounding the individual. Stark and Bainbridge (1996) maintained that these ecological differences explained the contradictions in existing literature as it related to the effect of religiosity on delinquent behavior.

Expansion of Moral Community

Previous research has primarily aligned the moral community with a church or religious group (Burkett & White, 1974; Cochran & Akers, 1989; Cornwall, 1989; Durkheim, 1897, 1915; Elifson, Peterson, & Hadaway, 1983; Hirschi & Stark, 1969; Stark, 1996; Stark & Bainbridge, 1996; Stark, Kent, & Doyle, 1982). Johnson and Mullins' (1990) research extended the moral community concept to include community groups such as social/service clubs, church congregations, and professional organizations. The researchers suggested that community groups are often social networks with memories and aspirations comprised of rituals, beliefs, practices, which are closely akin to qualities of a moral community. To explore this idea, they collected data from three

samples: 135 psychology students; a random sample of 440 adults contacted at home; and 405 adults who attended one of twelve identified church congregations. Johnson and Mullins (1990) confirmed that various types of community groups (e.g. churches, social service organizations, professional groups) could serve the moral community function. Results showed that those who are significantly involved in a moral community experienced fewer feelings of isolation and alienation. Johnson and Mullins also reported that involvement in a moral community contributed to higher self-esteem and a greater sense of purpose and meaning in life.

Moral Community Theory and Substance Abuse Treatment Outcomes

The majority of research examining moral community theory has been related to deviant behavior and delinquency, with a focus on acts such as theft, vandalism, truancy, and assault. Subsequent replications of the seminal work by Hirschi and Stark (1969) and later studies on religion and delinquency guided by the moral community hypothesis have added alcohol and marijuana use to the list of delinquent behaviors. As discussed earlier, previous literature detailing the religious impact on delinquency reported contextual differences, indicating that the degree of influence was based on both individual and community religiosity. In some research (Burkett & White, 1974; Elifson, Peterson, & Hadaway, 1983; Hirschi & Stark, 1969), religion was not found to impact delinquent behaviors such as vandalism, assault, truancy, or theft. However, several researchers reported that religiosity was linked to a reduction in alcohol and marijuana use (e.g. Burkett & White, 1974; Elifson, Peterson, & Hadaway, 1983; Higgins & Albrecht, 1977; Stark, 1996).

More recent literature has expanded moral community theory to studying substance abuse treatment outcomes (Ford & Kadushin, 2002; Richard, Bell, & Carlson, 2000; Shields, Broome, Delany, Fletcher, & Flynn, 2007). All of the reviewed studies found support for the moral community theory, although some of the reported relationships were weak. Richard, Bell, and Carlson (2000) presumed that if the moral community impact exists, then participation in communal religious activities could affect substance abuse treatment outcomes. These researchers interviewed 193 former clients of a Center for Substance Abuse Treatment funded substance abuse treatment program in Houston, Texas. The substance abuse program utilized a campus treatment concept, which included a number of communal activities. The study measures included self-reported improvement in drug use and urinalysis results. The effects of individual religiosity and moral community participation on the outcome of substance abuse treatment were examined. One type of moral community was measured by church attendance and the other was measured by self-help recovery group attendance. Richard, Bell, and Carlson (2000) interviewed participants between six to ten months after date of discharge. Results of this study demonstrated support for the moral community theory and its relationship to drug treatment outcomes. The authors reported that increased church attendance and the 12-step group attendance both accounted for a significant reduction in drug and alcohol use. This research did not find individual religiosity to predict reductions in drug and alcohol use.

Most of the initial research on religion and delinquency did not include African American samples. When African Americans were included in the pool of potential respondents, their numbers were meager and they were not included in the final sample.

An exception to this is Ford and Kadushin's (2002) study, which explored the conditions under which the normative and integrative dimensions of religion are related to alcohol use among Black and White adults. This research also considered denominational differences. Secondary analysis was conducted on data obtained from a national evaluation of Fighting Back, a community-based substance abuse intervention program funded by the Robert Wood Johnson Foundation. The sample included 18,817 respondents (10,982 Caucasians and 7,835 African Americans). Each participant completed a 23-minute telephone interview. Measures included self-reported alcohol use within the last 12 months, denominational affiliation, and frequency of church attendance. Ford and Kadushin (2002) found that service attendance and denomination were both directly and indirectly related to the risk for alcohol dependency. Whites were more often affiliated with denominations that maintained more tolerant views toward causal alcohol use, such as Catholic, Episcopalian, Presbyterian, and Lutheran. As such, the researchers suggested that denominational effects were a more likely predictor of alcohol use for Caucasians. For African Americans, there was an inverse relationship between alcohol use and frequency of church attendance. Ford and Kadushin (2002) suggested that further research be conducted to more fully understand the organizational impact of the church as it relates to the risk of alcohol dependency for African Americans.

Research conducted by Shields, Broome, Delany, Fletcher, and Flynn (2007) examined the relationship between religiosity and substance abuse treatment outcomes. These authors noted that previous studies had examined the impact of religiosity in the recovery of substance abuse and only reported weak to moderate correlations for

treatment outcomes. In this study, the researchers used the moral community theory to explore relationships between individual religiosity, religiosity of treatment programs, and treatment outcomes. Data were collected from the Drug Abuse Treatment Outcome Studies (DATOS), a national study of 10,010 clients from 70 drug treatment programs at the following three time points: intake, in-treatment, and post-treatment. Individual-level data were collected from clients and program directors or senior counselors. Individual-level data were also collected on religiosity, critical retention or length of stay, and treatment commitment. Program-level data measured the program's religious emphasis or the moral climate. The authors found a weak to moderate relationship between religiosity and outcomes for substance abuse treatment. While the researchers did not find significant support for the moral community hypothesis, they did report that personal religiosity enhanced retention and commitment to treatment, particularly when the clientele as a whole views religion as an important resource for substance abuse recovery.

Application of Moral Community Theory to Current Study

Past research has primarily utilized moral community theory to explain the impact of religion on delinquency and more recently the impact of religion on substance abuse treatment outcomes. Support for the moral community theory has been varied and at times contradictory. All the reviewed literature included predominantly White, or all Caucasian samples, with the exception of one study. The current study will expand the application of moral community theory to look at differences between personal religiosity and organizational religiosity of African American caregivers, proposing that caregivers who are more connected to their religious, moral communities will have less caregiving stress, greater social support, better physical health, and less depression. Studies

consistently report that caregivers experience greater caregiver stress, higher levels of depression, greater physical health problems, and less social support than non-caregivers. The following sections of this literature review will present research findings in each of these areas, including studies that examined some aspect of the four variables and studies that specifically investigated the relationship between religious involvement and each variable.

Empirical Investigations of Caregiving Stress

Caregiving stress has been widely studied in the literature, as evidenced by 17 studies that examined the levels of stress experienced by caregivers (Burgener, 1994; Chang, Noonan, & Tennstedt, 1998; Cheng et al., 1994; Desbiens, Muller-Rizner, Virnig, & Lynn, 2001; Dwyer, Lee, & Jankowski, 1994; Haley et al., 2004; Ingersoll-Dayton & Raschick, 2004; Karlin, 2004; Knight, Silverstein, McCallum, & Fox, 2000; Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001; Starrells, Ingersoll-Dayton, Dowler, & Neal, 1997; Stueve, Vine, & Struening, 1997; Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993; Young & Kahana, 1995; Zarit, Stephens, Townsend, & Greene, 1998). Findings from this research have been organized into two categories: a) studies investigating some aspect of the caregiving situation relative to stress levels of caregivers and b) studies exploring the relationship between religious involvement and caregiving stress. Frequently the terms “caregiving stress” and “caregiving burden” are used interchangeably in this body of research, with stress often measured in terms of the burden reported by the caregiver.

Studies Documenting Levels of Stress of Caregivers

Ten studies were located that addressed some element of the caregiving situation on levels of stress for caregivers (Cheng et al., 1994; Desbiens, Muller-Rizner, Virnig, & Lynn, 2001; Dwyer, Lee, & Jankowski, 1994; Haley et al., 2004; Ingersoll-Dayton & Raschick, 2004; Knight, Silverstein, McCallum, & Fox, 2000; Starrells, Ingersoll-Dayton, Dowler, & Neal, 1997; Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993; Young & Kahana, 1995; Zarit, Stephens, Townsend, & Greene, 1998) (see Table 1). Most of these study samples were predominantly Caucasian and majority female. Only three of the ten studies reported on the impact of race on caregiving stress (Haley et al., 2004; Knight, Silverstein, McCallum, & Fox; Young & Kahana, 1995).

Table 1

Studies Documenting Levels of Caregiving Stress of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Cheng et al. (1994)	28 caregivers of terminally ill veterans/2-part survey (self-administered and face-to-face)	Burden Inventory	Higher caregiver burden associated with less depression
Desbiens, Mueller-Rizner, Virnig, & Lynn (2001)	450 caregivers of hospitalized patients 80 years or older/Face-to-face interview	Stress Scale Evaluation	Higher caregiver stress scores associated with being female, poor health, more hours spent with patient, less time to attend to self needs, and patient hearing impairment
Dwyer, Lee, & Jankowski (1994)	135 predominately mother-daughter caregiving dyads/Questionnaire	Researcher developed tool-single item measuring caregiving stress	Coresidence negatively affected caregiving stress; reciprocity reduced caregiving stress

(continued)

Table 1 (continued)

Studies Documenting Levels of Caregiving Stress of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Haley et al. (2004)	620 dementia caregivers/In-home interviews	Activities of Daily Living Scale; Revised Memory and Behavior Problems Checklist	No significant racial differences for caregiving stress among African Americans and Caucasians
Ingersoll-Dayton & Raschick (2004)	Systematic sample of 441 spousal caregivers/ Community survey	Research developed index of four items: exhausted when you go to bed at night, more things to do than you can handle, lack time for yourself, and feel you work hard as a caregiver but never seem to make any progress	Care recipient help had greater reduction of distress of husband caregivers than wife caregivers
Knight, Silverstein, McCallum, & Fox (2000)	169 dementia caregivers/ Face-to-face interviews	Burden Interview; Memory and Behavior Problems Checklist	African American caregivers reported lower levels of burden; tendency of African American caregivers to be younger and in poorer health and have increased burden
Starrels, Ingersoll-Dayton, Dowler, & Neal (1997)	Convenience sample of 1585 caregiving employees/Survey	Employee's Caregiving Stress Scale	Elder impairment had greater impact on female caregiver stress; taking time off work associated with more caregiver stress for males
Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993	217 caregivers to frail elders in respite programs/ Interviews and self-report questionnaires	Burden Interview; Social Life Restrictions Scale	Feeling burdened was common among caregivers; engaging in social interaction for fun and recreation associated with less caregiving stress
Young & Kahana (1995)	180 caregiver/care recipient dyads/Interviews	Burden Measure	Race had no effect on burden; caring for impaired elder evoked more race similarities than differences

(continued)

Table 1 (continued)

Studies Documenting Levels of Caregiving Stress of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Zarit, Stephens, Townsend, & Greene (1998)	324 predominantly White dementia caregivers/Face-to-face interviews	Role Captivity Scale; Overload Scale; Worry and Strain Scale	Use of adult daycare by caregivers of dementia patients resulted in lower levels of caregiving related stress than caregivers that do not use the service

Two of the ten studies noted a reduction in caregiver stress when the care recipient was able to offer some type of assistance to the caregiver, such as help with light household chores, keeping the caregiver company, or financial contributions to household expenses (Dwyer, Lee, & Jankowski, 1994; Ingersoll-Dayton & Raschick, 2004). The first study (Dwyer, Lee, & Jankowski, 1994) was a secondary analysis using data from the 1982 Long-Term Care Survey (NLTCs) and the National Survey of Informal Caregivers (NSIC). Data from the NLTCs included a nationally representative sample of 6,393 noninstitutionalized disabled elders and the NSIC dataset consisted of 1,924 unpaid caregivers. Participants of NSIC were a sub-sample of impaired elders from the NLTCs who indicated receiving activities of daily living (ADL) assistance from at least one unpaid caregiver. The unpaid caregivers from the NSIC were then matched to the disabled elders from the NLTCs for whom they provided care. The study included 135 predominantly White mother-daughter caregiving dyads. The caregiver's stress was measured by a single item, which asked, "If bathing the care receiver causes you stress that is represented by 100 points, how many points would you give to show how much

stress it causes you to do all the things you do to help?" Findings from this study indicated that coresidence between mothers and daughters significantly contributed to diminished levels of caregiving stress and burden among caregivers. As such, daughters reported a reduction in stress and burden when mothers were able to reciprocate by doing things such as assisting with caregiving chores, babysitting, providing monetary gifts, or providing company.

The second study also noted reductions in stress when the care recipients were able to offer some degree of help to the caregivers (Ingersoll-Dayton & Raschick, 2004). This research was also a secondary analysis using data from the 1999 Long-Term Care Survey (NLTCs), which resulted in 441 spousal caregivers drawn from a systematic sample of Medicare recipients. The caregiver sample included 253 wives and 188 husbands. This research utilized a 4-point Likert scale to measure caregiver stress via an index of the following four items: "exhausted when you go to bed at night," "more things to do than you can handle," "lack time for yourself," and "feel you work hard as a caregiver but never seem to make any progress." Findings from this research concluded that care recipient help had a greater impact on reduction of the distress on husband caregivers than on wife caregivers. For wives, spousal helpfulness was inconsequential in reducing levels of caregiving stress.

Two other studies examined the impact of respite programs (Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993) and adult daycare programs (Zarit, Stephens, Townsend, & Greene, 1998) on caregiver burden. Both of these studies reported a reduction of caregiving stress among the samples. The first study (Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993) sample was comprised of 217

family caregivers of frail elderly persons in respite programs throughout the San Francisco Bay Area. Participants in this study were interviewed at baseline and subsequently completed a self-report questionnaire following the interview. The Burden Interview, the Social Life Restrictions Scale, and a single-item index were utilized to measure caregiver burden. Results from the Burden Interview indicated that caregivers commonly reported feelings of burden. However, when frail elders participated in respite programs, this allowed opportunities for caregivers to engage in social interactions that were perceived as fun and recreational, which in turn reduced caregiving burden. Findings from this study suggested that engaging in recreational activities appeared to be the most important in reducing the burden of caregiving.

Similar research conducted by Zarit, Stephens, Townsend, and Greene (1998) also reported lower levels of caregiving stress among a sample of 324 predominantly White and majority female family caregivers of persons with dementia. This study employed a quasi-experimental design to compare two groups of family caregivers in New Jersey, a treatment group of caregivers who utilized adult day care services for their relatives and a control group of caregivers from another state who did not have their relatives enrolled in an adult day care program. Three scales measured caregiving stress: Role Captivity, Overload, and Worry and Strain. Caregivers who used adult daycare reported lower levels of caregiving related stress than caregivers who did not utilize adult daycare services.

Another study investigated the effect of elder impairment on caregiving stress (Starrels, Ingersoll-Dayton, Dowler, & Neal, 1997) among a convenience sample of 1,585 employees who cared for a parent or parent-in-law age 60 or older. The

respondents to the study's survey were 94% White. The Employee's Caregiving Stress Scale was used to measure stress among these employed caregivers. Results from the study found that elder impairment contributed to higher stress among female caregivers, while taking time off of work was associated with more caregiving stress for males. Similar to the studies mentioned previously (Dwyer, Lee, & Jankowski, 1994; Ingersoll-Dayton & Raschick, 2004), this study (Starrels, Ingersoll-Dayton, Dowler, & Neal, 1997) also found that caregiving stress was impacted when the care recipient was able to assist with some caregiving tasks. As with the Ingersoll-Dayton and Raschick (2004) study, the reduction in caregiving stress was greater for husbands than for wives.

In the sixth study, Desbiens, Mueller-Rizner, Virnig, and Lynn (2001) conducted face-to-face interviews with 450 primary caregivers of hospitalized patients 80 years or older from four medical centers in Boston, MA; Cleveland, OH; Marshfield, WI; and Los Angeles, CA. Utilizing the Stress Scale Evaluation, these researchers determined that higher caregiver stress scores were associated with being female, in poor health, spending increased hours with the patient, and caring for a patient with a hearing impairment. Similar to the two studies on respite and adult daycare programs described above (Thompson et al., 1993; Zarit et al., 1998), this study also found that caregivers who spent great lengths of time with their care recipients had inadequate time to meet their own social needs, resulting in greater caregiver burden.

Interestingly, another study (Cheng et al., 1994) found higher levels of caregiving burden among those caregivers with reportedly less depression. These unexpected results were evidenced among a sample of 28 caregivers of terminally ill veterans. Authors surmised that caregiving, though presumably burdensome for many, functioned as a

source of interpersonal reward for others, thereby resulting in lesser amounts of depression than anticipated.

The remaining three studies were the only investigations that explored the impact of race on caregiving stress. In the first of these studies, Knight, Silverstein, McCallum, and Fox (2000) conducted face-to-face interviews with 41 African American and 128 non-African American caregivers of family members with dementia. More than 90% of study participants opted for home-interviews, with the other 10% deciding to be interviewed in the research lab. Each person completed the Burden Interview and the Memory and Behavior Problems Checklist to measure caregiving stress. African American caregivers reported lower levels of burden, despite the likelihood of Black caregivers to be younger and in poorer health, which tends to increase caregiver burden. In another study, Young and Kahana (1995) found that race had no effect on burden or caregiver stress among 183 caregivers of older heart patients when other caregiving context variables were controlled. Similarly, the final study (Haley et al., 2004) did not find any significant racial differences in caregiving stress among a sample of African American ($n = 295$) and Caucasian ($n = 425$) caregivers of persons with dementia.

Studies on Religious Involvement and Caregiving Stress

The current literature review identified seven studies that addressed some aspect of the relationship between religious involvement and caregiver stress (Burgener, 1994; Chang, Noonan, & Tennstedt, 1998; Karlin, 2004; Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001; Stueve, Vine, & Struening, 1997) (see Table 2). The literature on the effect of organized and/or personal religiosity on caregiving stress is sparse. However, there is extensive research addressing religiosity

and general stress among noncaregiver samples. Studies on religious involvement and perceived caregiver rewards are also evident in the caregiving literature. The following sections discuss findings from the reviewed literature on the relationship between some aspect of religious involvement and caregiving stress.

Organizational Religiosity

Six of the seven studies reviewed explored the relationship between organizational religiosity and caregiving stress (Burgener, 1994; Karlin, 2004; Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001; Stueve, Vine, & Struening, 1997). Two of these studies found a negative relationship

Table 2

Studies on Religious Involvement and Caregiving Stress

Author(s)	Sample/Methods	Measures	Findings
Burgener (1994)	Purposive sampling of 84 caregivers of institutionalized Alzheimer's patients and 81 control subject non-caregiving older persons living in the community/ Mailed questionnaire	Relatives' Stress Scale; Religiosity Scale	Past religiosity not significantly related to caregiver stress; present church attendance and degree to which spiritual needs were met both significant predictors of caregiving stress
Chang, Noonan, & Tennstedt (1998)	127 informal caregivers to community-residing disabled elders/ Telephone interviews	Role-submersion Scale; Single-item from Meaning in Caregiving Scale	No direct effect of religious/ spiritual coping on caregiving stress
Karlin (2004)	31 dementia caregivers/ Questionnaires	Zarit Burden Scale; Researcher developed questions on organized and non-organized religiosity	Organized and non-organized religiosity associated with less caregiver burden

(continued)

Table 2 (continued)

Studies on Religious Involvement and Caregiving Stress

Author(s)	Sample/Methods	Measures	Findings
Leblanc, Driscoll, & Pearlman (2004)	200 spousal caregivers of Alzheimer's or dementia patients/Face-to-face interviews	ADL Scale, Problem Behaviors Scale, Cognitive Difficulties Scale; Role Overload Scale; Role Entrapment Scale; Researcher developed religiosity tool of 3-items: How religious? Attendance of religious services? Frequency of prayer?	No relationship between caregiving stress and religiosity
Murray-Swank et al. (2006)	83 caregivers of persons with serious mental illness/ Interviews	Family Experience Interview Schedule (13); Religious affiliation; Researcher developed religiosity tool of 3-items: importance of religious and spiritual beliefs, frequency of attendance, degree to which participants believed that God was source of strength and comfort	No significant relationship between religiosity and subjective caregiver burden
Shah, Snow, & Kunik (2001)	Convenience sample of 48 Alzheimer's caregivers/Self-administered survey	Zarit Burden Interview; Duke University Religion Index; Religious Coping Activities Scale	No significant correlations between organizational or non-organizational religiosity and caregiver burden; religious discontent was positively correlated to caregiver burden
Stueve, Vine, & Struening (1997)	180 caregivers of persons with severe mental illness/ Structured interviews	Perceived Burden Scale; Researcher developed religiosity tool of 2 items: frequency of church attendance and importance of religion in their life	No relationship between religious involvement and caregiver burden

between organizational religiosity and caregiving stress (Burgener, 1994; Karlin, 2004), with higher involvement associated with lower stress. The first study (Burgener, 1994)

included a purposive sample comprised of 84 caregivers of institutionalized Alzheimer's patients and a control group of 81 non-caregiving older persons living in a northern New York community. The sample included one African American respondent in each of the two groups. Burgener (1994) utilized the Relatives' Stress Scale to measure caregiver stress among the caregivers in the sample. The Religiosity Scale was employed to measure organized religious behavior. The study questionnaire included supplementary items to determine participants' current religious involvement. Specifically, these items inquired about the "importance of church or synagogue past and present, past and present frequency of church or synagogue attendance, frequency of visits from clergy or rabbis, the extent to which need for contact with the church or synagogue was met, and the extent to which spiritual needs were met." The results of this study found no differences between the two groups as it related to religious involvement in organized religion. The research did reveal that past organizational religiosity was not significantly related to caregiver stress. However, findings did indicate that present organizational religiosity (present church or synagogue attendance), was a predictor of lower caregiver stress. The study also reported that caregiving stress was lower when the need for church contact was met.

The second study (Karlin, 2004) reported a significant relationship between organized religiosity and caregiver stress. The cross-sectional sample was comprised of 31 family caregivers of persons with dementia. Participants were recruited from the Alzheimer's associations of Colorado and western Nebraska adult daycare centers, and from regional physicians or physician assistants. Questionnaires were mailed and took an average of 30 minutes to complete. The Zarit Burden Scale was used to measure

caregiver stress. The religiosity measure was developed by the researcher and included questions regarding participant involvement in organized religion, such as “How would you describe your involvement with organized religion during your adult life (before you became a caregiver)” and “How would you describe your involvement with organized religion during your adult life (currently)?” Findings from this study indicated that participation in organized religion was associated with lower levels of caregiver burden.

Four of the remaining studies did not find organizational religiosity to be a significant predictor of caregiver stress (Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001; Stueve, Vine, & Struening, 1997). In the first study (Leblanc, Driscoll, & Pearlin, 2004), researchers conducted 90-minute interviews with 200 caregivers of a spouse with Alzheimer’s disease or related dementia. While the majority of the interviews were administered face-to-face, a small number (9%) of the interviews were conducted by telephone. The majority of the caregivers in the study were White (89%). Protestants represented 59% of the sample and Catholics made up 23% of the mainstream denominations noted in the participant demographics.

In this study, Leblanc, Driscoll, and Pearlin measured two aspects of caregiver stress, primary objective stressors and primary subjective stressors. The primary objective stressors gauge the needs of the patient and the demands of care. The following scales measured the objective stressors: Activities of Daily Living (ADL) Scale, Problem Behaviors Scale, and the Cognitive Difficulties Scale. Primary subjective stressors assess the intuitive stress of caregiving, as measured by the Role Overload Scale and the Role Entrapment Scale. Religiosity was evaluated by a 3-item assessment developed by the researchers. The first question asked “how religious” the participant was. The response

for this item was recorded with a 4-point Likert scale with 4 being “very religious.” The second item asked about “attendance of religious services” and also included a 4-point Likert response scale, with 4 indicating “once a week or more.” A 5-point Likert scale assessed “frequency of prayer,” with 5 being “once a day or more.” Study findings for this research did not demonstrate a statistically significant relationship between organizational religiosity and either objective or subjective caregiver stress among spousal caregivers.

Similar to the previous study, research conducted by Murray-Swank and colleagues (2006) did not reveal a relationship between organizational religiosity and caregiver burden. This study was a secondary data analysis that interviewed a sample of 83 caregivers of persons with a serious mental illness. Participants were 72% female, 73% White, 42% Protestant, and 32% Catholic. The Family Experience Interview Schedule assessed subjective caregiving burden. The subscales of this scale evaluate the worry and displeasure associated with caregiver burden. Organizational religiosity was evaluated by a 3-item measure, which gauged the “importance of religious and spiritual beliefs,” “frequency of attendance at religious services,” and degree to which participants “believe that was source of strength and comfort.” Results indicated there was no significant relationship between organizational religiosity and caregiving burden.

A third study by Shah, Snow, and Kunik (2001) also examined organizational religiosity and caregiving stress among a convenience sample of 48 fairly religious caregivers of persons with Alzheimer’s disease. These researchers measured caregiver burden via the Zarit Burden Interview. The Duke University Religion Index and the Religious Coping Activities Scale were utilized to evaluate organizational religiosity

within the caregiving sample. While 95.8% of the sample described themselves as religious, they did not report that organizational religiosity reduced their levels of caregiving burden. Study measures from this highly religious sample did indicate a positive correlation between religious discontent and caregiver burden. Caregivers who reported feelings of anger or distance from God or members of their religious group also reported high levels of caregiving burden.

The final study investigated differences between racial groups relative to both organizational religiosity and caregiver burden (Stueve, Vine, & Struening, 1997). This is the only study to explore racial differences among these variables. The sample was comprised of 180 caregivers of African American (24%), Hispanic (24%), and Caucasian (52%) descent. Researchers employed structured interviews to assess caregiving stress via the Perceived Burden Scale. Religious involvement was analyzed by a 2-item measure that asked about the “frequency of church attendance” and “importance of religion.” Findings from this study noted that Black and Hispanic caregivers assigned greater importance to religion than Whites; however, there were no differences among the groups with regard to frequency of church attendance. Level of caregiving burden was lower for African Americans than for Whites. Hispanic caregivers reported burden levels similar to Whites in the sample.

Personal Religiosity

Five of the seven studies examined some aspect of personal religiosity and caregiving stress, but only one study (Karlin, 2004) reported a significant relationship between these two variables. As discussed previously, Karlin utilized the Zarit Burden Scale to measure caregiving stress among a sample of 31 dementia caregivers. The

researcher-developed measure of religious involvement included several items on personal religiosity. Examples of these items are “How would you describe your involvement with nonorganized religion (e.g., prayer or religious reading) during your adult life (before you became a caregiver)?” and “How would you describe your involvement with nonorganized religion (e.g., prayer or religious reading) during your adult life (currently)?” Findings revealed that personal religiosity was associated with less caregiver burden.

The remaining four studies failed to detect a significant relationship between personal religiosity and caregiving stress. As stated above, Burgener (1994) examined personal religiosity among a purposive sample of 84 Alzheimer’s caregivers and among 81 control group non-caregivers. Some example items assessing personal religiosity included the extent to which spiritual needs were met and the extent to which frequency of visits from clergy or rabbis. Findings indicated that there was no relationship between past or present personal religiosity and caregiver stress. Leblanc, Driscoll, and Pearlin (2004), previously discussed, examined personal religiosity and caregiver stress among a sample of 200 spousal caregivers. Their personal religiosity measure asked the question, “How often do you pray?” using a 5-point Likert scale response set with 1 being never and 5 being once a day or more. Although over half the sample revealed frequent use of prayer, there was no relationship between personal religiosity and caregiving stress.

Likewise, Murray-Swank and colleagues (2006) did not find personal religiosity to impact caregiver burden in their sample of 83 caregivers of persons with mental illness. These researchers evaluated personal religiosity by exploring how often study participants coped with the caregiving situation by “praying or meditating, watching or

listening to religious programs on television or the radio, seeking spiritual direction on the internet, reading the Bible or other religious literature, and seeking support from clergy or from other members of the individual's spiritual community.” Although a substantial portion of the sample reported high levels of personal religiosity, personal religiosity was not correlated to caregiver burden. Research by Shah, Snow, and Kunik (2001) also failed to identify a relationship between personal religiosity and caregiving stress in their convenience sample of 48 caregivers. As previously mentioned, this study sample was comprised of individuals with reportedly high religiosity. Although participants indicated spending more than two times a week in private prayer or other religious activity, these personal religiosity activities were not found to reduce levels of caregiving stress among this group of caregivers.

In a seventh study, not previously described, Chang, Noonan, and Tennstedt (1998) also examined an aspect of personal religiosity and caregiving stress among a sample of 127 caregivers of community-residing, disabled elders. These researchers utilized a Role-Submersion scale to assess the level of caregiving stress among the study population. The personal religiosity measure recorded how the respondents' “religion or spiritual beliefs helped them to handle the whole experience,” which the authors identified as religious/spiritual coping. Seventy-five percent of the caregivers agreed to some extent that their involvement in religion has helped them to cope with the caregiving situation. However, findings from this study did not reveal a statistically significant relationship between religiosity and caregiver stress.

Empirical Investigations of Social Support

Social support is one of the most widely studied variables in the social science literature. Much of the social support and health research has involved non-caregiver samples, focusing on social support as a predictor variable of health outcomes. This literature review yielded few studies exploring social support as an outcome measure among caregiver samples, locating only five studies that examined social support among this population (Cheng et al., 1994; Clip & George, 1990; De Frias, Tuokko, & Rosenberg, 2005; Poindexter, Linsk, & Warner, 1999; Williams & Dilworth-Anderson, 2002). Findings from these studies have been organized into two categories: a) studies investigating some aspect of the caregiving situation relative to social support and b) studies exploring the relationship between religious involvement and social support.

Studies Documenting Levels of Social Support of Caregivers

Four studies were identified that addressed some aspect of the caregiving situation on levels of social support among caregivers of elders (Cheng et al., 1994; Clip & George, 1990; De Frias, Tuokko, & Rosenberg, 2005; Williams & Dilworth-Anderson, 2002) (see Table 3). Two of these studies included a majority White sample, one study was comprised of Canadian respondents and provided no information on race, and the fourth study investigated social support among African American caregivers.

Two studies evaluated the impact of caregiver needs on social support (Cheng et al., 1994; Clip & George, 1990). In the first study, Cheng and colleagues (1994) surveyed the psychosocial and concrete needs of 28 predominantly White, female caregivers of terminally ill veterans. During a structured interview, participants responded to questions from the Provision of Social Relations self-report scale. Findings

revealed a positive relationship between life satisfaction and social support. Caregivers that reported less life satisfaction also reported fewer social supports. Study results further indicated that social support was not significantly associated with caregiver need.

Table 3

Studies on Documenting Levels of Social Support of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Cheng et al. (1994)	28 caregivers of terminally ill veterans/2-part survey (self-administered and interview)	Provision of Social Relations Self-Report scale	Social support positively associated with life satisfaction; social support not associated with need
Clip & George (1990)	510 caregivers of person with Alzheimer's disease or related dementia	Two dimension measure: instrumental assistance received and perceived adequacy of social support received	Need predicts both instrumental assistance and perceived adequacy of support
Frias, Tuokko, & Rosenberg (2005)	133 caregivers to older persons with cognitive or physical impairments/ Structured interviews	Caregiver Reaction Assessment	Being older related to more family support
Williams & Dilworth-Anderson (2002)	Community sample of 187 caregivers of older African Americans	Social Support Questionnaire; single item measures for church social support and formal social support	Higher education associated with use of formal support services; greater care recipient need linked to increased use of formal support; higher levels of informal social support associated with increased likelihood of church support; more cohesive networks linked to lesser formal social support

In the second study, Clipp and George (1990) also explored caregiver needs and patterns of social support among 376 caregivers of persons with Alzheimer's disease. The mostly White participants were mailed the survey instruments, which included a measure of two dimensions of social support. One scale was an objective measure of social support that analyzed "instrumental assistance" and the other scale included a subjective measure of "perceived adequacy" of social support received from family and friends. Contrary to the Cheng and associates (1994) study discussed above, Clipp and George found that need predicted both instrumental social support and perceived adequacy of social support.

Canadian researchers, De Frias, Tuokko, and Rosenberg (2005) employed structured interviews to analyze the impact of age on 133 caregivers of older persons with cognitive or physical impairments. In this study, the Caregiver Reaction Assessment utilized the 5-item Lack of Family Support domain to measure social support. Study findings indicated that older caregivers had more social support from family. The data also showed that older caregivers reported higher self-esteem and fewer financial problems.

Williams and Dilworth-Anderson (2002) was the only study that investigated social support among 187 family caregivers of older African Americans. This study assessed three types of social support: informal social support, church social support, and formal social support. The Social Support Questionnaire measured informal social support. Church social support was indicated by a list of possible types of assistance available from the church, such as prayer, advice, encouragement, food, financial assistance, and spiritual guidance. Formal social support was documented based on the

use of up to 16 formal support services (e.g. Meals on Wheels, counseling, financial advice or planning, respite care, support groups, adult day care). Results indicated that more educated caregivers tended to utilize more formal social support services. There was a positive relationship between care recipient ADL/IADL need and formal social support. Those caregivers with extensive social networks were less likely to utilize formal social support services, but reported greater church support and informal social support.

Studies on Religious Involvement and Social Support

A substantial body of research documents the pivotal role that the Black church has played as a source of social support in the lives of African Americans facing a wide range of life circumstances (e.g. Barnes, 2005; Billingsley & Caldwell, 1991; Chaves & Higgins, 1992; Douglas & Hopson, 2001; Ellison, Musick, & Henderson, 2008; Kip, Peters, & Morrison-Rodriguez, 2002; Lincoln & Mamiya, 1990; Taylor, Chatters, & Levin, 2004). However, there is a dearth of studies that specifically examine the effect of organized and/or personal religiosity on social support among caregiving samples. The current literature review identified only three studies that specifically addressed aspects of religious involvement and social support among this population (Marks, Nesteruk, Swanson, Garrison, & Davis, 2005; Poindexter, Linsk, & Warner, 1999; Stuckey, 2001) and two additional studies that investigated is relationship between non-caregiver African American samples (see Table 4).

Organizational Religiosity

The first study investigating religiosity involvement and caregiver social support used qualitative methodology (Marks, Nesteruk, Swanson, Garrison, & Davis, 2005).

This research included a sample of 32 highly religious African Americans that were providing care for at least one elderly parent. A semi-structure questionnaire was employed with participants during face-to-face interviews. Grounded theory

Table 4

Studies on Religious Involvement and Social Support

Author(s)	Sample/Methods	Measures	Findings
CAREGIVER SAMPLE			
Marks, Nesteruk, Swanson, Garrison, & Davis (2005)	Purposive sample of 32 highly religious African Americans/2-hour home-based interviews	Qualitative questions regarding religious involvement and social support	Emergent Themes: Social Support (church family support vital and not just social and also financial when needed); Power of Prayer (strengthens the bond between sisters as each are supported through prayer)
Poindexter, Linsk, & Warner (1999)	Convenience sample of 20 predominantly African American caregivers of persons with HIV/Qualitative home-based interviews	Qualitative questions: Who do you depend on for emotional support? How important is spirituality or religion to you? Does your religious or spiritual group know that you have had HIV in the family? Why or why not?	Religiosity and spirituality introduced without researcher prompting; personal religiosity reported as majority source of support; organizational religiosity not as important due to feared stigma
Stuckey (2001)	20 Catholic and Protestant older adults (10 caregivers, 10 noncaregivers)/Face-to-face qualitative interviews	Life Reflection Interview	Personal relationship with God through prayer provided greatest social support; prayer was important aspect of life
NON-CAREGIVER SAMPLES			
Chatters, Taylor, Lincoln, & Schroepfer (2002)	2107 African Americans/ Interviews	Self-reports of assistance from family members and church members; single-item about frequency of involvement in organized religious activities	Greater involvement with both family and church networks associated with assistance from both groups; involvement with only one group tended to receive assistance from that group

(continued)

Table 4 (continued)

Studies on Religious Involvement and Social Support

Author(s)	Sample/Methods	Measures	Findings
NON-CAREGIVER SAMPLES			
Taylor & Chatters (1988)	2107 African Americans/ Interviews	Researcher developed measure: probability of receiving support; probability of never needing versus never receiving support; measures of religious participation and involvement	Level of church attendance positively related to church-based social support; frequent church attendance associated with never needing support

methodology was used to identify themes from participant responses. The researchers reported an emergent theme, which suggested that support by other church members (affectionately described as the church family) is vital. This solace involved spiritual and financial support as well as social support.

A second study conducted by Poindexter, Linsk, and Warner (1999) examined religiosity and social support within a convenience sample of 20 ethnic minority caregivers of HIV-diagnosed adults and children. This exploratory, qualitative study involved in-depth interviews that lasted about an hour and a half with 18 African Americans, one Mexican, and one Filipino participant; all were reportedly of Protestant faith. The qualitative interview guide included some of the following questions: Whom do you depend on for emotional support? How important is spirituality or religion to you? Does your religious or spiritual group know that you have had HIV in the family? Why or why not? Narratives about religion and spirituality tended to be introduced into the

conversation by the participants, without questioning by the interviewer. The comments related to organizational religiosity suggested that it was strongly linked to a feared source of HIV stigma for research participants, and thus, was not viewed as a positive source of social support.

While the research on the influence of religiosity on social support within African American caregiving populations is quite limited, two additional studies provide findings on the relationships between organizational and/or personal religiosity and social support among other African American populations (Chatters, Taylor, Lincoln, & Schroepfer, 2002; Taylor & Chatters, 1988) (see Table 5). Both of these studies (Chatters, Taylor, Lincoln, & Schroepfer, 2002; Taylor & Chatters, 1988) reported a positive relationship between organizational religiosity and church-based social support. In the first study, Chatters, Taylor, Lincoln, & Schroepfer (2002) examined the relationship between organizational religiosity and social support. These authors interviewed a sample of 2,107 African Americans using a researcher-developed self-report measure of assistance from family and church members. The authors also created a single item measure of organized religiosity, which evaluated the frequency of involvement in organized religious activities. Study findings indicated that participants who were greatly involved with both family and church networks received assistance from both groups; whereas participants with involvement in only one group tended to receive assistance from that one group.

The second study (Taylor & Chatters, 1988) also found a relationship between organizational religiosity and social support among a sample of noncaregivers. Like the previously mentioned study (Chatters, Taylor, Lincoln, & Schroepfer, 2002), Taylor and

Chatters examined the same data from the sample of 2107 African Americans in order to determine their probability of receiving support and their probability of never needed support versus never receiving support. These researchers also used another measure developed for this study, which assessed religious participation and involvement. The results of this found that the level of church attendance was positively related to church-based social support. Findings further reported that frequent church attendance was associated with never needing support. Those who attended church regularly reported lesser need for support because their needs were subsequently met through their frequent church attendance.

Personal Religiosity

Although involvement in organized religion was not seen as a positive source of social support in the study by Poindexter and colleagues (1999), a different picture emerged for the importance of personal religiosity within this study (see Table 4). Specifically, the caregivers of adults and children with HIV in this study repeatedly indicated that they experienced considerable social support in their personal relationship with God and the supportive connections that derived from this spiritual bond. The findings from this study highlight the differential impacts experienced by some caregivers between involvement in organized religiosity versus personal religiosity.

Another previously mentioned qualitative study (Marks, Nesteruk, Swanson, Garrison, & Davis, 2005) also reported on the relationship between personal religiosity and social support among a highly religious African American sample. A “power of prayer” theme emerged and participants emphasized the importance of prayer in

strengthening bonds between other sisters in the faith. Participants noted that they supported each other through prayer.

Finally, Stuckey (2001) focused solely on personal religiosity through an investigation of 10 caregivers of persons with Alzheimer's disease and 10 non-caregiver; all participants were either Protestant or Catholic. Though qualitative, face-to-face interviews using the Life Reflection Interview guide, personal religiosity emerged as a vital factor to social support among the caregivers in this study. A frequent theme that emerged was the importance of prayer. Participants reported that their personal relationship with God through prayer provided the greatest social support during the caregiving experience.

Empirical Investigations of Physical Health

The extant literature on caregiving and health is vast. This literature review covers research examining the effect of some aspect of the caregiving situation on the physical health of caregivers. Results from eleven caregiver studies evaluating physical health as the outcome variable will be detailed in this section (Banthia, Moskowitz, Acree, & Folkman, 2007; Beach, Schulz, & Yee, 2000; Clark et al., 2004; Dilworth-Anderson, Goodwin, & Williams, 2004; Gaugler, et al., 2009; Grant, Elliott, Giger, & Bartolucci, 2001; Haley et al., 2004; Roth, Haley, Owen, Clay, & Goode, 2001; Schulz et al., 1997; Shaw et al., 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995). Findings from these studies have been organized into two categories: a) studies investigating some aspect of the caregiving situation relative to physical health and b) studies exploring the relationship between religious involvement and physical health.

Studies Documenting Levels of Physical Health of Caregivers

Ten studies were identified that addressed some aspect of the caregiving situation on levels of physical health among caregivers of elders (Beach, Schulz, & Yee, 2000; Clark et al., 2004; Dilworth-Anderson, Goodwin, & Williams, 2004; Gaugler, et al., 2009; Grant, Elliott, Giger, & Bartolucci, 2001; Haley et al., 2004; Roth, Haley, Owen, Clay, & Goode, 2001; Schulz et al., 1997; Shaw et al., 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995) (see Table 5). Five of the ten studies examined the impact of some aspect of caregiving stress on physical health. Two of these five studies and three additional studies discussed some aspect of the caregiving situation or caregiver characteristics in relation to physical health. Five studies included a substantial number of African Americans and one study sample was comprised solely of African Americans.

Table 5

Studies Documenting Levels of Physical Health of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Beach, Schulz, & Yee (2000)	680 spousal caregivers (299 caregivers; 381 noncaregivers); supplemental cohort of African American (9.6%)/Structured home-based interviews	Researcher developed tool of single item asking to describe general health; yes/no count of seven health risk behaviors	Higher levels of education reported improved health; African Americans reported more health risk behaviors; greater caregiver strain related to poorer health outcomes
Clark et al. (2004)	132 stroke survivor caregivers/In-person questionnaires	Medical Outcomes Study Short Form 36	Positive correlation between education and caregiver physical health
Dilworth-Anderson, Goodwin, & Williams (2004)	3 waves of African American caregivers of elderly family members/Face-to-face interviews	Medical Outcomes Study Short Form	Higher education levels associated with better health outcomes; culture explained impact of caregiving on health

(continued)

Table 5 (continued)

Studies Documenting Levels of Physical Health of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Gaugler et al. (2009)	238 cancer caregivers/ Interviews	Caregiver Reaction Inventory subscale	Greater role overload and role captivity linked to negative health; limited social support and financial strain also associated with poor health
Grant, Elliott, Giger, & Bartolucci (2001)	40 stroke survivor caregivers (20 African Americans, 20 Caucasians)/Interviews	Medical Outcomes Study Short Form 36	Positive relationship between education and physical health; correlation between physical health and personal control; social support was not a predictor of physical health
Haley et al. (2004)	295 African American and 425 Caucasian caregivers of persons with dementia/In-home interviews	4 items assessing perceived and physical health	African Americans reported more unhealthy behaviors than Caucasians
Roth, Haley, Owen, Clay, & Goode (2001)	197 dementia caregivers and 218 noncaregiver controls/Structured interview and series of questionnaires	Cornell Medical Index	Both African Americans and Whites reported increased physical health symptoms over time; African Americans more vulnerable to health problems than Caucasians
Schulz et al. (1997)	Majority White sample of 395 spousal caregivers and 424 noncaregivers/ Structured in-home interviews	Single item perceived health measure; health behavior questionnaire	Lower income and less education is associated with more physical health problems; greater caregiving stress is predictive of increased physical health problems
Shaw et al. (1997)	Predominantly White sample of 150 spousal caregivers of Alzheimer's patients and 46 married control participants/In-home interviews	Interval Medical History symptom checklist; Interval Medical History (36)	Greater caregiving stress was predictive of poor health outcomes

(continued)

Table 5 (continued)

Studies Documenting Levels of Physical Health of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Tomlinson, Harbaugh, Kotchevar, & Swanson (1995)	20 maternal caregivers of critically hospitalized child/Questionnaire	Medical Outcomes Study Short Form	Changes in sleep and nutrition was most frequent and most significant negative health behavior change

The first study (Beach, Schulz, & Yee, 2000) that explored the relationship between caregiving stress and physical health involved a population-based sample of 680 spousal caregivers. A supplemental cohort of African Americans was recruited to participate in this research and made up 9.6% of the final sample. A control group of non-caregivers was also included in the study. Structured interviews lasted about 60-90 minutes and were conducted in participant homes. The researchers measured perceived health by a single item asking respondents to “describe their health in general” on a 5-point scale. A single item probe was utilized to identify health risk behaviors among the sample by asking them to respond in a yes-no format to the following seven behaviors that could lead to physical health problems: “eating less than three meals a day; not having enough time to exercise; not getting enough rest in general; not being able to slow down and get needed rest when sick; forgetting to take medications; delaying doctor visit if a health problem is suspected; and missing one or more doctor’s appointments in the last 6 months”. Study findings indicated that greater caregiver stress was related to

poorer health outcomes. Results further indicated that African American caregivers reported more health risk behaviors than Caucasians.

Schulz and colleagues (1997) also reported on the relationship between caregiving stress and physical health among a predominantly White population-based sample of 395 spousal caregivers and 424 noncaregivers. Structured interviews and questionnaires evaluated the health effects of caregiving. The results indicated that greater caregiving stress was a predictor of increased poor health outcomes.

A third study conducted by Shaw and associates (1997) also found a correlation between caregiving stress and health using a prospective longitudinal design. The study sample was comprised of 150 predominantly White spousal caregivers of persons with Alzheimer's disease. A group of married control participants were also included in the study. During in-home interviews, participants completed the Interval Medical History Symptom Checklist and an Interval Medical History (36) in order to assess the caregivers' physical health. Findings indicated that greater caregiving stress was predictive of poor physical health outcomes.

In a fourth study, Gaugler and colleagues (2009) found a significant relationship between caregiving stress and physical health. Researchers interviewed 238 cancer caregivers utilizing a five-item subscale of the Caregiver Reaction Inventory to evaluate the negative health impact of caregiving. Study findings revealed that caregiving stress, as indicated by greater role overload and role captivity, was linked to negative physical health. Data further indicated that limited social support and financial strain also contributed to poor caregiver health.

In the final study exploring some aspect of caregiver stress, Tomlinson, Harbaugh, Kotchevar, and Swanson (1995) surveyed 20 maternal caregivers of a critically hospitalized child. Mothers in the sample completed the Medical Outcomes Study Short Form as a measure of the caregivers' physical health. These findings indicated that changes in sleep and nutrition, indicators of a stressed condition, were most frequent and most significant in resulting negative health behavior change.

Five of the ten studies examined some aspect of caregiver characteristics and the caregiving situation as they related to caregiver health; all of these studies investigated level of education as one of these variables (Beach, Schulz, & Yee, 2000; Clark et al., 2000; Dilworth-Anderson, Goodwin, & Williams, 2004; Grant, Elliott, Giger, & Bartolucci, 2001; Schulz, 1997). The first study (Clark et al., 2004) investigated physical health among a nonrandom sample of 132 predominantly White stroke survivor caregivers. Participants completed the Medical Outcomes Study Short Form (36) questionnaire as a measure of physical health outcomes. Clark and colleagues reported a positive correlation between education and better caregiver physical health.

Dilworth-Anderson, Goodwin, and Williams (2004) also reported on the influence of education on the physical health among African American caregivers. This longitudinal study sample consisted of three waves of African American caregivers of elderly family members. Physical health was measured by using the Medical Outcomes Study Short Form during face-to-face interviews. The data revealed that higher education levels were associated with better health among the study sample. Findings also indicated that among African Americans, African American cultural norms regarding the care of elders explained the physical health effects of caregiving over time.

A third study (Grant, Elliott, Giger, & Bartolucci, 2001) also reported on the relationship between education and physical health. Physical health was assessed among 40 caregivers of persons who had survived a stroke ($n = 20$ African Americans, $n = 20$ Caucasians) by utilizing the Medical Outcomes Study Short Form 36. The study survey was administered via in-home interviews of stroke survivor caregivers. Grant and colleagues found a positive relationship between education and physical health. They also noted a correlation between personal control and physical health. This study did not find social support to be a predictor of physical health.

In previously mentioned research (Beach, Schulz, & Yee, 2000), data revealed that higher levels of education were associated with improved physical health. Schulz and colleagues (1997), discussed earlier, also reported on the relationship between education and physical health among a predominantly White population-based sample. These findings also indicated that more education and higher income were associated with fewer physical health problems.

Five of the ten studies on physical health and caregiving (Beach, Schulz, & Yee, 2000; Dilworth-Anderson, Goodwin, & Williams, 2004; Grant, Elliott, Giger, & Bartolucci, 2001; Haley et al., 2004; Roth, Haley, Owen, Clay, & Goode, 2001) reported on differences between Blacks and Whites in relation to the physical health effects among caregivers. As previously mentioned, Beach, Schulz, and Yee (2000) found that African American caregivers reported more health risk behaviors than Caucasians. Also discussed previously, was research conducted by Dilworth-Anderson, Goodwin, and Williams (2004), which suggested that the impact of Black culture explained the improved physical health of caregivers over time among its solely African American

sample. Earlier described research conducted by Grant, Elliott, Giger, and Bartolucci (2001) did not note any racial differences among its diverse caregiver sample.

Two of these five studies (Haley et al., 2004; Roth, Haley, Owen, Clay, & Goode, 2001) that examined racial differences between Black and White caregivers found a relationship between race and physical health behaviors. Haley and colleagues (2004) conducted in-home interviews with a sample of 295 African Americans and 425 Caucasian caregivers of persons with dementia. The researchers designed a four-item measure to assess perceived health and physical health. Data revealed that African Americans reported more unhealthy behaviors than Caucasians.

Similarly, research conducted by Roth, Haley, Owen, Clay, and Goode (2001) found Blacks to be more vulnerable to health problems than Whites. Roth and others interviewed 197 caregivers and 218 noncaregiver controls about their caregiving experience. The Cornell Medical Index was administered via structured interviews and through a series of questionnaires. Results indicated that both African Americans and Caucasians reported increased physical health symptoms over time with Blacks having greater susceptibility to health problems than Whites.

Studies on Religious Involvement and Physical Health

While the literature is replete with research investigating the effects of caregiving on physical health, there is less data revealing the impact of religiosity on the physical health of caregivers. This review yielded only two studies (Banthia, Moskowitz, Acree, & Folkman, 2007; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005) that addressed relationships between religious involvement and caregiver physical health (see Table 6).

Table 6

Studies on Religious Involvement and Physical Health

Author(s)	Sample/Methods	Measures	Findings
Banthia, Moskowitz, Acree, & Folkman (2007)	155 maternal caregivers of children with HIV or other chronic illnesses/Interviewer-administered self-report questionnaires	Physical Health Status; Index of Prayer; Religious Belief Salience	Personal religiosity associated with fewer physical health problems; Black women reported highest level of religiosity and prayer, followed by Hispanics and then Whites; people with lower income and less education reported more prayer
Marks, Nesteruk, Swanson, Garrison, & Davis (2005)	Purposive sample of 32 African American parental caregivers/Semi-structured qualitative interviews	Qualitative questions regarding religious involvement and physical health	Emergent Themes: Active Faith Involvement (active church participation associated with longevity); Power of Prayer (resource to abstain from detrimental health behaviors; represents dependence on God for sustenance)

Organizational Religiosity

This literature review on religious involvement in organized religion and physical health yielded one study (Marks, Nesteruk, Swanson, Garrison, & Davis, 2005) that included a caregiver sample. A qualitative study, utilizing a narrative approach, involved a purposive sample of 32 highly religious African Americans caring for at least one parent. Researchers employed a 20-question semi-structured interview instrument. Grounded theory methodology was utilized to report study findings from emergent themes. One of the resultant themes from this qualitative research indicated an

association between active church participant and longevity. Participants reported strong beliefs that church attendance kept them active and thereby contributed to better health.

Personal Religiosity

Both of the reviewed studies on religious involvement and caregiver physical health addressed personal religiosity. Banthia and colleagues (2007) studied a highly religious and ethnically diverse sample of 155 maternal caregivers of children with HIV or some other chronic illness. Interviewers administered self-report questionnaires comprised of the Index of Prayer, Religious Belief Salience, and Physical Health Status scales. The data revealed that Black women demonstrated the highest level of religiosity and prayer, followed by Hispanics, and then Whites. The researchers found that personal religiosity was associated with fewer physical health problems, but the strength of the association varied by ethnic group, as education moderated the relationship between religiosity and health symptoms. Additionally, this research revealed that sample participants with lower income and less education prayed more and reported fewer problems with their physical health.

As discussed previously, a qualitative study conducted by Marks and colleagues (2005) investigated why some religiously involved African Americans live longer and healthier lives. Using grounded methodology, these researchers discovered several themes, one that related to personal religiosity and physical health. The study findings indicated a “power of prayer” theme, which suggested that prayer enabled people to abstain from unhealthy behaviors that might be detrimental to one’s health, such as drinking, smoking, domestic violence, assault, and suicide. Study participants further reported that prayer represented one’s sole dependence on God to sustain health and life.

Empirical Investigations of Depression

Depression has been widely studied in the caregiving literature, as evidenced by this review which yielded 21 studies that examined the levels of depression experienced by caregivers (Amirkhanyan & Wolf, 2003; Beach, Schulz, & Yee, 2000; Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Burgener, 1994; Cannuscio et al., 2004; Chang, Noonan, & Tennstedt, 1998; Clark et al., 2004; Drentea & Goldner, 2006; Gaugler et al., 2009; Grant, Elliott, Giger, & Bartolucci, 2001; Haley et al., 2004; Herbert, Dang, & Schulz, 2007; Leblanc, Driscoll, & Pearlin, 2004; Li, Seltzer, & Greenberg, 1997; Mitchell & Knowlton, 2009; Murray-Swank et al., 2006; Rankin, Haut, & Keefover, 2001; Roth, Haley, Owen, Clay, & Goode, 2001; Schulz et al., 1997; Shah, Snow, & Kunik, 2001; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995). Findings from this research have been organized into two categories: a) studies investigating some aspect of the caregiving situation relative to depression levels of caregivers and b) studies exploring the relationship between religious involvement and depression.

Studies Documenting Levels of Depression of Caregivers

Thirteen studies were located that addressed some element of the caregiving situation on levels of depression for caregivers (Amirkhanyan & Wolf, 2003; Beach, Schulz, & Yee, 2000; Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Clark et al., 2004; Gaugler et al., 2009; Grant, Elliott, Giger, & Bartolucci, 2001; Haley et al., 2004; Li, Seltzer, & Greenberg, 1997; Mitchell & Knowlton, 2009; Rankin, Haut, & Keefover, 2001; Roth, Haley, Owen, Clay, & Goode, 2001; Schulz et al., 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995) (see Table 7). Five studies found a relationship between caregiving stress and depression. Five studies reported a significant impact of

social support on depression among caregivers. Care recipient need or problems were also related to caregiver depression in four studies. Four studies found that caregiver physical health was a predictor of depression. Racial differences were reported in three studies.

Table 7

Studies Documenting Level of Depression of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Amirkhanyan & Wolf (2003)	8,345 majority White adult children of elderly parents/Interviews	Shortened version of Center for Epidemiologic Studies Depression Scale (CES-D)	Women reported higher levels of depression than men; parental need positively related to depression for women; having caregiver sibling increased noncaregiver depression
Beach, Schulz, & Yee (2000)	299 spousal caregivers; 381 noncaregivers/Structured home-based interviews	Diagnostic Interview Schedule	Increased caregiver strain was related to increased depression; increased help to spouse predicted declines in depression
Biegel, Katz-Saltzman, Meeks, Brown, & Tracy (2010)	82 predominantly Black caregivers of persons with substance abuse disorder/Face-to-face interviews	Center for Epidemiologic Studies Depression Scale (CES-D)	Caregiver depression predicted by care recipient emotional problems, reduced care recipient social support, poor caregiver health

(continued)

Table 7 (continued)

Studies Documenting Level of Depression of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Clark et al. (2004)	132 stroke survivor caregivers/In-person questionnaires	Medical Outcomes Study Short Form 36	Poorer stroke survivor functioning and poor family functioning were associated with worse mental health
Gaugler et al. (2009)	238 cancer caregivers/Interviews	Center for Epidemiologic Studies Depression Scale (CES-D)	Greater role overload and role captivity linked to greater depression; loss of intimate exchange associated with more depression; greater socioemotional support related to less depression
Grant, Elliott, Giger, & Bartolucci (2001)	40 stroke survivor caregivers/ Interviews	Center for Epidemiologic Studies Depression Scale (CES-D)	Social support and personal control were significant predictors of depression
Haley et al. (2004)	720 dementia caregivers/In-home interviews	Center for Epidemiologic Studies Depression Scale (CES-D)	Caucasians more depressed than African Americans
Li, Seltzer, & Greenberg (1997)	252 wife and daughter caregivers/Home-based interviews	Center for Epidemiologic Studies Depression Scale (CES-D)	Health status of wife and care recipient behavioral problems predicted depression levels; for daughters, social participation predicted depression; increased levels of emotional support predicted less depression

(continued)

Table 7 (continued)

Studies Documenting Level of Depression of Caregivers

Author(s)	Sample/Methods	Measures	Findings
Mitchell & Knowlton (2009)	207 predominantly African American caregivers of PLWHA/Face-to-face interviews	Center for Epidemiologic Studies Depression Scale (CES-D)	Greater stigma associated with greater depression; increased disclosures related to reduced depression
Rankin, Haut, & Keefover (2001)	Convenience sample of 96 spousal caregivers of persons with Alzheimer's disease/ Clinical interview and questionnaires	Center for Epidemiologic Studies Depression Scale (CES-D)	Wives more likely to be depressed than husbands; caregiver burden predicted depression
Roth, Haley, Owen, Clay, & Goode (2001)	197 dementia caregivers and 218 noncaregiver controls/ Structured interview and series of questionnaires	Center for Epidemiologic Studies Depression Scale (CES-D)	Whites more depressed than Blacks; caregivers more depressed than noncaregivers
Schulz et al. (1997)	Majority White sample of 395 spousal caregivers and 424 noncaregivers/ Structured in-home interviews	Center for Epidemiologic Studies Depression Scale (CES-D); Diagnostic Interview Schedule subsection for depressive episode (16)	Caregiving stress predicted depressive symptoms; less sleep and less self-care linked to increased depression
Tomlinson, Harbaugh, Kotchevar, & Swanson (1995)	20 maternal caregivers of critically hospitalized child/Questionnaire	Medical Outcomes Study Short Form	Increased depression was related to caregiving stress and caregiver physical health decline

Caregiving stress was frequently identified as a predictor of depression among caregiver samples (Beach, Schulz, & Yee, 2000; Gaugler et al., 2009; Rankin, Haut, &

Keefover, 2001; Schulz et al., 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995). In the first study, Beach and colleagues (2000) conducted structured home-based interviews with 299 spousal caregivers and 381 noncaregivers. The population-based sample was predominantly White, although a supplemental cohort of African Americans (9%) was included in the sample. The Diagnostic Interview Schedule was utilized to measure depression among the study sample. Data revealed a positive relationship between caregiving stress and depression. This study also found that care recipient social support contributed to declines in caregiver depression.

A second study (Gaugler et al., 2009) reported a link between caregiving stress and depression. Gaugler and colleagues interviewed 238 cancer caregivers employing the Center for Epidemiologic Studies Depression Scale (CES-D). This research also demonstrated a relationship between caregiving stress and depression. Participants who reported greater role overload and role captivity also reported higher depression scores. Other results found that loss of intimate exchanges between care recipient and caregiver was associated with more depression. Study findings further revealed that greater caregiver social support was related to less depression.

Additional research (Rankin, Haut, & Keefover, 2001) examined the influence of caregiving stress on depression. A convenience sample of 96 spousal caregivers of persons with Alzheimer's disease completed a clinical interview and questionnaire utilizing the Center for Epidemiologic Studies Depression Scale (CES-D) to measure depression. Study results indicated that caregiver burden predicted depression, with a positive relationship between burden and depression being demonstrated within the

caregiver sample. Rankin, Haut, and Keefover's research on spousal caregivers also found that wives were more likely to be depressed than husbands.

In a fourth study investigating the effect of caregiver burden on depression, Schulz and colleagues (1997) conducted structured in-home interviews with a majority White sample of 395 spousal caregivers and 424 noncaregivers. The Center for Epidemiologic Studies Depression Scale (CES-D) and the Diagnostic Interview Schedule were used to assess caregiver depression. Researchers found that caregiving stress predicted depressive symptoms among the sample. The study also reported a correlation between caregiver health and depression. Limited sleep and less attention to self-care were associated with higher depression. Similarly, a fifth study (Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995) noted relationships between caregiving stress and depression and also between caregiver health and depression. The Medical Outcomes Study Short Form to measure depression within a sample comprised of 20 maternal caregivers of critically hospitalized children. Study findings reported that caregivers with higher levels of stress and poorer physical health had increased depression.

In addition to previously mentioned research (Beach, Schulz, & Yee, 2000; Gaugler et al., 2009), three other studies investigated the effect of social support on caregiver depression (Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Grant, Elliott, Giger, & Bartolucci, 2001; Li, Seltzer, & Greenberg, 1997). Research by Biegel, Katz-Saltzman, Meeks, Brown, and Tracy (2010) included a majority African American sample of care recipients with a substance use disorder and their family caregivers. During separate face-to-face interviews, depression was measured for caregivers and care recipients by using the Center for Epidemiologic Studies Depression Scale (CES-D).

Results from this study indicated that caregiver depression was lower when care recipients had greater levels of emotional and/or informational social support.

Depression among caregivers in the sample was also predicted by increased emotional problems of the care recipient and poor caregiver health.

Another study (Grant, Elliott, Giger, & Bartolucci, 2001) also evaluated the effect of social support on caregiver depression with a racially mixed sample of 40 stroke survivor caregivers. Participants were interviewed using the Center for Epidemiologic Studies Depression Scale (CES-D) to measure caregiver depression. Higher social support was significantly related to lower depression. Personal control was also noted to have a significant effect on depression among this sample of stroke survivor caregivers. A final study (Li, Seltzer, & Greenberg, 1997) utilized the Center for Epidemiologic Studies Depression Scale (CES-D) to assess the effect of social support on depression within a sample of 252 wife and daughter caregivers during home-based interviews. The researchers found that increased levels of emotional social support contributed to less depression among wives and daughters. Study findings also indicated that wives' poor health status and increased care recipient behavioral problems were associated with increased depression. For daughters, increased levels of social participation were related to lower levels of depression.

Similar to previous research discussed above (Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Li, Seltzer, & Greenberg, 1997), two additional studies (Amirkhanyan & Wolf, 2003; Clark et al., 2004) also found a relationship between care recipient needs and problems and caregiver depression. Amirkhanyan and Wolf (2003) interviewed 8,345 predominantly White adult child caregivers of elderly parents.

Researchers used a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) to assess depression among its caregiver sample. Results noted a positive relationship between parental need and depression for female caregivers. Additional findings suggested that having a caregiving sibling resulted in increased depression among noncaregivers. Women also reported higher levels of depression than men.

Four of the studies mentioned earlier found a correlation between caregiver health and depression (Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Li, Seltzer, & Greenberg, 1997; Schulz et al., 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995). Each study reported that poor physical health was predictive of higher levels of caregiver depression. One study (Mitchell & Knowlton, 2009) examined the impact of HIV stigma and disclosure on caregiver depression. A predominantly African American sample of PLWHA (persons living with HIV or AIDS) caregivers engaged in face-to-face interviews. Utilizing the Center for Epidemiologic Studies Depression Scale (CES-D), participants were analyzed for depression levels. Study findings indicated that greater stigma was associated increased depression. A negative relationship existed between reported HIV caregiving disclosures and caregiver depression.

Of the thirteen studies on depression, only two studies (Haley et al., 2004; Roth, Haley, Owen, Clay, & Goode, 2001) examined racial differences in depression levels of caregivers. Haley and colleagues (2004) conducted in-home interviews with 295 African American and 425 Caucasian caregivers, evaluating depression with the Center for Epidemiologic Studies Depression Scale (CES-D). Analyses revealed that Caucasian caregivers were more depressed than African American caregivers. Similar results were found in the second study (Roth, Haley, Owen, Clay, & Goode, 2001). A sample of 197

dementia caregivers and 218 noncaregiver controls participated in structured interviews and completed a series of questions to investigate levels of depression using the Center for Epidemiologic Studies Depression Scale (CES-D). Overall, caregivers were more depressed than noncaregivers, with White caregivers reporting higher levels than African Americans.

Studies on Religious Involvement and Depression

The current literature review identified eight studies that addressed some aspect of the relationship between religious involvement and depression (Burgener, 1994; Cannuscio et al., 2004; Chang, Noonan, & Tennstedt, 1998; Drentea & Goldner, 2006; Herbert, Dang, & Schulz, 2007; Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001) (see Table 8). The following sections will discuss findings from the reviewed literature on the relationship between some aspect of religious involvement and depression among caregiver samples.

Table 8

Studies on Religious Involvement and Depression

Author(s)	Sample/Methods	Measures	Findings
Burgener (1994)	Purposive sampling of 84 caregivers of institutionalized Alzheimer's patients and 81 control subject non-caregiving older persons living in the community/ Mailed questionnaire	Life-3 Scale; Medical Outcomes Study Survey; Religiosity Scale	Increased participation in organized religion related to higher levels of well-being; improved mental health linked to having spiritual needs met

(continued)

Table 8 (continued)

Studies on Religious Involvement and Depression

Author(s)	Sample/Methods	Measures	Findings
Cannuscio et al. (2004)	61,383 female caregivers from 1992 Nurses' Health Study/Questionnaires	Mental Health Inventory; Berkman-Syme Social Network Index	Negative relationship between church attendance and depression
Chang, Noonan, & Tennstedt (1998)	127 caregivers to community-residing disabled elders/ Telephone interviews	Center for Epidemiologic Studies Depression Scale (CES-D); single item from Meaning in Caregiving Scale	Inverse relationship between personal religiosity and depression
Drentea & Goldner (2006)	Multi-stage area probability sample of 2493 caregivers/Interviews	Center for Epidemiologic Studies Depression Scale (CES-D); researcher developed religiosity tool of 5-items	No significant relationship between organizational religiosity and depression; strong religious beliefs contributed to reduced depressive symptomology for Blacks; higher religiosity among Blacks in sample; Black caregivers significantly more depressed than White caregivers
Herbert, Dang, & Schulz (2007)	1229 randomly assigned caregivers of persons with dementia/Interviews	Center for Epidemiologic Studies Depression Scale (CES-D); Inventory of Complicated Grief; Researcher developed religiosity tool of 3-items measuring frequency of religious attendance, frequency of prayer, and importance of religious faith/spirituality	All measures of religiosity associated with less depression, before and after death; religious attendance increased after death
Leblanc, Driscoll, & Pearlin (2004)	200 spousal caregivers of persons with Alzheimer's disease or related dementia/Face-to-face interviews conducted in caregiver's home; 9% of interviews conducted via telephone	Hopkins Symptoms Checklist; researcher developed religiosity tool of 3-items: How religious? Attendance of religious services? Frequency of prayer?	Positive relationship between self-perceived religiosity and depression; no significant relationship between prayer, church attendance, and depression

(continued)

Table 8 (continued)

Studies on Religious Involvement and Depression

Author(s)	Sample/Methods	Measures	Findings
Shah, Snow, & Kunik (2001)	Convenience sample of 48 Alzheimer's caregivers/Self-administered survey	Geriatric Depression Scale; Duke University Religion Index; Religious Coping Activities Scale	No correlations between church attendance and depression or prayer and depression; higher levels of depression for in-home caregivers; religious discontent positively correlated with depression

Organizational Religiosity

Seven of the eight studies reviewed explored the relationship between organizational religiosity and depression (Burgener, 1994; Cannuscio et al., 2004; Drentea & Goldner, 2006; Herbert, Dang, & Schulz, 2007; Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001). Four of the seven studies found a significant relationship between organizational religiosity and depression (Burgener, 1994; Cannuscio et al., 2004; Drentea & Goldner, 2006; Herbert, Dang, & Schulz, 2007). The first study (Burgener, 1994) included a purposive sample comprised of 84 caregivers of institutionalized Alzheimer's patients and a control group with 81 non-caregiving older persons living in a northern New York community. The sample included one African American respondent in each of the two groups. Burgener (1994) utilized the Life-3 Scale to measure well-being and the Medical Outcomes Study Survey to assess depression among the sample. The Religiosity Scale was employed to measure organized religious behavior. The study questionnaire included supplementary items to

determine participants' current religious involvement. Specifically, the items inquired about the "importance of church or synagogue past and present, past and present frequency of church or synagogue attendance, frequency of visits from clergy or rabbis, the extent to which need for contact with the church or synagogue was met, and the extent to which spiritual needs were met." The results of this study revealed that increased participation in organized religion was related to higher levels of well-being. Moreover, participants who purportedly had spiritual needs met by the clergy noted improvements in mental health.

The second study (Cannuscio et al., 2004) also reported a significant relationship between organized religiosity and caregiver depression. Secondary data analysis was conducted on a data set of responses from 61,383 female caregivers included in the 1992 Nurses' Health Study. Questionnaires included the Mental Health Inventory, which assessed depression among the caregiver sample, and the Berkman-Syme Social Network Index, which evaluated participants' organizational religiosity. The organizational religiosity measure determined the frequency of church attendance among study participants and included the following two response options: regular or infrequent/never. Findings revealed a negative relationship between church attendance and depression among caregivers in the sample.

The third study (Herbert, Dang, & Schulz, 2007) investigated depression among 1,229 randomly assigned caregivers of persons with dementia. Depression was evaluated via interviews using the Center for Epidemiologic Studies Depression Scale (CES-D) and Inventory of Complicated Grief. Researchers developed a study-specific tool to measure religiosity, which included three items asking about the frequency of religious

attendance, frequency of prayer, and importance of religious faith/spirituality. The organizational measure of religiosity was related to depression, with increased church attendance being linked to less depressive symptomology, both before and after the care recipients' death. Findings also indicated that rates of church attendance increased after the death of the care recipients.

The fourth study (Drentea & Goldner, 2006) examined depression within a multi-stage area probability sample, which included 2,493 caregivers. Researchers interviewed participants using the Center for Epidemiologic Studies Depression Scale (CES-D) and a five-item measure of religiosity, developed by the study authors. Two of the questions evaluated organizational religiosity with one question asking how often participants attended religious services and another question gauging the level of participation in church-affiliated groups. Although results did not yield a significant relationship between organizational religiosity and depression among the total sample, it did find that African Americans reported higher religiosity than Caucasians. Consequently, this higher religiosity contributed to lower depression among African Americans in the sample, despite the fact that Black caregivers were significantly more depressed than White caregivers.

Three of the remaining seven studies did not find organizational religiosity to be significantly associated with depression among caregivers (Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001). In the first of these studies, Leblanc, Driscoll, and Pearlin (2004) failed to find a significant relationship between organizational religiosity and depression. These researchers conducted 90-minute interviews with 200 highly religious and predominantly White spousal caregivers

of persons with Alzheimer's disease or related dementia. While the majority of the interviews were administered face-to-face, a small number (9%) of the interviews were conducted by telephone. In this study, the Hopkins Symptoms Checklist measured depression and religiosity was evaluated by a three-item assessment developed by the researchers. In terms of organized religion, participants were asked about their frequency of attendance at religious services and how religious they considered themselves to be. Study findings for this research did not demonstrate a statistically significant relationship between organizational religiosity and depression. Surprisingly, the researchers did report a positive relationship between self-perceived religiosity and depression. Participants who perceived themselves to be more religious reported higher levels of depression.

Similarly to the previous study, research conducted by Murray-Swank and colleagues (2006) did not reveal a significant relationship between organizational religiosity and depression. This study was a secondary data analysis that included a sample of 83 caregivers of persons with a serious mental illness. Participants were 72% female, 73% White, 42% Protestant, and 32% Catholic. Caregiver depression was measured by the Center for Epidemiologic Studies Depression Scale (CES-D). Religiosity was evaluated by a three-item measure developed by the authors, which gauged the importance of religious and spiritual beliefs, frequency of attendance at religious services, and degree to which participants believe that was source of strength and comfort. Results indicated there was no significant relationship between church attendance and depression.

Like the other two studies, Shah, Snow, and Kunik (2001) did not find organizational religiosity to influence depression among a convenience sample of 48 fairly religious caregivers of persons with Alzheimer's disease. The Geriatric Depression Scale assessed depression. The Duke University Religion Index and the Religious Coping Activities Scale were utilized to evaluate organizational religiosity within the caregiving sample. While 95.8% of the sample described themselves as religious, they did not report that organizational religiosity reduced their levels of depression. The researchers did discover higher levels of depression for in-home caregivers. The study further found that religious discontent was positively correlated with depression.

Personal Religiosity

Six of the eight studies examined some aspect of personal religiosity and depression (Burgener, 1994; Chang, Noonan, & Tennstedt, 1998; Herbert, Dang, & Schulz, 2007; Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001), but only three studies reported a significant relationship between these two variables (Chang, Noonan, & Tennstedt, 1998; Herbert, Dang, & Schulz, 2007; Murray-Swank et al., 2006). In the first of these three studies, Chang, Noonan, and Tennstedt (1998) examined an aspect of personal religiosity and depression among a sample of 127 caregivers to community-residing disabled elders. The personal religiosity measure recorded how the respondents' "religion or spiritual beliefs helped them to handle the whole experience," which the authors identified as religious/spiritual coping. Depression was assessed with the Center for Epidemiologic Studies Depression (CES-D) scale. Seventy-five percent of the caregivers agreed to some extent that their involvement in religion has helped them cope with the depression associated with the

caregiving situation. As such, this research found an inverse relationship between personal religiosity and depression.

The second study (Herbert, Dang, & Schulz, 2007) noted that personal religiosity was significantly related to depression among sample of 1,229 caregivers of persons with dementia. Personal religiosity was assessed with a single item that asked participants about their frequency of prayer. Similar to Chang, Noonan, and Tennstedt's research, this study also yielded a negative relationship between personal religiosity and caregiver depression, with higher frequency of prayer related to lower levels of depression.

Finally, Murray-Swank and colleagues (2006) also reported that personal religiosity was associated with lesser depression. In this research, personal religiosity was measured by a researcher-developed tool that asked about the frequency of prayer, meditation, viewing or listening to religious programs, reading the Bible, or seeking spiritual direction from Internet, clergy, or others in the religious community. As discussed above, this research evaluated the influence of religiosity on depression among a sample of 83 caregivers of persons with serious mental illness. Like the other two studies (Chang, Noonan, & Tennstedt, 1998; Herbert, Dang, & Schulz, 2007), Murray-Swank and associates also found that caregivers with higher levels of personal religiosity reported less depression.

The three remaining studies, described above, all explored the relationship between personal religiosity and depression among various samples of caregivers of persons with Alzheimer's disease (Burgener, 1998; Leblanc, Driscoll, & Pearlin, 2004; Shah, Snow, & Kunick, 2001). Assessing the use of prayer and other personal religious

activities, these investigations failed to detect a statistically significant relationship between personal religiosity and levels of caregiver depression.

Summary and Critique of the Literature

Caregiving research is a burgeoning area in the extant literature, with caregiving stress, social support, physical health, and depression among some of the most frequently examined variables. A substantial number of studies provide descriptive information in these four areas as they relate to the caregiving experience, sometimes examining them as outcome variables and at other times considering them as independent variables. In reviewing the literature, caregiving stress and depression were found to be the most widely researched as dependent variables. While social support and physical health were widely examined as predictor variables, fewer studies considered these factors as outcome measures. The majority of studies found depression to be a significant factor in caregiving, either as a frequently noted experience reported by caregivers or as a variable found to be significantly associated with other factors such as caregiving stress (Beach, Schulz, & Yee, 2000; Gaugler et al., 2009; Rankin, Haut, & Keefover, 2001; Schulz et al., 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995), social support (Gaugler et al., 2009; Grant, Elliott, Giger, & Bartolucci, 2001; Li, Seltzer, & Greenberg, 1997), physical health (Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Li, Seltzer, & Greenberg, 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995), gender (Amirkhanyan & Wolf, 2003; Beach, Schulz, & Yee, 2000; Li, Seltzer, & Greenberg, 1997; Rankin, Haut, & Keefover, 2001), and race (Haley et al., 2004; Roth, Haley, Owen, Clay, & Goode, 2001).

The literature on religion and health outcomes among the general public is vast, while investigations of the relationships between religious involvement and caregiving is in a more preliminary stage, particularly caregiving studies that evaluate religious involvement as a predictor variable. This literature often uses the term religiosity in discussions about religious involvement and typically measures two general aspects of religiosity: organizational, and personal. Existing findings present a mixed picture concerning the impact of religious involvement on various aspects of caregiving. Some studies report positive effects of either organized or personal religiosity (Banthia, Moskowitz, Acree, & Folkman, 2007; Burgener, 1994; Cannuscio et al., 2004; Chang, Noonan, & Tennstedt, 1998; Herbert, Dang, & Schulz, 2007; Karlin, 2004; Leblanc, Driscoll, & Pearlin, 2004; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005; Murray-Swank et al., 2006; Poindexter, Linsk, & Warner, 1999), while others report either negative impacts or no relationship (Chang, Noonan, & Tennstedt, 1998; Drentea & Goldner, 2006; Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006; Shah, Snow, & Kunik, 2001; Stueve, Vine, & Struening, 1997). Several of these studies found a negative relationship between organizational or personal religiosity and one aspect of the caregiving situation (e.g. caregiving stress, social support, physical health, or depression), while also reporting a positive relationship between religiosity and some other facet of the caregiving situation (Chang, Noonan, & Tennstedt, 1998; Leblanc, Driscoll, & Pearlin, 2004; Murray-Swank et al., 2006). Reported findings in the literature must be considered within the limitations of the various research studies. Most of the investigations reviewed were descriptive studies, which primarily utilized cross-sectional research designs. Seven longitudinal studies were identified in this literature review,

with the researchers reporting on Wave one data (Amirkhanyan & Wolf, 2003; Banthia, Moskowitz, Acree, & Folkman, 2007; Beach, Schulz, & Yee, 2000; Dilworth-Anderson, Goodwin, & Williams, 2004; Roth, Haley, Owen, Clay, & Goode, 2001; Shaw et al., 1997; Young & Kahana, 1995). Only one study reported an experimental design with random assignment (Herbert, Dang, & Schulz, 2007), while another utilized a quasi-experimental design (Zarit, Stephens, Townsend, & Greene, 1998). One study reportedly recruited a probability sample of caregivers utilizing random-digit dialing techniques (Li, Seltzer, & Greenberg, 1997). Most of the studies examined in this literature review only included caregivers in their sample, with the exception of six studies that included non-caregiver controls (Beach, Schulz, & Yee, 2000; Burgener, 1994; Roth, Haley, Owen, Clay, & Goode, 2001; Schulz et al., 1997; Shaw et al., 1997; Stuckey, 2001). The majority of the research was quantitative; however, there were a small number of qualitative studies included in this review (Marks, Nesteruk, Swanson, Garrison, & Davis, 2005; Poindexter, Linsk, & Warner, 1999; Stuckey, 2001).

In terms of data collection methods, most studies collected data via face-to-face interviews conducted in the home of the caregiver (Beach, Schulz, & Yee, 2000; Haley et al., 2004; Knight, Silverstein, McCallum, & Fox, 2000; Leblanc, Driscoll, & Pearlin, 2004; Li, Seltzer, & Greenberg, 1997; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005; Poindexter, Linsk, & Warner, 1999; Schulz et al., 1997; Shaw et al., 1997; Zarit, Stephens, Townsend, & Green, 1998). Trained researchers used structured interview guides comprised mainly of standardized measures. While there were some researcher-developed measures, particularly for measures of religiosity, the majority of interview guides were comprised of standardized scales that most often reported adequate

reliability with a Cronbach's alpha of .70 and above (Amirkhanyan & Wolf, 2003; Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Banthia, Moskowitz, Acree, & Folkman, 2007; Burgener, 1994; Chang, Noonan, & Tennstedt, 1998; Clark, Dunbar, Shields, Viswanathan, Aycock, & Wolf, 2004; Dilworth-Anderson, Goodwin, & Williams, 2004; Drentea & Goldner, 2006; Gaugler et al., 2009; Grant, Elliott, Giger, & Bartolucci, 2001; Haley et al., 2004; Ingersoll-Dayton & Raschick, 2004; Karlin, 2004; Knight, Silverstein, McCallum, & Fox, 2000; Li, Seltzer, & Greenberg, 1997; Mitchell & Knowlton, 2009; Rankin, Haut, & Keefover, 2001; Roth et al., 2001; Schulz et al., 1997; Shah, Snow, & Kunkik, 2001; Starrels, Ingersoll-Dayton, Dowler, Neal, 1997; Stueve, Vine, & Struening, 1997; Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995; Zarit, Stephens, Townsend, & Greene, 1998). Many of the measures were self-report in nature, which lends itself to an increase in respondents giving socially desirable responses during the structured interviews. Despite the lengthy interviews, only a few studies reported providing an incentive for study participation (Banthia, Moskowitz, Acree, & Folkman, 2007; Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Mitchell & Knowlton, 2009; Poindexter, Linsk, & Warner, 1999; Roth et al., 2001). When incentives were given, the amounts ranged from \$15 to \$45 and were typically distributed in the form of a grocery store coupon.

The vast majority of the studies reviewed lacked sampling rigor and used non-probability sampling methods, using either convenience or purposive sampling methods (Biegel, Katz-Saltzman, Meeks, Brown, & Tracy, 2010; Burgener, 1994; Marks, Nesteruk, Swanson, Garison, & Davis, 2005; Poindexter, Linsk, & Warner, 1999;

Rankin, Haut, & Keefover, 2001; Shah, Snow, & Kunik, 2001; Starrels, Ingersoll-Dayton, Dowler, & Neal, 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995). Most samples lacked diversity and were overwhelming female and predominantly White. A limited number of studies specifically examined racial differences among African American and Caucasian caregivers (Beach, Schulz, & Yee, 2000; Drentea & Goldner, 2006; Haley et al., 2004; Knight, Silverstein, McCallum, & Fox, 2000; Roth, Haley, Owen, Clay, & Goode, 2001; Young & Kahana, 1995) and even fewer studies were comprised of exclusively Black samples (Dilworth-Anderson, Goodwin, & Williams, 2004; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005; Williams & Dilworth-Anderson, 2002). Several of the studies included spousal caregivers; the wife was typically the caregiver (Beach, Schulz, & Yee, 2000; Ingersoll-Dayton & Raschick, 2004; Leblanc, Driscoll, & Pearlin, 2004; Rankin, Haut, & Keefover, 2001; Schulz et al., 1997; Shaw et al., 1997). The majority of studies involved caregivers of care recipients who were suffering from Alzheimer's disease or some other form of dementia (Burgener, 1994; Clip & George, 1990; Haley et al., 2004; Herbert, Dang, & Schulz, 2007; Karlin, 2004; Knight, Silverstein, McCallum, & Fox, 2000; Leblanc, Driscoll, & Pearlin, 2004; Rankin, Haut, & Keefover, 2001; Roth, Haley, Owen, Clay, & Goode, 2001; Shah, Snow, & Kunik, 2001; Shaw et al., 1997; Zarit, Stephens, Townsend, & Greene, 1998). The other most prevalent group of care recipients were frail elders with varying health concerns (Cannuscio et al., 2004; Chang, Noonan, & Tennstedt, 1998; De Frias, Tuokko, & Rosenberg, 2005; Dilworth-Anderson, Goodwin, & Williams, 2004; Dwyer, Lee, & Jankowski, 1994; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005; Starrels,

Ingersoll-Dayton, Dowler, & Neal, 1997; Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993; Williams & Dilworth-Anderson, 2002; Young & Kahana, 1995).

The goal of the current study was to address some of the gaps in the literature while extending the knowledge base regarding religious involvement and family caregiving. Therefore, both organizational and personal religiosity was included in the analysis through the use of measures on involvement in organized religious activities, personal religious activities, and intrinsic religious motivation. The study also includes four variables noted in the literature as having particular salience to the caregiving experience: caregiving stress, social support, physical health, and depression.

The current research also addresses the relative paucity of research on diverse racial groups in the caregiving literature by utilizing an African American sample of caregivers. The study also contributes to our knowledge of a wider population of caregivers by its inclusion of a variety of family caregivers (spouses, adult children, other relatives) and care recipients with an extensive range of both physical and mental health challenges.

Finally, the use of both bivariate and multivariate analysis allows for examination of study variables as both dependent and independent variables. The bivariate hypotheses involved exploration of the relationships between religious involvement as an independent variable with caregiving stress, social support, physical health, and depression as dependent variables. The multivariate hypothesis led to examination of caregiving stress, social support, physical health, and depression as discriminant (or

independent) variables of the four types of religious involvement (dependent variable).

Thus, this two-tiered analysis plan permits consideration of the complex interplay among all of the study variables.

Chapter III: Methodology

The current study utilized an existing data set collected from a community-based, observational study conducted within the Washington, DC metropolitan area. The purpose of this study was to investigate the effects and mechanisms of religious involvement on the physical and mental health of African American caregivers of elderly relatives or friends. The John Templeton Foundation funded the original study, which was sub-contracted through the Duke University Center for Spirituality, Theology, and Health. It represents one of seven research projects funded nationally through this initiative. The study was conducted by a research team comprised of faculty of The Catholic University of America and an advisory team of health professionals, social service providers, faith community members, and caregivers. The Principle Investigator was Dr. Michael Sheridan; Dr. Susanne Bennett and Dr. Barbara Soniat served as Co-PIs. The following discussion includes a detailed account of the current study's methodology. Attention is given to describing the study design and data collection procedures, the sampling plan, conceptualization and measurement of key variables, and approaches to data analysis. Discussion of the process for ensuring human participant concerns is also presented.

Original Study Design and Data Collection Procedures

The research presented here represents a secondary data analysis of an existing data set described above. The original research utilized a cross-sectional survey design involving mixed-methodology to collect quantitative and qualitative data. Only the quantitative data were utilized for the current analysis. Both the quantitative and qualitative phases of the data collection involved face-to-face interviews with trained

interviewers. Interviews were conducted in the homes of study participants or in some other location of their choosing. Each participant was given a \$50.00 grocery store coupon as compensation for their participation in and as an acknowledgement of their contribution to the study.

Three African American social work doctoral students served as Research Assistants and interviewers on the original project, which ensured a match of racial identity between interviewers and study participants. The assigned doctoral students had completed quantitative and qualitative research methods courses as part of their doctoral studies. Interviewers participated in extensive training regarding the protocols for conducting both the quantitative and qualitative interviews provided by the PI and the two Co-PIs. Training included a detailed review of the interview schedules and directions for administration, pilot-testing of both interview processes, instructions regarding use of interview technology (PC Tablets and audio-taping equipment), a “test-run” of equipment, and guidelines regarding proper storage and security of all data. In addition, Dr. Sheridan provided ongoing supervision and monitoring of all data collection processes to insure adherence to the two interview protocols and quality control of data management.

Quantitative data were collected via a structured interview schedule, which was access through an internet-based survey system (Vovici). Each interviewer was issued a laptop to be used for the onsite interviews and participants’ responses were directly entered into the Vovici system, which eliminated any data entry errors that were “out of range” of possible correct responses. The multi-faceted interview schedule was comprised of both single items and standardized scales. The response formats for the

interview questions were included on laminated cards and given to interviewees during the interview process in order to increase participant clarity regarding possible answers and to increase ease of administration. The quantitative interviewing process took approximately two hours per participant. Interview data were directly submitted to the Vovici system immediately following completion of the interview. Data were then exported to the Statistical Package for the Social Sciences (SPSS) (Version 17.0) for data analysis.

Study Population

The original study used a purposive, nonprobability sampling plan to recruit potential study participants based on their experience with caregiving of elders. Probability sampling strategies were not feasible due to the study's focus, targeted population, and available resources. The targeted study population were African American family caregivers. The definition of a family caregiver was taken from the National Alliance for Caregivers and the American Association of Retired Persons (AARP), which describes a caregiver as an adult 18 years or older who provides unpaid care to another relative or friend (2004). According to this interpretation, caregiving can include assistance with personal needs, household chores, managing finances, arranging for outside services, and/or regular visitation to see how the person is doing. Study eligibility will be described in the following paragraph, with a discussion of inclusion and exclusion criteria. The focus in the current study was on caregivers of elders or persons who are 50 years of age or older.

Inclusion and Exclusion Criteria

Inclusion criteria. In order to be eligible for the study, the participant had to be African American; 18 years or older; English speaking; currently providing informal, unpaid care to a relative or friend who was at least 50 years or older, or having provided such care within the past six months. The care recipient was either living with the caregiver or residing in the community within two hours traveling distance of the caregiver. Caregivers could be persons who were legally related to the care recipient or close friends. This latter inclusion was to recognize the phenomenon of “fictive kin” within the African American community or persons who are considered part of the family system even though there may not be any biological or legal relationship.

Exclusion criteria. The following would exclude a person from study eligibility: caregiver unable to participate in the interview due to language, health, or other restrictions; care recipient living in an assisted living, nursing home, rehabilitation center, or other facility with paid staff; or care recipient residing more than two hours away from caregiver. If the caregiver was providing care to a care recipient residing in a facility, or is participating in long distance caregiving, *in addition to* providing care to a care recipient within the community, the caregiver still met the inclusion criteria. These last two exclusion criteria were due to this study’s focus on community-based, informal caregiving.

Participants in this study were selected from six different sample sites that provide services to caregivers, care recipients, or both. Each sample site was given a detailed overview of the inclusion and exclusion criteria in order to ensure eligibility of their patient or client population for the study. The PI met with staff from each sample site to

determine the exact recruitment procedures that would be the most viable in their particular setting. Generally speaking, potential participants were given information about the study during regular contact with sample site staff. If they were interested in participating, they contacted the PI directly. The goal for the final sample of the original study is 300 participants. As the original study is still in the process of completing data collection, the analysis of the current study includes a sub-sample of 262 participants from the larger study.

Variable Measurement

Variables were assessed through the use of a multi-dimensional survey that included both single items and composite item standardized scales (See Appendix A). The following sections provide information on variable measurement, including demographic/background variables, caregiving variables, and key independent and dependent variables.

Demographic/ Background and Caregiving Variables

A series of 10 single items assessed relevant demographic and background information of study participants. Demographic variables included sex, age, marital status, parenting status, number of children, education level, employment status, income level, religious affiliation, and if Christian, specific denomination.

A number of items gathered information on the specific caregiving situation and caregiver experience. These included questions concerning the relationship between the caregiver and care recipient, the care recipient's age, the duration of caregiving, the average number of hours per week of caregiving, the proximity of living arrangements between the caregiver and care recipient, and the major reason for caregiving.

Caregiving intensity was also assessed through a calculation recommended by the National Alliance for Caregiving and the American Association for Retired Persons (2004). This calculation is based on scores on the 6-item *Activities of Daily Living* (ADL) Scale (Katz, Down, Cash, & Grotz, 1970) and the 8-item *Instrumental Activities of Daily Living* (IADL) Scale (Lawton & Brody, 1969), plus the number of reported caregiving hours per week. Responses to these items are then combined to create a 5-point “Level of Care Index” ranging from 1 (low intensity) to 5 (high intensity).

The following sections provide both conceptual and operational definitions of the study’s independent and dependent variables. All of these variables were measured using standardized scales that have demonstrated acceptable estimates of reliability and validity in previous research (see Appendix B). Information concerning reliability of scales with the current sample is provided in Chapter 4.

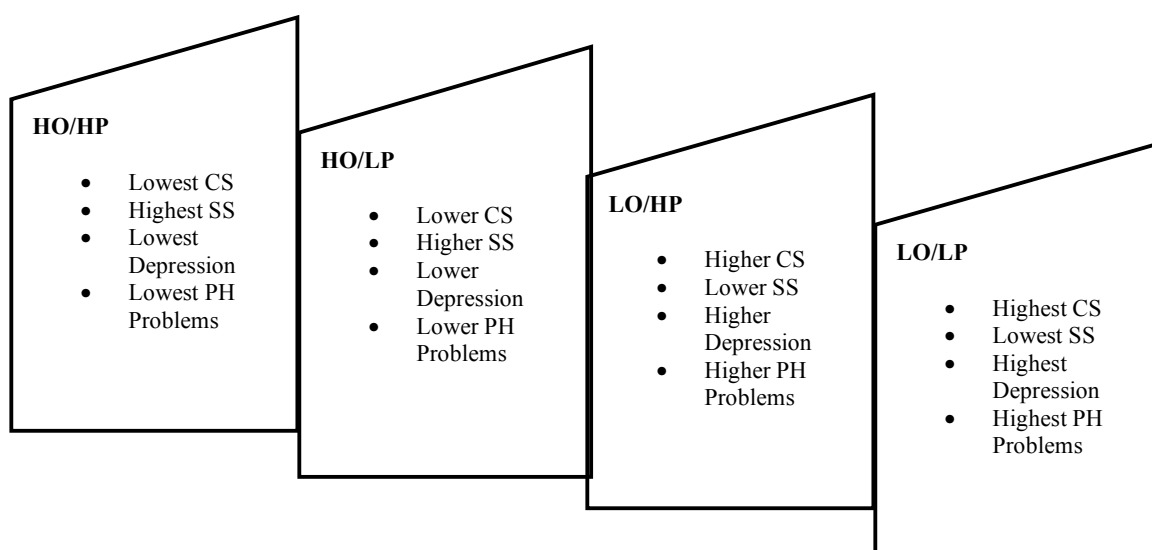
Independent Variables

There are two independent variables in the current study: organizational religiosity and personal religiosity. These two variables were combined to produce a composite variable (type of religious involvement). This permitted the formation of the four religious involvement groups investigated in this analysis: 1) High Organizational/High Personal; 2) High Organizational/Low Personal; 3) Low Organizational/ High Personal; and 4) Low Organizational/Low Personal (see Figure 1).

Organizational Religiosity. Organizational religiosity is conceptualized as involvement in organized religious activities, such as attendance at regular religious services and/or involvement in other institutional religious activities, such as Bible study, Sunday school, choir rehearsals, special events. This variable was measured by a two-

item scale that determines: 1) how often one attends religious services and 2) how often one takes part in other activities at a place of worship. This scale uses a 10-point Likert-type response format ranging from “never” to “daily.” The scale has been used in numerous studies as a measure of organized religious involvement (Fetzer Institute, 2003).

Figure 1. Hypothesized Differences in Health Outcomes Among Four Groups of Religiously-Involved African American Caregivers: An Exploration of Moral Community Theory. Organizational is defined as organized religious practices. Personal is defined as private religious practices and intrinsic religiosity.



Personal Religiosity. The second independent variable is personal religiosity, which is conceptualized as private religious and/or spiritual practices, (e.g., prayer, meditation, journaling, reading of religious or spiritual literature), or personal religious/spiritual beliefs or worldviews. This variable was operationalized through the use of two scales. The first scale is comprised of four items that assess: 1) how often a person prays privately in places other than a church, synagogue, or mosque; 2) how often

one watches or listens to religious programs on TV, radio, or the internet; 3) how often one reads the Bible, Torah, Koran, or other religious literature; and 4) how often prayers or grace are said before meals in the home. As such, it taps into the private religious or spiritual practices domain of personal religiosity. This scale uses an 8-point Likert-type response format ranging from “never” to “several times a day.” The scale has been used in numerous studies as a measure of personal religiosity (Fetzer Institute, 2003).

The second measure of personal religiosity utilized in the current study was the 10-item *Intrinsic Religious Motivation (IRM) Scale* (Hoge, 1972). This scale was originally developed to measure different ways of being religious and assesses personal internalized beliefs or worldviews. Examples of items include: “My faith (spirituality) involves all of my life” and “My faith (spirituality) sometimes restricts my actions.” This scale uses a 4-point Likert-type response format: 1 = strongly disagree; 2 = moderately disagree; 3 = moderately agree; 4 = strongly agree. This scale has been widely used as a measure of intrinsic personal religiosity (Fetzer, 2003).

Dependent Variables

There are four dependent variables in the current study, which include:

1) caregiving stress, 2) social support, 3) physical health, and 4) depression.

Caregiving Stress. Caregiving stress is conceptualized as negative caregiving appraisal and burden reported by the caregiver. This variable was measured by the eight-item *Cargiving Distress Scale* (CDS), which measures relationship distress and emotional burden (Cousins, Davies, Turnbull, & Playfer, 2002). Examples of items include: “I feel frustrated with caring for (care recipient)” and “My relationship with (care recipient) is

strained.” This scale uses a 5-point Likert type response format: 1 = strongly disagree; 2 = disagree; 3 = neither disagree or agree; 4 = agree; 5 = strongly agree.

Social Support. Social support is conceptualized in the current study as the amount of informal support provided by family, friends, neighbors, or other individuals. This variable was measured by the Social Support Sub-Scale of the Duke Social Support and Stress Scale (DUSOCS), which assesses the level of support received from 10 possible sources: wife, husband or significant other; children or grandchildren, parents or grandparents; brothers or sisters; other blood relatives; relatives by marriage or partnership; neighbors; co-workers; church members; or other friends (Parker, 2002). This subscale utilizes a 4-point response format: 0 = none; 1 = some; 2 = a lot; 3 = there is no such person.

Physical Health. Physical health in the current study is conceptualized as the self-reported state of one’s physical health or well-being. This variable was measured by a subset of five items of the Center for Disease Control and Prevention Health-Related Quality-of-Life “Healthy Days” Measure (CDC HRQOL-14). These items ask participants to indicate how many days they have experienced difficulty with their physical health over the past 30 days. Examples of items include: “Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?” and “During the past 30 days, for about how many days did poor physical health keep you from doing your usual activities, such as self-care, work, or recreation? Scores are the summed number of days reported. Thus, this measure is an assessment of physical health problems (CDC, 2008).

Depression. Depression is conceptualized as a disabling condition that manifests with sustained feelings of sadness that interferes with daily life, normal functioning, and causes pain (NIMH, 2008). This variable was measured by the 20-item *Center for Epidemiologic Studies Depression Scale* (CES-D). This instrument measures depressive symptomology and ways that a person might have felt or behaved within the past week (Radloff, 1997). Examples of items include: “I did not feel like eating; my appetite was poor” and “I felt that everything I did was an effort.” The scale uses a 4-point Likert-type format: 0 = Rarely or None of the Time (less than 1 day), 1 = Some or a Little of the Time (1-2 days); 2 = “Occasionally or a Moderate Amount of the Time (3-4 days); 3 = “Most or All of the Time (5-7 days).

Data Analysis Plan

As stated previously, only quantitative data from the original study were utilized for the current study. Using SPSS, the analysis of quantitative data employed univariate, bivariate, and multivariate statistical techniques. *Univariate* statistics included measures of central tendency and dispersion conducted to determine frequencies and percentages for all variables, identify outliers, and assess the extent of any missing data. Univariate descriptive statistics was also used to describe the study sample and its demographic, background, and caregiving characteristics, as well as provide information on the central tendency and dispersion of independent and dependent variables. *Bivariate* hypotheses will be tested using One-way Analysis of Variance, which is appropriate for examining the differences on continuous variables among three or more groups. The *multivariate* hypothesis will be tested using Discriminant Function Analysis (DFA). Discriminant Function Analysis is used to determine which variables discriminate between two or

more naturally occurring groups. The main purpose of a DFA is to predict group membership based on a linear combination of a set of continuous variables. In the case of the proposed study, DFA will tell us how well the variables in the study (caregiving stress, social support, physical health, and depression) can predict membership into one of the four religiously-involved groups (HO/HP; HO/LP; LO/HP; LO/LP).

Human Subjects Concerns

This study is a secondary analysis of previously collected data and is, therefore, exempt from human subjects concerns according to section 46.101(b)(4). This status was verified through expedited review and received Institutional Review Board approval (See Appendix C). Participant names have been removed from the database to ensure anonymity. The Institutional Review Board of The Catholic University of America has approved the original study, including the informed consent form (See Appendices D and E).

Chapter Summary

This chapter described the original African American Caregiver study, which was granted by Duke University Center for Spirituality, Theology, and Health and funded by the John Templeton Foundation. The methodology for the current study was described and included details about the design and data collection procedures, sampling plan, variable measurement, and data analyses. The following chapter reports the findings of this study's data analyses.

Chapter IV: Findings

This chapter will present the results of this study's data analyses. The findings from this research will be presented in the following five areas: 1) sample characteristics; 2) estimates of reliability of measures; 3) univariate analysis of key variables; 4) results of bivariate analyses; and 5) results of multivariate analyses. Quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS) (Version 17.0).

As stated in the preceding chapter, the current research included a sample of 262 African American caregivers. Eligible caregivers were: at least 18 years or older; English speaking; providing informal care to a relative or friend at least 50 years or older (or having provided such care within the past six months); who is living with the caregiver or resides in the community within two hours traveling distance of the caregiver. Caregivers were excluded from the study if they were unable to participate in the interview due to language, health, or other restrictions. Additionally, caregivers were ineligible if their care recipient lived in an assisted living, nursing home, rehabilitation center, or other facility with paid staff or if the care recipient resided more than two hours from caregiver. Study participants were selected from six different sample sites that provided services to caregivers, care recipients, or both.

Sample Characteristics

Demographic and Background Variables

Table 9 delineates the characteristics of the study's demographic and background variables. The sample was overwhelmingly female (88.2%, $n = 231$). The average age of study participants was 57 ($SD = 11.53$), ranging from 22 to 90. Nearly one-third of the sample was married (33.5%, $n = 87$) and another third was single or never married

(32.3%, $n = 84$). The remaining participants were separated, divorced, or widowed (34.3%, $n = 89$). The majority of caregivers did not have children under age 18 living in the household (84.2%, $n = 218$). Of those who had children, the average number of children was two ($SD = 1.86$), ranging from one to twelve children in the household.

Table 9

Demographic and Background Variables

Variable	Test Statistic
Sex	
Male	11.8%, $n = 31$
Female	88.2%, $n = 231$
Age	$M = 56.57$ ($SD = 11.53$)
Marital status	
Married or living with a partner	33.5%, $n = 87$
Separated	3.1%, $n = 8$
Divorced	21.2%, $n = 55$
Widowed	10.0%, $n = 26$
Single, never married	32.3%, $n = 84$
Children	
Yes	15.8%, $n = 41$
No	84.2%, $n = 218$
Number of children	$M = 2.00$ ($SD = 1.86$)
Education	
Less than high school	9.3%, $n = 24$
High school or GED	21.2%, $n = 55$
Some college	26.6%, $n = 69$
Technical school	5.0%, $n = 13$
College grad	23.9%, $n = 62$
Graduate school	13.9%, $n = 36$

(continued)

Table 9 (continued)

Demographic and Background Variables

Variable	Test Statistic
Employment	
Working full-time	32.2%, $n = 84$
Working part-time	10.7%, $n = 28$
Primarily a student	.8%, $n = 2$
Not working due to a disability	10.7%, $n = 28$
Retired	33.3%, $n = 87$
Homemaker full-time caregiver	3.8%, $n = 10$
Unemployed and looking for work	7.7%, $n = 20$
Other	.8%, $n = 4$
Leave of absence	.4%, $n = 2$
Unemployed, not seeking work	.4%, $n = 2$
Income	
Less than \$ 20,000	23.1%, $n = 60$
\$20,000 to \$30,000	13.8%, $n = 36$
\$40,000 to \$50,000	11.9%, $n = 31$
\$50,000 to \$60,000	8.1%, $n = 21$
\$60,000 to \$70,000	6.2%, $n = 16$
More than \$70,000	27.3%, $n = 71$
Religious affiliation	
Christian	94.3%, $n = 246$
Muslim	1.1%, $n = 3$
None	3.1%, $n = 8$
Other	1.6%, $n = 4$
Jehovah Witness	.4%, $n = 1$
Non-denominational/Buddhist	.4%, $n = 1$
Unitarian/Unitarian Universalist	.8%, $n = 2$

Over half of study participants had completed some college courses, graduated from college, or was enrolled in or had completed graduate school (64.4%, $n = 167$). A small fraction of the sample did not finish high school (9.3%, $n = 24$) and the remaining

participants had a high school diploma, GED, or had attended technical school (26.2%, $n = 68$). Nearly one third of the sample was working full-time ($n = 84$, 32.2%) and a tenth was working part-time (10.7%, $n = 28$). A third of the sample was not working due to retirement (33.3%, $n = 87$), while others were unemployed for reasons such as having a disability, being a full-time caregiver, looking for work, on a leave of absence, or not currently seeking employment (23%, $n = 62$). Two caregivers indicated that they were primarily a student (11.5%). One third of the sample reported an income greater than \$60,000 (33.45%, $n = 87$). Another third of participants had income between \$20,000 and \$60,000 (33.8%, $n = 88$). The remainder of the sample reported income less than \$20,000 (23.1%, $n = 60$). The median income for the caregiver sample as a whole was \$40,000-\$50,000.

The overwhelming majority of the sample was Christian (93.9%, $n = 246$). Three participants were Muslim (1.1%) and eight persons reported no religious affiliation (3.1%). A fraction of the sample described their religious affiliation as “other” ($n = 1.9\%$, 5) and included two Jehovah Witnesses, one person who identified themselves as Non-Denominational and also Buddhist, and two Unitarians. Of those participants who were Christian, the majority were Baptist (48.2%), followed by Non-Denominational (10.1%), Catholic (9.9%), Pentecostal/Holiness (8.1%), Methodist (5.3%), African Methodist Episcopal (AME) (3.5%), Apostolic (1.9%), Seven Day Adventist (1.5%), United Methodist (1.5%), Episcopalian (1.2%), Lutheran (1.2%), Anglican (.4%), Church of Christ (.4%), and Disciples of Christ (.4%).

Caregiving Situation Variables

Table 10 provides a detailed description of the caregiving situation variables. The vast majority of caregivers were taking care of their parents ($n = 161$, 61.9%), with 50% caring for their mothers. The next largest group of care recipients was spouses ($n = 33$, 12.7%). Caring for a sibling or friend was fairly common among the sample ($n = 44$, 13.1%). Other participants were caring for a grandparent, aunt/uncle, cousin, or neighbor ($n = 32$, 12.3%). The average age of care recipients was 80 ($SD = 10.09$), with a range of 50 to 102 years old. Participants have been caregiving for an average of five years and five months ($SD = 62.03$), ranging from two months to twenty-seven years, and provide an average of 40 hours per week.

Table 10

Caregiving Situation Variables

Variable	Test Statistic
Relation	
Parent	61.9%, $n = 161$
Grandparent	5.4%, $n = 14$
Spouse	12.7%, $n = 33$
Aunt/Uncle	3.9%, $n = 10$
Sibling	6.9%, $n = 28$
Cousin	1.5%, $n = 4$
Friend	6.2%, $n = 16$
Neighbor	1.5%, $n = 4$
Care recipient age	$M = 79.51$, $SD = 10.09$
Duration	$M = 5$ years, 5 months, $SD = 5$ years, 2 months
Hours per week	$M = 58.94$, $SD = 50.40$

(continued)

Table 10 (continued)

Caregiving Situation Variables

Variable	Test Statistic
Proximity	
In the same household with you	63.5%, $n = 165$
Within 30 minutes of your home	30.4%, $n = 79$
More than 30 minutes, but less than 1 hour away	5.4%, $n = 14$
One to two hours away from your home	.8%, $n = 2$
Major problem	
HIV/AIDS	.4%, $n = 1$
Alzheimer's/dementia	39.5%, $n = 103$
Amputee	1.5%, $n = 4$
Arthritis	5.4%, $n = 14$
Blindness/vision loss	4.6%, $n = 12$
Boredom	1.5%, $n = 4$
Broken bones	.4%, $n = 1$
Cancer	4.6%, $n = 12$
Diabetes	4.2%, $n = 11$
Feeble/unsteady/falling	1.5%, $n = 4$
Heart disease	4.6%, $n = 12$
Lung disease/emphysema	.4%, $n = 1$
Mental retardation	.4%, $n = 1$
Mental illness/emotional illness/depression	1.9%, $n = 5$
Mobility	11.9%, $n = 31$
Paraplegia	.8%, $n = 2$
Parkinson's	.8%, $n = 2$
Stroke	13.0%, $n = 34$
Level of caregiving intensity	
1 (low)	4.2%, $n = 11$
2	8.8%, $n = 23$
3	16.4%, $n = 43$
4	41.2%, $n = 108$
5 (high)	29.4%, $n = 77$

The bulk of caregivers live in the same home as their care recipient (61.9%, $n = 161$) with nearly a third of care recipients living within 30 minutes of their caregiver (30.4%, $n = 79$). The remaining care recipients live more than 30 minutes, but less than one hour away (5.4%, $n = 14$), and a small fraction of the care recipients live one to two hours away from their caregiver (.8%, $n = 2$). A majority of care recipients required care because they suffered from Alzheimer's disease or dementia (39.5%, $n = 103$), followed by stroke (13%, $n = 34$) and mobility issues (11.9%, $n = 31$). A number of persons needed a caregiver due to arthritis, vision concerns, cancer, diabetes, or heart disease (23.4%, $n = 61$). Other major problems experienced by care recipients included amputee-related issues, HIV/AIDS, broken bones, boredom, feeble/unsteady/falling, lung disease/emphysema, mental retardation, mental illness/depression, paraplegia, and Parkinson's disease (9.2%, $n = 25$).

Based on the 5-level "Index of Care" described in Chapter 3, the majority of caregivers reported an intensity level of four (41.2%, $n = 108$), followed by the highest caregiving level of five (29.4%, $n = 77$). Only 11 study participants reported a low level of caregiving intensity (4.2%). The remaining participants reported either a level three (16.4%, $n = 43$) or two of caregiving intensity ($n = 23$, 8.8%).

Estimates of Internal Consistency of Standardized Scales

Estimates of internal consistency were obtained for the six standardized scales that comprised the caregiver survey (see Table 11). Cronbach's *alpha*, an indicator of the scale's internal consistency, was utilized to compute estimates of each measure's reliability. Reliability coefficients ranged from .67 to .90, with all measures demonstrating acceptable reliability. The internal consistency estimates for all of the

scales approached or exceeded the recommended .70 level (Rubin & Babbie, 2001).

Table 11 summarizes the reliability information for all six scales.

Table 11

Estimates of Internal Consistency of Standardized Scales

Name of Scale	# of Items	Cronbach's Alpha (α)
Organizational Religiosity	2	.79
Personal Religiosity	4	.67
Intrinsic Religiosity	10	.69
Distress	8	.90
Social Support	10	.80
Unhealthy Days (Physical Health)	8	.81
Depression (CES-D)	21	.88

Univariate Analyses of Major Variables

Univariate analyses were also employed to provide descriptive information about key variables. The findings for this study's selected predictor variables and the health outcome variables are provided below in Table 12.

Independent Variables

The current study examined two independent variables to predict health outcomes among four groups of religiously involved African American caregivers. The first predictor variable, organizational religiosity, was evaluated by a two-item measure of organized religious activities ($M = 10.38$, $SD = 4.97$). The possible range for this

measure is 1 to 20; the range of scores in the current sample was from 2 to 19. The second independent variable was personal religiosity. This predictor variable was evaluated by a four-item measure of personal religious practices ($M = 25.63$, $SD = 5.26$) and ten-item measure, the *Intrinsic Religious Motivation Scale* ($M = 33.76$, $SD = 4.22$). The possible and actual range for the measure of personal religious practices was from 4 to 32. The possible range on the *Intrinsic Religious Motivation Scale* is 10 to 40; the actual range of sample scores was from 16 to 40.

Table 12

Univariate Analyses of Major Variables

Measure	# Items	Measures of Central Tendency and Dispersion
Independent Variables:		
Organized Religious Activities	2	$M = 10.38$, $SD = 4.97$, $R = 2$ to 19
Personal Religious Practices	4	$M = 25.63$, $SD = 5.26$, $R = 4$ to 32
Intrinsic Religious Motivation Scale	10	$M = 33.76$, $SD = 4.22$, $R = 16$ to 40
Dependent Variables:		
Caregiver Distress Scale	8	$M = 17.01$, $SD = 7.48$, $R = 8$ to 38
Social Support Scale	10	$M = 7.93$, $SD = 3.61$, $R = 0$ to 20
Physical Unhealthy Days Scale	8	$M = 36.54$, $SD = 29.78$, $R = 0$ to 145
Depression (CES-D) Scale	21	$M = 11.21$, $SD = 8.06$, $R = 0$ to 38

Dependent Variables

This study included four health outcome variables: caregiving stress, social support, physical health, and depression. The caregiving stress variable was measured by the *Caregiver Distress Scale*, which is an eight-item tool. The possible range for the caregiving stress measure is 8 to 40. Sample scores on this variable ranged from 8 to 38 ($M = 17.01$, $SD = 7.48$). The *Social Support Scale* measured the social support variable. This 10-item measure has a possible range of scores from 0 to 20. The current sample of social support scores also ranged from 0 to 20 ($M = 7.93$, $SD = 3.61$). The *Physical Unhealthy Days Scale* evaluated physical health, which was a five-item measure with possible scores ranging from 0 to 150. Actual scores ranged from 0 to 145 ($M = 36.54$, $SD = 29.78$). The final health outcome variable evaluated in this study was depression. This variable was measure by the 20-item *CES-D Scale*. The possible range for this measure is 0 to 60; actual scores in the current sample ranged from 0 to 38 ($M = 11.21$, $SD = 8.06$).

Bivariate Analyses

There was an initial step prior to the conducting of bivariate analyses to test the study's four hypotheses. This involved creation of the four levels of religiously involved groups. The data set included one measure of organized religiosity and two measures of personal religiosity (previously described in Chapter 3). The two personal religiosity measures tapped into two different aspects of this concept: a) personal religiosity behaviors, such as prayer, reading sacred texts, etc., and b) personal beliefs or worldviews. As the goal was to create four groups with varying levels of both organizational and personal religiosity, it was necessary to select one of these two aspects

as they could not be combined due to their use of different response formats. Initial correlations between the two personal religiosity measures and the four dependent variables revealed that the scale assessing personal beliefs or worldviews (Intrinsic Religious Motivation Scale) had the most utility for this purpose. Thus, this was the measure of personal religious involvement that was used in combination with the two-item measure of organizational religiosity to create the four groups. Specifically, the median scores on both measures were used as the determining point to identify each participant as “high” or “low” on each measure. Based on these scores, each participant was then coded as high organizational/high personal (HO/HP), high organizational/low personal (HO/LP), low organizational/high personal (LO/HP), or low organizational/low personal (LO/LP).

One-way analysis of variance (ANOVA) was then conducted to test the study’s four bivariate hypotheses to determine the differences in health outcomes (i.e. caregiver stress, social support, physical health, and depression) among the four different religiously involved groups. The results of the one-way ANOVA are presented in Table 13. Depression was the only health outcome variable that showed statistical significance.

The first hypothesis proposed that participants identified as having HO/HP religious involvement would report statistically significant lower levels of *caregiving stress*, followed by HO/LP, LO/HP, and LO/LP participants. This bivariate hypothesis was not supported. There was no significant difference in the mean caregiver distress scores of persons in the HO/HP, HO/LP, LO/HP, and LO/LP groups, [$F(3, 256) = 1.467$, $p = .224$]. The second bivariate hypothesis stated that participants identified as having

Table 13

Analysis of Variance Results for Bivariate Hypotheses

Measure	<i>df</i>	<i>F</i>	<i>p</i>
Caregiver Distress		1.47	.224
Between Groups	3		
Within Groups	256		
Total	259		
Social Support		1.35	.259
Between Groups	3		
Within Groups	258		
Total	261		
Physical Unhealthy Days		1.38	.249
Between Groups	3		
Within Groups	258		
Total	261		
Depression		3.35	.020
Between Groups	3		
Within Groups	258		
Total	261		

Note: Statistical significance at $p < .05$ level.

HP/HO religious involvement would report statistically higher levels of *social support*, followed by HO/LP, LO/HP, and LO/LP participants. Likewise, this bivariate hypothesis was not supported. There was no significant difference in the mean social support scores of persons in the HO/HP, HO/LP, LO/HP, and LO/LP groups, [$F(3, 258) = 1.349, p = .259$]. The third bivariate hypothesis, which stated that participants identified as having HP/HO religious involvement would report statistically higher levels of *physical health*, followed by HO/LP, LO/HP, and LO/LP participants, also was not supported. There was

no difference in the mean physical unhealthy days scores of persons in the HO/HP, HO/LP, LO/HP, and LO/LP groups, [$F(3, 258) = 1.380, p = .249$].

There was support for the final bivariate hypothesis, which predicted that participants identified as having HP/HO religious involvement would report statistically lower levels of *depression*, followed by HO/LP, LO/HP, and LO/LP participants. There was a significant difference among depression scores among the four groups (HO/LP, LO/HP, and LO/LP) of religiously involved African American caregivers, [$F(3, 258) = 3.35, p = .020$]. The Scheffe post hoc test was conducted to determine which of the religiously involved groups were significantly different. Post hoc comparisons showed that the statistically significant differences were between the HO/HP (group 1) and LO/LP (group 4). Group 1 (the HO/HP group) had significantly lower scores on the depression scale ($M = 9.43$) than Group 4 (the LO/LP group) ($M = 13.09$). Post hoc tests revealed no other statistically significant differences among the four groups.

Multivariate Analysis

Discriminant function analysis is a statistical technique used to determine dimensions that reliably and accurately classify study participants into groups based on a combination of measures (Huberty & Hussein, 2003; Mertler & Vannatta, 2002). In the current study it was hypothesized that caregiving stress, social support, physical health, and depression would significantly discriminate between the four groups of religiously involved caregivers. Specifically, it was predicted that the group with both high organizational and high personal religiosity (HO/HP) would show the most positive profile (less caregiving stress, more social support, fewer unhealthy days of physical health, and less depression) followed by the HO/LP, LO/HP, and LO/LP groups. In

order to use discriminant function analysis (DFA), a number of assumptions must be addressed, including issues related to sample sizes, homogeneity of variances/covariances, and non-multicollinearity (Klecka, 1980). In terms of sample size, the maximum number of independent or discriminant variables must be $N-2$, with N being the overall sample size. With an N of 162, technically 160 independent variables would be allowed using this analytical technique. The current study examined only four discriminant variables; therefore, the sample size is well within the requirements. Furthermore, unequal sub-sample or group sizes are acceptable in DFA as long as the sample size of the smallest group exceeds the number of predictor variables. The four groups are of unequal sizes, with the LO/LP group having the highest number of cases ($n = 97$), followed by the HO/HP group ($n = 79$), the HO/LP group ($n = 46$), and the LO/HP group ($n = 40$). As the smallest group ($n = 40$) far exceeds the number of predictor variables (four), this assumption is not violated.

As discriminant function analysis is very sensitive to heterogeneity of variance-covariance matrices, a Box's Test of Equality of Covariance Matrices was computed to test homogeneity. Results revealed a non-significant result (Box's $M = 5.11$, $p < .167$), thus alleviating concern about violation of this assumption.

Finally, multicollinearity is an issue if one of the independent variables is highly correlated with another, or if one is a function (e.g., the sum) of other independents. None of the independent variables were functions of other variables and none were highly correlated with one another. The strongest association between any of the four independent variables emerged between scores on the Depression and Physical Health

Unhealthy Days scales ($r = .50$). These results suggest that the four independent variables each tap into separate constructs.

Discriminant function analysis is conducted in a two-step process: 1) testing the significance of a set of discriminant functions and 2) determining classification of groups based on the discriminant functions that emerge during step one. During the first step, the DFA procedure determines whether or not there are any significant differences (with regard to all variables) between groups. If the multivariate test shows significance, one proceeds to see which of the variables have significantly different means across the groups. Because of the exploratory nature of the current analysis, variables were entered using a stepwise procedure that minimizes Wilks' lambda, a measure of the discriminating power in the predictor variables.

Only one statistically significant function emerged from the analysis (see Table 14). The canonical correlation coefficient of this function equaled .20. As a measure of the degree of association between the discriminant scores and the groups, this coefficient does not indicate a particularly strong relationship. Second, Wilks' lambda, a measure of the discriminating power of the predictor variables equaled .96. Wilks' lambda is an "inverse" measure, with values near zero denoting higher discrimination. Thus, this finding indicates generally low predictive power of the predictor variables within the function.

The function is comprised of only one of the four independent variables: Depression. Scale scores measuring caregiving stress, social support, and physical health did not enter the analysis. Generally, the structure coefficients, or discriminant loadings,

Table 14

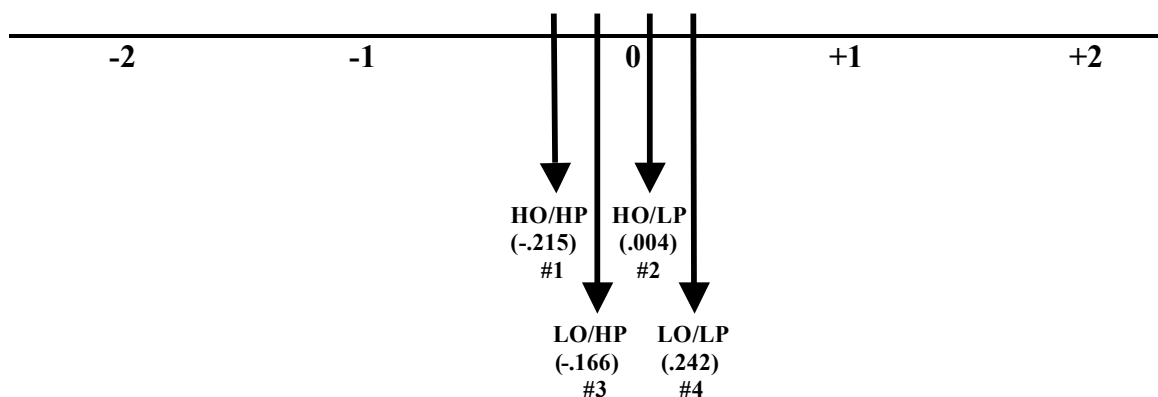
Discriminant Function Analysis and Related Statistics

	Test Statistic	Significance
Canonical Correlation	.20	$p = .017$
Wilk's lambda	.96	$p = .017$

are examined next to determine the relative importance of the variables comprising the discriminant function (Klecka, 1980). As the function is comprised of only one variable, the structure coefficient value of 1.00 on this measure is meaningless, as scores on Depression make up the entire function. However, examination of group centroids, which represent the mean of the function across groups, contributes more clarity regarding the discriminatory power of the function. Figure 2 provides a visual representation of the relative position of the four groups on Function 1, which permits a conceptual understanding of group differences. Even though the relative distance between the group centroids is not large, a specific pattern does emerge.

Based on group centroids, it is clear that scores on depression do distinguish the four religiously involved groups from one another. Two groups (HO/HP and LO/HP) fall on the negative side of the graph, indicating that these two groups have lower scores on depression than the other two groups (LO/HP and LO/LP), which both fall on the positive end of the graph, denoting higher depression scores. In terms of relative position, it is clear that Group #1 (High Organizational and High Personal Religiosity) reveals the lowest depression scores followed by Group #3 (Low Organizational and High Personal

Figure 2. Group centroids relative to Function 1 for the four groups



Religiosity), Group #2 (Low Organizational and High Personal Religiosity), and Group #4 (Low Organizational and Low Personal Religiosity).

Once the function is identified and its interpretation is completed, the second stage of DFA involves examination of the outcome of the classification process. In this part of the procedure, each case is placed within one of the groups based on classification scores determined from the canonical functions. Participants are classified in the groups in which they have the highest classification scores. Table 15 provides the outcome of this classification process.

The discriminant function analysis achieved a 38.2% rate of correct classification of the overall sample based on the function that emerged, which was comprised solely of depression scores. In predicting group membership, depression most successfully classifies the HO/HP group (62%). The LO/LP group also has a relatively high classification rate (45.4%). The HO/LP (8.7%) and LO/HP (7.5%) groups have comparatively low correct classification percentages based on depression scores.

Table 15

Discriminant Function Analysis: Classification Results Predicted Group Membership^a

Actual Group Membership	<i>n</i>	Group 1 (HO/HP)	Group 2 (HO/LP)	Group 3 (LO/HP)	Group 4 (LO/LP)
Group 1 (HO/HP)	79	49 (62.0%)	4 (5.1%)	6 (7.6%)	20 (25.3%)
Group 2 (HO/LP)	46	20 (43.5%)	4 (8.7%)	1 (2.2%)	21 (45.7%)
Group 3 (LO/HP)	40	23 (57.5%)	1 (2.5%)	3 (7.5%)	13 (32.5%)
Group 4 (LO/LP)	97	39 (40.2%)	10 (10.3%)	4 (4.1%)	44 (45.4%)

^a 38.2% of original group cases correctly classified.

Chapter Summary

In summary, results of the discriminant function analysis only partially supported the multivariate hypothesis, which predicted that the four independent (predictor) variables of caregiving stress, social support, physical health, and depression would significantly discriminate between the four different religiously involved groups. Only one of these hypothesized predictor variables, depression, demonstrated the ability to distinguish the four groups. Furthermore, this one variable was more successful in classifying the two consistently high or low groups (HO/HP and LO/LP) than the two groups that have mixed levels of organizational and personal religiosity (HO/LP and LO/HP).

Chapter 5 highlights the major findings, identifies the methodological limitations of the current study, discusses implications for social work practice, and suggests directions for future research.

Chapter V: Discussion

The purpose of this study was to examine differences in health outcomes among four different groups of religiously involved African American family caregivers. A secondary data analysis was conducted to investigate the impact of varying levels (high vs. low) of organizational and personal religious involvement on caregiving stress, social support, physical health, and depression among study participants. While a sizable body of research has previously explored relationships between religion and health; African Americans and religion; African Americans, stress, and religion; and African Americans, health, and religion, there has been far less investigation into the role of organizational religiosity versus personal religiosity, particularly as it relates to caregiver stress, social support, and physical and mental health among African American caregivers. Therefore, this study addressed a gap in the literature through an examination of varying aspects of religious involvement on the caregiving situation among this vulnerable population.

The current study examined the impact of religious involvement on health outcomes among African American caregivers in light of the moral community theory as originally posited by Durkheim (1897, 1915) and later contemporarized by Stark and Bainbridge (1969). Previous research has primarily utilized moral community theory to explain the impact of religion on various types of deviant behavior, such as vandalism, theft, alcohol and drug use, and assault (Burkett & White, 1974; Cochran & Akers, 1989; Cornwall, 1989; Elifson, Peterson, & Hadaway, 1983; Ford & Kadushin, 2002; Higgins & Albrecht, 1977; Hirschi & Stark, 1969; Johnson & Mullins, 1990; Regnerus, 2003; Richard, Bell, & Carlson, 2000; Shields, Broome, Delany, Fletcher, & Flynn, 2007; Stark, 1996; Stark, Kent, & Doyle, 1982; Welch, Tittle, & Petee, 1991). The current

study expanded the application of moral community theory through a focus on different levels of personal religiosity and organizational religiosity as an indicator of involvement in moral community and the relationship between this involvement and health outcomes among African American caregivers. Thus, this study represents a new direction in that it is focused on the applicability of moral community theory to potentially positive health outcomes within a different population. The following chapter will present an interpretation of the findings, provide a discussion of the study's limitations, highlight implications for social work, and present recommendations for future research.

Interpretation of the Findings

This study sample of African American caregivers was highly religiously affiliated with the vast majority identifying as Christian (94.3%). This is consistent with the literature's assertion of the importance of religion in the lives of African Americans (Billingsley & Caldwell, 1991; Chatters, Taylor, & Lincoln, 1999; Chaves & Higgins, 1992; Lincoln & Mamiya, 1990). The overwhelmingly female sample (88.2%) of the current study resembles the majority of samples in the reviewed caregiving literature (e.g. Banthia, Moskowitz, Acree, & Folkman, 2007; Clark, et al., 2004; De Frias, Tuokko, & Rosenberg, 2005; Gaugler, Linder, Given, Kataria, Tucker, & Regine, 2009; Grant, Elliott, Giger, & Bartolucci, 2001; Li, Seltzer, & Greenburg, 1997; Shaw et al., 1997). The African American participants in this study were generally well educated, with over half of the caregivers reporting some level of undergraduate and graduate studies (64.4%), as similar to several of the predominantly White caregiver samples (e.g. Beach, Schulz, & Yee, 2000; Clark, et al., 2004; Clip & George, 1990; Dwyer, Lee, & Jankowski, 1994; Gaugler, Linder, Given, Kataria, Tucker, & Regine, 2009; Shaw et al.,

1997). Consistent with the caregiving literature, most of the study participants were spousal or parental caregivers (74.6%) with over half of the sample caring for their mothers (61.9%) (e.g. Amirkhanyan & Wolf, 2003; Banthia, Moskowitz, Acree, & Folkman, 2007; Beach, Schulz, & Yee, 2000; Marks, Nesteruk, Swanson, Garison, & Davis, 2005; Rankin, Haut, & Keefover, 2001; Shaw et al., 1997; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995). Nearly all of the caregivers co-resided with their care recipient (63.5%) or lived no more than 30 minutes away (30.4%), which illustrates the close community-based nature of the caregiving situation for most of the study participants. The majority (70.6%) of caregivers in this study were engaged in high levels of caregiving intensity, reporting either level four or five. This high level of caregiving intensity was commonly found among other caregiving samples (e.g. Desbiens, Mueller-Rizner, Virnig, & Lynn, 2001; Starrels, Ingersoll-Dayton, Dowler, & Neal, 1997; Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993), which suggests that most caregivers are providing substantial amounts of attention to their loved ones.

The current sample reported moderate levels of organizational religiosity, as evidenced by mean scores and measures of dispersion on the organized religious activities measure ($M = 10.38$, $SD = 4.97$). Study participants noted generally high levels of personal religiosity, based on mean scores for their personal religious practices ($M = 25.63$, $SD = 5.26$) and intrinsic religious motivation ($M = 33.76$, $SD = 4.22$). The majority of study participants were within the Low Organizational/Low Personal group ($n = 97$). The next largest group was the High Organizational/High Personal group ($n = 79$). The High Organizational/Low Personal ($n = 46$) and the Low

Organizational/High Personal ($n = 40$) had the fewest sample participants. This dispersion across the four groups demonstrates that, regardless of almost uniform religious affiliation among the sample, there was heterogeneity in terms of *involvement* in both personal and organizational religiosity.

Participants also varied in their mean scores on the study's health outcome variables. The current sample reported average levels of caregiving stress ($M = 17.01$, $SD = 7.48$). This is a curious finding, particularly because most caregivers in this study reported relatively high levels of caregiving intensity. The social support scores were below a possible average score of 10 ($M = 7.93$, $SD = 3.61$), which, in part, may explain the sample's moderate levels of organizational religiosity, as participation in organized religious practices allow participants more opportunities to experience social support from the moral community. The physical health measure indicated that participants reported a generally low amount of physical health problems ($M = 36.54$, $SD = 29.78$). This low mean score on physical unhealthy days may be attributable, in part, to measurement concerns, which are described in the limitations section below. It may also reflect participants' reluctance to identify "not feeling well" or it may be a true representation of overall health status. Depression scores for this sample were also relatively low ($M = 11.21$, $SD = 8.06$). Lesser depression may be due to the highly religious nature of the current sample, which contributed to this study's significant findings as described below. Or again, it may stem from a tendency to report positive feelings or may be a true measure of depression among this sample.

The major focus of the current study was to investigate the following research question: What are the differences between four groups of religiously involved African

American caregivers on caregiving stress, social support, physical health, and depression? Thus, this research tested the following four bivariate hypotheses: Participants identified as having HO/HP religious involvement will report statistically significant: H1) lowest levels of *caregiving stress*; H2) highest levels of *social support*; H3) lowest levels of *physical health problems*; and H4) lowest levels of *depression*, followed by HO/LP, LO/HP, and LO/LP participants. Based on findings from Oneway Analysis of Variance, only one of the four bivariate hypotheses was partially supported. A statistically significant difference emerged between two of the four groups on scores on *depression*. Specifically, caregivers with High Organizational and High Personal religious involvement reported statistically lower levels of depression than caregivers with Low Organizational and Low Personal religious involvement. This finding suggests that the connection between organizational religiosity and personal religiosity has a more significant effect when combined, rather than considered in isolation or in a mixed (high/low or low/high) configuration. There were no statistically significant differences between any other groups on depression scores. Additionally, the impact of religiosity, either organizational or personal, did not emerge as significant in the other three areas, which is not consistent with some previous research. For example, several studies found organizational and/or personal religiosity to be predictors of caregiving stress (Burgener, 1994; Karlin, 2004); social support (Poindexter, Linsk, & Warner, 1999; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005; Stuckey, 2001); and physical health (Banthia, Moskowitz, Acree, & Folkman, 2007; Marks, Nesteruk, Swanson, Garrison, & Davis, 2005).

A second major purpose of the current study was to investigate the multivariate hypothesis that caregiving stress, social support, depression, and physical health would significantly discriminate between the four religiously involved groups, with the HO/HP showing the most positive profile, followed by the HO/LP, LO/HP, and LO/LP groups. Similar to the bivariate finding, this analysis also found support for the multivariate hypothesis, based on discriminant function analysis. Specifically, depression emerged as the sole variable contributing to a statistically significant discriminant function, even though the predictive power of this function was low given the small canonical correlation coefficient and large Wilks' lambda.

However, group centroids, which highlight the relative positions of the four groups, show that the function was associated with a discernable pattern among the four groups. Specifically, both the HO/HP and LO/HP groups were associated with lower depression scores, with the group with high scores on both organized and personal religiosity showing the most positive profile. Conversely, the HO/LP and LO/LP groups were more likely to have problems with depression, with participants with both low organizational and personal religiosity showing the most negative outcomes. This was a slightly different pattern than predicted in that the Low Organizational/High Personal group had lower depression scores than the High Organizational/Low Personal group. It is interesting to note that it was high *personal* religiosity that was associated with the two groups with more positive outcomes. High *organizational* religiosity seemed to require the addition of high personal involvement in order for depression scores to be positively impacted. As the group centroids illustrate, when high organizational religious involvement was combined with low personal religiosity, a more negative outcome

emerged. Finally, as predicted, the group with low scores on both organizational and personal religiosity revealed the most negative profile.

Classification results stemming from the DFA provide additional information regarding the ability of the function to correctly predict group membership. Specifically, the function, comprised solely of depression scores, most correctly classified the HO/HP group (62%) followed by the LO/LP group (45.4%). The classification analysis revealed that the function poorly predicted group membership for the HO/LP (8.7%) and LO/HP groups (7.5%) groups, with fewer participants being correctly classified than would be due to chance alone (25%). Again, these findings stress the relative potency of the function to correctly predict groups of “pure” types (either high or low on both dimensions of religious involvement) versus groups of “mixed” types (high/low or low/high combinations).

Findings from both the bivariate and multivariate analyses provide partial credence to this study’s expansion of moral community theory. As indicated in Durkheim’s original theory, the moral community was presumed to be the church and was viewed as a place where religion permeated social life (Durkheim, 1897, 1915). Subsequent empirical research reported how the moral community could influence and reduce deviant behavior (Cochran & Akers, 1989; Higgins & Albrecht, 1977; Stark, 1996; Stark, Kent, & Doyle, 1982). The effect of the moral community theory was more pronounced when researchers noted that personal religiosity and religious commitment were particularly linked to a reduction in delinquent behavior (Cornwall, 1989; Elifson, Peterson, & Hadaway, 1983; Johnson & Mullins, 1990; Regnerus, 2003; Welch, Tittle, & Petee, 1991).

The current study did not examine delinquent behavior, but rather health related outcomes (e.g., caregiving stress, social support, physical health, and depression among African American caregivers). While hypotheses related to caregiving stress, social support, and physical health were not supported, organized and personal religious involvement did emerge as statistically significant factors related to depression. Consistent with empirical research on moral community theory and deviance, this study's expansion of the moral community theory mirrors previous research in other areas that suggests that it is likely the combined effect of organizational and personal religiosity that has the greatest impact (Cornwall, 1989; Elifson, Peterson, & Hadaway, 1983; Johnson & Mullins, 1990; Regnerus, 2003; Welch, Tittle, & Petee, 1991).

Additionally, it was posited that those caregivers who were healthy, mobile, and had time available would be more likely to attend church and, therefore, would be more attached to the religious group, thus positioning the caregiver to receive support from its moral community. Study findings suggest that for caregivers who, for whatever reason, are not engaged heavily in activities of organized religion, personal religious involvement does provide some protective or mediating impacts. Furthermore, this positive effect is evident in situations where there is either high or low organizational involvement, although the greatest impact is for persons who are engaged in high levels of both kinds of religious involvement. Finally, the results of the discriminant function analysis showed that those who had limited involvement in both aspects of religiosity (LO/LP) reported the most depression. Here, the absence of moral community, experienced either communally or privately, is linked to poorer mental health, but not to the other predicted health outcomes.

Study Limitations

These findings must be considered in light of existing methodological limitations. The current study was a secondary data analysis. While secondary data analysis can be a very cost effective mechanism to conduct research that allows the investigator access to a larger database as compared to primary data, it is not without drawbacks. First and foremost, secondary data analysis does not permit the researcher to specifically design elements of the study to best address the intended area of study (Singleton & Straits, 1999). This may be a particular issue in the area of measurement of key variables. In the current study, operationalization of both independent and dependent variables had already been determined. For example, it is possible that a more multi-faceted measurement of organizational and/or personal religiosity may have revealed different results. In addition, the data set contained a limited number of possible health outcome variables. It is possible that other types of health outcomes, such as health promotion or health prevention variables, may have emerged as significantly associated with religious involvement, but were not available in the existing data set. Other noted limitations of secondary data analysis are that the researcher cannot guarantee the reliability or the source of the data as with primary data (Singleton & Straits, 1999). Secondary data can also be out of date and have excessive amounts of missing data. Because the author of the current study served as a research assistant on the original study and was a member of the research team that collected the data for this secondary analysis, these latter limitations are not primary areas of concern.

Although the current study was theoretically based, its cross-sectional design limits causal inferences. However, relationships between selected variables can be

discussed in terms of their significance and direction. In the current study, lower depression scores are clearly linked with high personal religious involvement and are most strongly associated with high organizational and personal religious involvement. In addition, discriminant function analysis does permit identification of potential predictor variables, which is suggestive of causal influences.

In terms of sampling, the current research's use of a non-probability sample of African American caregivers in the Washington, DC metropolitan area does not allow generalizability beyond the study sample. Although findings can be used as a foundation for considering application of results to other similar study populations, these are only suggestive. Replication of this study with other groups of African American caregivers would enhance confidence in the applicability of the present findings to similar populations.

Finally, while all of the standardized measures approached or exceeded the .70 recommended level for measurement reliability, issues of measurement validity still persist. Some of scales may not have fully evaluated the concepts under study. For example, the physical health measure assesses the number of days that the respondent reported "feeling unhealthy" during the past 30 days. As a limited indicator of physical health it does not allow for the delineation of particular health issues, such as some of most prevalent health issues facing African Americans, like high blood pressure, cholesterol, and obesity. In addition, the self-report nature of this measure may be particularly sensitive to social desirability as there is reluctance among this population to "complain" about health issues. Additionally, the religiosity measures did not distinguish

between previous and current levels of religious involvement, which may have provided a much richer picture of the caregiving experience in light of the research question.

Implications for Social Work

Implications for Practice

The current research has implications for social work practice, education, policy, and research. First and foremost, the present findings shed light on the experience of caregiving for elders among African Americans. Whether the parameter is intensity of caregiving, time spent per week, or duration of time in caregiver role, the majority of study participants reveal a significant commitment to the caregiving enterprise. It is important for social work practitioners to understand this commitment, and the potential costs associated with it, for the caregiver, the care recipient, and his or her family system. This awareness is particularly critical to social workers serving elderly populations. Too often the focus of such practice is solely on the older client while ignoring the needs of his or her caregiver, even when this means potentially putting the well-being of the elder at risk. Social work practitioners should understand that “the client system” in any caregiving situation must include both the care recipient and caregiver and their family context. Social workers should pay close attention to the needs of both members in the caregiving partnership in all phases of service delivery. It is also important to recognize that “family caregivers” may include people who are not related to the older person, but may represent “fictive kin,” such as close friends or neighbors.

Second, it is important to keep in mind the great variety of caregiving situations among any group of caregivers. Beginning with the reason for care, there are different physical and/or mental conditions among older persons that create the initial need for

caregiving. Although Alzheimer's disease or other dementia was the most frequently noted reason for care in the current study, a wide range of other conditions were also reported. Perhaps due, in part, to this variety, some caregivers reported a great deal of caregiving stress, while others seem to experience this role as relatively non-stressful. Some caregivers have a circle of others who provide social support to them in their caregiving, while others are performing this role in relative isolation. This heterogeneity is also apparent in the realm of caregiver health, as well, where some caregivers attempt to maintain the optimal health of their older relative or friend while struggling with their own physical or mental health issues. The implication of all of these noted areas of difference reflects the time honored social work maxim to "start where the client is," reminding practitioners that each caregiving situation is both unique and fluid.

Third, study findings also contribute to our understanding of the applicability of moral community theory to social work practice. The current research expanded the use of the moral community theory beyond its usual focus on research on substance abuse and other problematic behavior to the realm of family caregiving. As such, it provides important information regarding maintaining health and well-being among individuals often served by social work practitioners. Current results show that caregivers who are more connected to their religious, moral communities and who are more in touch with their own intrinsic personal religiosity have less depression. These findings highlight the importance of social workers exploring the spiritual dimension with caregivers and assess whether or involvement in organized and/or personal religiosity is important to them. If this aspect of life is relevant to the caregiver, then the practitioner needs to be supportive

of this resource, focusing on the potential link between religious involvement and caregiver well-being that emerged from this study and previous research.

The findings from this research have several other implications for social work practice. Moral and social justice commitments make it necessary for social workers to develop coalitions and collaborations with faith-based organizations on various issues that affect local and national communities. The results from this study provide more support for these strategies and better inform the services social workers provide to faith communities. Efforts that are well-grounded in the current and existing research can enhance opportunities for new and improved collaborative efforts with religious institutions, particularly within the African American community.

This research can also stimulate thinking regarding ways that social workers can work collaboratively to establish and strengthen existing partnerships with Black churches and other African American organizations within the faith-based community. Social workers already provide unparalleled support to family caregivers and care recipients. Specifically, with findings from this research, social workers could work with community and faith-based organizations to develop both social work and faith-based programs designed to promote emotional well-being and prevent depression among family caregivers.

Implications for Education

This study has significant implications for social work education because it offers new information concerning the influence and impact of religion in the Black community, specifically as it relates to caregiving. Research findings stemming from the current research can enhance social work courses that address gerontology issues and the

expanding role of caregivers within today's society. For example, specific findings on the nature, duration, and intensity of caregiving can be infused in both practice and human behavior classes. Results can also be used to discuss the potential protective function of both organizational and personal religious involvement to mental health and emotional well-being. Social work practice classes could consider means for expanding the usual network of service providers to include congregations and faith-related agencies, especially in regards to service delivery to elders and their families. The current study findings can also be used to ensure cultural relevance to aging content within the social work curriculum, particularly as it applies to African American caregivers. Finally, this research has the potential to increase student awareness concerning the pivotal role of faith for the Black community and the overall importance of being sensitive to diverse religious and spiritual perspectives with all clients.

Implications for Policy

In addition, this study has implications for social work policy because it can aid in the development of new faith-friendly policies, especially for African American caregivers and perhaps for other races of caregivers for whom religion is important. Similar to the discussion above concerning expanding service networks to include congregational and faith-affiliated agencies, the current research suggests that policy networks can also be enhanced through collaborative relationships with relevant faith-based entities that can provide support for efforts in community organizing, advocacy, and policy development. In particular, findings from this study support the National Association of Social Workers in its efforts to close the gaps in eldercare services by lobbying for policies that will enhance the welfare of both caregivers and care recipients.

Implications for Research

The current study has several implications for social work research. The current research represents an expansion of research on moral community theory by recasting it in a different perspective (i.e. from deviance to health outcomes) and utilizing it with a new population (caregivers). Additionally, this study contributes to the burgeoning body of research on the rapidly growing numbers of African American caregivers, increasing our understanding of the caregiving experience. African Americans have been an understudied group in research, particularly with regard to empirical research on moral community theory. Blacks have also been largely omitted from the caregiving research and especially in studies related to religious involvement and caregiving. The current study begins to address the deficit in these research areas.

The lack of significant findings relative to religious involvement and caregiving stress, social support, and physical health in the current study poses a question, especially in light of previous studies that had demonstrated linkages of these areas. Whether the results of the current study are due to methodological limitations or represent valid, differential findings is unknown. What is clear is that additional research is needed in these areas to deepen our understanding of the interrelationships among these variables.

In terms of future research, the current study suggests a number of next steps. Additional studies are needed to continue exploration of the applicability of moral community theory within the context of organizational and personal religiosity and various life circumstances within diverse communities. These studies could replicate the current focus of health-related variables or examine other factors that may be logically assumed to be impacted by varying levels of religious involvement. It is time to expand

testing of moral community theory beyond preventing negative events to investigating its role in promoting and facilitating positive human development. The current study is just one example of this possible line of important inquiry. Finally, identification and study of other types of “moral communities” beyond religious institutions should also be done to more fully explore the theory’s utility.

In terms of future studies of African American caregivers, studies should utilize comparison groups of caregivers of other races in order to allow examination of the differential effects of group membership on the caregiving experience. Comparison of non-caregivers with caregivers would also increase understanding of the possible differential impacts of religious involvement on stress, social support, and physical and mental health within varying life circumstances. Another fruitful area for investigation would be study of the effects of the caregiving situation on secondary caregivers (e.g. siblings or the non-caregiving spouse), both residing within and outside of the home.

The caregiving literature could likewise benefit from a comparative study of both organizational and personal religious involvement before, during, and after the onset of the caregiving situation. Additionally, six and 12-month follow-up interviews with the current sample could also yield informative data, including the possible role of faith communities and personal religiosity as sources of coping following the death of the care recipient. In closing, it should be noted that the possibilities for needed and relevant research in the areas of caregiving, religious involvement, and health are myriad. The beneficiaries of such research include social work practitioners, students, and most importantly, the client populations we serve.

APPENDICES

APPENDIX A

African American Family Caregiver Survey

**Section 1: Demographics/Background Variables
Questions 2 -11**

**Section 2: Caregiving Situation Variables
Questions 12-20**

**Section 3: Caregiving Intensity: ADLs and IADLs
Questions 21-29**

**Section 4: Caregiving Distress Scale
Question 30**

**Section 5: Duke Social Support Subscale
Questions 31**

**Section 6: Organized Religious Involvement Items
Question 32-33**

**Section 7: Personal Religious Involvement Items
Questions 34-37**

**Section 8: Intrinsic Religious Motivation Scale
Question 38**

**Section 9: CDC Health-Related Quality of Life:
Questions 39-43
“Healthy Days” Measure: Physical Unhealthy Days**

**Section 10: CES-Depression Scale
Question 44**

African American Family Caregiver Study

Thank you so much for being willing to participate in this interview. I'm going to be asking you several sets of questions, so if you need a break at any point, just let me know. I'm going to start with some questions that will be used to describe the overall sample. Even though they ask things about you, your individual answers will not be reported. All information will be presented about the study sample as a whole.

(If you need an example of how answers will be used, you can say that we'll report something like "the sample was made up of 75% women and 25% men.")

1) Data Entry # _____
[Enter the next Data Entry number in the sequence of numbers you were assigned.]

2) Record Gender
[You don't have to actually ask them this, but you can tell them what you're doing.]

- ☐ Male
- ☐ Female

3) How old were you on your last birthday? [in years]

4) Are you currently...

- ☐ Married or living with a partner
- ☐ Separated
- ☐ Divorced
- ☐ Widowed
- ☐ Single, never married

5) Are there any children living in your household under 18 years of age?

- ☐ Yes
- ☐ No

6) If "Yes," how many children? _____

7) What is the last grade of school you completed?

- ☐ Less than high school
- ☐ High school or GED
- ☐ Some college
- ☐ Technical school
- ☐ College grad
- ☐ Graduate school

8) Are you currently...

- ☐ Working full-time
- ☐ Working part-time
- ☐ Primarily a student
- ☐ Not working due to a disability
- ☐ Retired
- ☐ A homemaker
- ☐ Unemployed and looking for work
- ☐ Other (please specify): _____

9) Last year, what was your total annual household income from all sources?

[If they appear uneasy about this question, assure them that no one will see this information, including any agency providing services.]

- ☐ Less than \$20,000
- ☐ \$20,000 to \$30,000
- ☐ \$30,001 to \$40,000
- ☐ \$40,001 to \$50,000
- ☐ \$50,001 to \$60,000
- ☐ \$60,001 to \$70,000
- ☐ More than \$70,000

10) At the present time, what is your religious affiliation?

- ☐ Christian
 - ☐ Muslim
 - ☐ Jewish
 - ☐ None
 - ☐ Other - please specify:
-

11) If Christian, which specific denomination?

Thank you. Now I'm going to ask you some questions about your experiences with caregiving.

12) Who do(did) you provide caregiving for? [get first name only]

[Note: Use past tense for this and following questions if the interviewee is no longer providing care, but has provided care within last 6 months.]

13) Are you currently providing care for this person or have you provided care within the last 6 months?

- ☐ Yes
- ☐ No

[If the response is No, end the interview as the person is not eligible for the study.]

14) How is (care recipient) related to you?

[e.g., they are my...husband, wife, mother, father, aunt, uncle, sister, brother, friend]

15) What is(was) (care recipient's) age? _____

[For this and remaining questions, if it makes the most sense to refer to the care recipient by their name (like "Bob"), then use their name; if it makes more sense to refer to them by their relationship to the interviewee (like "your Dad"), then use that.]

16) How long have you been caring (did you care) for (care recipient)? _____ (# of months)

[Record in total number of months - for example 2 1/2 years would be 30 months]

17) On average, how many hours a week do(did) you provide caregiving for (care recipient)?

[Record number of hours] _____ (# of hours)

18) Does(did) (care recipient) live:

[Note: If the answer to this question is "more than two hours away", end the interview as the person is not eligible for the study.]

- ☐ In the same household with you
- ☐ Within 30 minutes of your home
- ☐ More than 30 minutes but less than 1 hour from your home
- ☐ One to two hours away from your home
- ☐ More than two hours away

19) [If care recipient is not residing in interviewee's household, ask the following:] Does(did) (care recipient) live:

- ☐ In his or her own home
- ☐ In someone else's home
- ☐ In an independent living or retirement community
- ☐ In an assisted living facility where care is(was) provided
- ☐ In a nursing home or other care facility
- ☐ Other (please specify):

[Note: If answer is "assisted living" or "nursing home," end the interview as the person is not eligible for the study. If interviewee indicates that care recipient is currently in a rehabilitation center, inquire if this is a temporary situation with the intent of the person returning home. If the intent is to return home, they are still eligible to participate. Also, if the care recipient was in some sort of professional care facility at the end of their life, like Hospice, but the caregiver provided community-based care *prior* to that (but still within the past 6 months), they are still eligible for the study.]

20) What would you say is(was) the main problem or illness that (care recipient) has(had) that is related to the need for caregiving? [Do not read list out loud; just check the appropriate category.]

- ☐ Alzheimer's/Confusion/Dementia/Forgetfulness
 - ☐ Amputee
 - ☐ Arthritis
 - ☐ Blindness/Vision Loss/Can't See Well
 - ☐ Blood Pressure/Hypertension
 - ☐ Broken Bones
 - ☐ Cancer
 - ☐ Deafness/Hearing Loss
 - ☐ Diabetes
 - ☐ Feeble/Unsteady/Falling
 - ☐ Heart Disease
 - ☐ HIV/AIDS
 - ☐ Lung Disease/Emphysema
 - ☐ Mental Retardation
 - ☐ Mental Illness/Emotional Illness/Depression
 - ☐ Mobility (can't get around)
 - ☐ Osteoporosis
 - ☐ Paraplegia
 - ☐ Parkinson's
 - ☐ Speaking Difficulties/Can't Speak
 - ☐ Stroke
 - ☐ Other (please specify):
-

21) How many of the following daily activities is(was) (care recipient) able to do for him/herself?

	Yes	No
Bathing (sponge bath, tub bath, or shower) - Receives either no assistance or assistance in bathing only one part of the body.	<input type="checkbox"/>	<input type="checkbox"/>
Dressing - Gets clothes and dresses without any assistance except for tying shoes.	<input type="checkbox"/>	<input type="checkbox"/>
Toileting - Goes to toilet room, uses toilet, arranges clothes, and returns without any assistance (may use cane or walker for support and may use bedpan/urinal at night).	<input type="checkbox"/>	<input type="checkbox"/>
Transferring - Moves in and out of bed and chair without any assistance (may use cane or walker).	<input type="checkbox"/>	<input type="checkbox"/>
Continence - Controls bowel and bladder completely by self (without occasional "accidents").	<input type="checkbox"/>	<input type="checkbox"/>
Feeding - Feeds self without assistance (except for help with cutting meat or buttering bread).	<input type="checkbox"/>	<input type="checkbox"/>

22) Ability to Use Telephone: How many of the following activities is (was) (care recipient) able to do for him/herself? [Indicate one category that best describes abilities]

- ☐ Operates telephone on own initiative - looks up and dials numbers, etc.
- ☐ Dials a few well-known numbers.
- ☐ Answers telephone but does not dial.
- ☐ Does not use telephone at all.

23) Shopping: How many of the following activities is (was) (care recipient) able to do for him/herself? [Indicate one category that best describes abilities]

- ☐ Takes care of all shopping needs independently.
- ☐ Shops independently for small purchases.
- ☐ Needs to be accompanied on any shopping trip.
- ☐ Completely unable to shop.

24) Food Preparation: How many of the following activities is (was) (care recipient) able to do for him/herself? [Indicate one category that best describes abilities]

- ☐ Plans, prepares and serves adequate meals independently.
- ☐ Prepares adequate meals if supplied with ingredients.
- ☐ Heats, served and prepares meals, but does not maintain adequate diet.
- ☐ Needs to have meals prepared and served.

25) Housekeeping: How many of the following activities is (was) (care recipient) able to do for him/herself? [Indicate one category that best describes abilities]

- ☐ Maintains home alone or with occasional assistance (e.g., "heavy work domestic help").
- ☐ Performs light daily tasks such as dish washing, bed making.
- ☐ Performs light daily tasks but cannot maintain acceptable level of cleanliness.
- ☐ Needs help with all home maintenance tasks.
- ☐ Does not participate in any housekeeping tasks.

26) Laundry: How many of the following activities is (was) (care recipient) able to do for him/herself?

- ☐ Does personal laundry completely.
- ☐ Launders small items - rinses stockings, etc.
- ☐ All laundry must be done by others.

27) Mode of Transportation: How many of the following activities is (was) (care recipient) able to do for him/herself? [Indicate one category that best describes abilities]

- ☐ Travels independently on public transportation or drives own car.
- ☐ Arranges own travel via taxi, otherwise no use of public transportation.
- ☐ Travels on public transportation when accompanied by another.
- ☐ Travel limited to taxi or automobile with assistance of another.
- ☐ Does not travel at all.

28) Responsibilities for Own Medication: How many of the following activities is (was) (care recipient) able to do for him/herself? [Indicate one category that best describes abilities]

- ☐ Is able to take medication in correct dosages at correct time.
- ☐ Is able to take medication if prepared in advance in separate dosage.
- ☐ Is not capable of dispensing own medication.

29) Ability to Handle Finances: How many of the following activities is (was) (care recipient) able to do for him/herself? [Indicate one category that best describes abilities]

- ☐ Manages financial matters independently (budgets, writes checks, pays rent, bills, goes to bank), collects and keeps track of income.
- ☐ Manages day-to-day purchases, but needs help with banking, major purchases, etc.
- ☐ Incapable of handling money.

Now I'm going to ask you about some possible impacts of caregiving - what it may be like for you. Please know that we want to understand your real experience - whatever that might be. There are no right or wrong answers.

So, using the 2nd set of possible answers on this card [hand interviewee response format card], pick the number that best fits your experience.

30) With 1 being "strongly disagree," 2 "disagree," 3 "neither agree nor disagree," 4 "agree," and 5 being "strongly agree," rate how well the following statements fit your caregiving experience.

	1	2	3	4	5
I feel frustrated with caring for (name of care recipient).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My relationship with (name of care recipient) depresses me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My relationship with (name of care recipient) is strained.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel resentful towards (name of care recipient).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Caring for (name of care recipient) has made me nervous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel helpless in caring for (name of care recipient).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

My relationship with (name of care recipient) no longer gives me pleasure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel overwhelmed by caring for (name of care recipient).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Now I'm going to ask you questions about things that may have been helpful to you as a caregiver.

Please use the 5th set of possible answers for these questions. [Make sure they are using the 5th response format.]

31) I'm going to ask you how supportive different people are for you at this time in your life. By a "supportive person", I mean one who is helpful, who will listen to you, or who will back you up when you need someone.

Using 0 as "none," 1 as "some," 2 "a lot," and 9 as "there is no such person," tell me how supportive each of these people is now:

	0	1	2	9
Your wife, husband, or significant other person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your children or grandchildren	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your parents or grandparents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your brothers or sisters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your other blood relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your relatives by marriage(partnership) (e.g., in-laws, ex-wife, ex-husband)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your neighbors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your co-workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your church members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your other friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For the next 2 questions, please use the 6th set of possible answers. [Make sure they are using the 6th response format.]

32) In general, how often do you attend religious services? ("Never", "Less than once a year", etc.)

- ☐ Never
- ☐ Less than once a year
- ☐ About once or twice a year
- ☐ Several times a year

- ☐ About once a month
- ☐ 2-3 times a month
- ☐ Nearly every week
- ☐ Every week
- ☐ Several times a week
- ☐ Daily

33) Besides religious services, how often do you take part in other activities at a place of worship? (e.g., Bible group, adult Sunday school, spiritual development group, choir rehearsal, special events, etc.) ("Never," "Less than once a year," etc.)

- ☐ Never
- ☐ Less than once a year
- ☐ About once or twice a year
- ☐ Several times a year
- ☐ About once a month
- ☐ 2-3 times a month
- ☐ Nearly every week
- ☐ Every week
- ☐ Several times a week
- ☐ Daily

For the next 4 questions, please use the 7th set of possible answers. [Make sure they are using the 7th response format.]

34) How often do you pray privately in places other than a church, synagogue or mosque? ("Never," "Less than once a month," etc.)

- ☐ Never
- ☐ Less than once a month
- ☐ Once a month
- ☐ A few times a month
- ☐ Once a week
- ☐ A few times a week
- ☐ Once a day
- ☐ Several times a day

35) How often do you watch or listen to religious or spiritual programs on TV, radio or internet? ("Never," "Less than once a month," etc.)

- ☐ Never
- ☐ Less than once a month
- ☐ Once a month
- ☐ A few times a month
- ☐ Once a week

- ☐ A few times a week
- ☐ Once a day
- ☐ Several times a day

36) How often do you read religious scripture (Bible, Torah, Qu'ran, etc.) or other religious literature? ("Never," "Less than once a month," etc.)

- ☐ Never
- ☐ Less than once a month
- ☐ Once a month
- ☐ A few times a month
- ☐ Once a week
- ☐ A few times a week
- ☐ Once a day
- ☐ Several times a day

37) How often are prayers or grace said before or after meals in your home? ("Never," "Less than once a month," etc.)

- ☐ Never
- ☐ Less than once a month
- ☐ Once a month
- ☐ A few times a month
- ☐ Once a week
- ☐ A few times a week
- ☐ Once a day
- ☐ Several times a day

OK - For the next 9 questions, please use the 10th set of possible answers. [Make sure they are using the 10th response format.]

38) With 1 being "strongly disagree," 2 "moderately disagree," 3 "moderately agree," and 4 "strongly agree," indicate your response to each of the following statements.

[Use the terminology (e.g., faith/spirituality), that best fits how the interviewee described themselves in the question they just answered.]

	1	2	3	4
My faith(spirituality) involves all of my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One should seek God's(the Divine's) guidance when making every important decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my life I experience the presence of God(the Divine).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

My faith(spirituality) sometimes restricts my actions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nothing is as important to me as serving God (the Divine) as best I know how.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try hard to carry my religion (spirituality) over into all my other dealings in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My religious (spiritual) beliefs are what really lie behind my whole approach to life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It doesn't matter so much what I believe as long as I lead a moral life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Although I am a religious (spiritual) person, I refuse to let religious (spiritual) considerations influence my everyday affairs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Although I believe in my religion (spiritual perspective), I feel there are many more important things in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

39) Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? _____# of days

[Enter the number of days reported; if none, type in 0.]

40) During the past 30 days, for about how many days did poor physical health keep you from doing your usual activities, such as self-care, work, or recreation? _____# of days

[Enter the number of days reported; if none, type in 0.]

41) During the past 30 days, for about how many days did PAIN make it hard for you to do your usual activities, such as self-care, work, or recreation? _____(# of days)

[Enter the number of days reported; if none, type in 0.]

42) During the past 30 days, for about how many days have you felt you did NOT get ENOUGH REST or SLEEP? _____(# of days)

[Enter the number of days reported; if none, type in 0.]

43) During the past 30 days, for about how many days have you felt VERY HEALTHY AND FULL OF ENERGY? _____(# of days)

[Enter the number of days reported; if none, type in 0.]

44) For the next set of questions, please use the 12th set of possible answers. [Make sure they are using the 12th response format.

Now I'm going to read a list of statements about the ways you might have felt or behaved recently. Please tell me how often you have felt this way during the past week with 0 being "Rarely or None of the Time" (less than 1 day), 1 "Some or a Little of the Time" (1-2 days); 2 "Occasionally or a Moderate Amount of the Time" (3-4 days); or 3 "Most or All of the Time" (5-7 days):

	0	1	2	3
<i>I was bothered by things that don't usually bother me.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I did not feel like eating; my appetite was poor.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I felt that I could not shake off the blues even with help from my family or friends.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I felt that I was just as good as other people.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I had trouble keeping my mind on what I was doing.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I felt depressed.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I felt that everything I did was an effort.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I felt hopeful about the future.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Questions continue				
	0	1	2	3
<i>I thought my life had been a failure.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I felt fearful.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>My sleep was restless.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I was happy.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I talked less than usual.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I felt lonely.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>People were unfriendly.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I enjoyed life.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I had crying spells.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<i>I felt sad.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I felt that people disliked me.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>I could not get "going."</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***OK - Thank you so much for participating in this study!
We think the information is going to be really useful and
we appreciate your involvement very much!***

***[DON'T FORGET TO SUBMIT THE SURVEY BEFORE YOU TURN OFF THE
COMPUTER!!! - And if you're using the little pen, put it back in its slot.
THANK YOU!]***

APPENDIX B

Reported Reliability and Validity Evidence of Standardized Scales

Variable	Measure	Psychometric Findings
Religious Involvement	Organizational Religiousness-2 items	<i>Has not been formally tested for psychometric properties, but has been used in numerous polls and studies and recommended by the Fetzer Institute and National Institute on Aging. Cronbach's alpha for current sample = .75. Construct Validity: Sig. relationships with variety of health status indicators and well-being.</i>
	Personal Religious Practices-4 items	<i>Has not been formally tested for psychometric properties, but has been used in numerous polls and studies and recommended by the Fetzer Institute and National Institute on Aging. Cronbach's alpha for current sample = .67. Construct Validity: Significant relationships with variety of health status indicators and well-being.</i>
	Intrinsic Religious Motivation Scale-	<i>Reliability: Kuder-Richardson Formula 20 = .90; Cronbach's alpha = .84. Concurrent Criterion Validity: Sig. correlation with Religious Orientation Scales ($r = .71$ to $.87$). Construct Validity: Sig. positive correlation with non-spontaneous helping.</i>
Caregiving Stress	Caregiver Distress Scale (CDS)	<i>Reliability: Cronbach's alphas ranging from .79 to .85. Concurrent Criterion Validity: Sig. correlations with Financial Burden ($r = .33$) and Caregiving Burden ($r = .60$). Construct Validity: Sig. positive correlation with CES-D (depression) ($r = .46$) and sig. negative correlation with FMTC (caregiving meaning) ($r = -.44$).</i>
Social Support	Duke Social Support and Stress Scale: DUSOCS: Support Subscale	<i>Reliability: Cronbach's alpha = .70. Concurrent Criterion Validity: Sig. correlations with Family Inventory of Life Events ($r = .51$) and Family Strengths ($r = .43$). Construct Validity: Sig. correlations with various indices of health ($r = .15$ to $.33$), self-esteem ($r = .33$), anxiety ($r = -.27$), depression ($r = -.25$).</i>

<i>Mental Health Outcomes</i>	Center for Epidemiologic Studies Depression Scale (CES-D)	<i>Reliability:</i> Cronbach's alpha = .84 to .90. <i>Concurrent Criterion Validity:</i> Sig. correlations w/Hamilton Rating Scale ($r = .50s$ to $.80s$), Raskin Rating Scale ($r = .30s$ to $.80s$), Lubin Depression Adjective Checklist ($r = .40s$ to $.50s$), Bradburn Affect Balance Scales Negative Affect ($r = .20s$ to $.60s$), Langner Scale ($r = .50s$) and Cantril Life Satisfaction Ladder ($r = .43$). <i>Discriminant Validity:</i> Sig. differentiated between psychiatric inpatient and general population samples and between levels of severity within patient groups.
<i>Physical Health Outcomes</i>	CDC Health-Related Quality of Life "Healthy Days" Measure: Physical Days Subscale	Numerous psychometric studies show that the CDC HRQOL-14 and its 3 subscales demonstrates both <i>internal consistency</i> and <i>test-retest reliability</i> ; <i>factorial validity</i> ; <i>known-groups criterion validity</i> ; <i>concurrent criterion validity</i> with other health measures; and <i>construct validity</i> with measures of related concepts. Reliability coefficients = .75 and higher.

APPENDIX C



THE CATHOLIC UNIVERSITY OF AMERICA

Office of Sponsored Programs and Research Services

Washington, D.C. 20064

202-319-5218

November 4, 2009

Ms. Jeronda T. Burley
2720 Summers Ridge Drive
Odenton, MD 21113

Dear Ms. Burley:

Your research project titled "Differences in Health Outcome Among Four Groups of Religiously-Involved African American Caregivers: An Exploration of Moral Community Theory," was reviewed by the Committee for the Protection of Human Subjects, and has been certified as exempt. Certification is good for three years as long as no changes are made to the protocol. If changes are made, or if the research continues beyond three years, re-submission to the IRB must be made. Approval expires on November 3, 2012.

Attached is an approved copy of the exemption certificate.

Sincerely,

Ralph Albano
Secretary
Committee for the Protection of Human Subjects

cc: Dr. Michael J. Sheridan

CUA**THE CATHOLIC UNIVERSITY
OF AMERICA***Committee for the Protection of
Human Subjects (CPHS)***EXEMPTION
CERTIFICATE****Principal Investigator(s):** Jeronda T. Burley**Date:** October 30, 2009**Department(s):** National Catholic School of Social Service FWA00004459**Title of Study:** Differences in Health Outcomes Among Four Groups of Religiously-Involved African American Caregivers: An Exploration of Moral Community Theory

The project is exempt under the following category of 45 CFR 46.101:

1. (b) (1) _____ Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as a) research on regular and special education instructional strategies, or b) research on the effectiveness of or the comparison among instruction techniques, curricula, or classroom management methods.
2. (b) (2) _____ Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: a) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and b) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.
3. (b) (3) _____ Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior that is not exempt under (2), it: a) the human subjects are elected or appointed public officials or candidates for public office; or b) federal statutes(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
4. (b) (4) ☒ Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.
5. (b) (5) _____ Research and demonstration projects which are conducted by or subject to the approval of the department or agency heads, and which are designed to study, evaluate, or otherwise examine: a) Public benefit or service programs; b) procedures for obtaining benefits or services under those programs; c) possible changes in methods or levels of payment for benefits or services under those programs.
6. (b) (6) _____ Taste and food quality evaluation and consumer acceptance studies, a) if wholesome foods without additives are consumed or b) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

Certification as Exempt:Secretary of the Institutional Review Board (IRB) for
Research with Human Subjects11/5/09

Date

APPENDIX D



THE CATHOLIC UNIVERSITY OF AMERICA

Office of Sponsored Programs and Research Services

Washington, D.C. 20064

202-319-5218

March 5, 2009

Dr. Michael J. Sheridan
National Catholic School of Social Service
103 SHAH
Campus

Dear Dr. Sheridan:

Your request for approval to renew your project titled "Investigation of the Effects and Mechanisms of Religious Involvement on the Physical and Mental Health of African American Caregivers," and for the addition of a qualitative interview guide, has been approved by the Committee for the Protection of Human Subjects. This renewal will expire on February 6, 2010. You are required to use the stamped and dated consent forms that accompany this approval letter.

Attached is a signed copy of the request for renewal form.

Sincerely,

Ralph Albano
Secretary
Committee for the Protection of Human Subjects

Request to Renew an Approved Protocol
The Catholic University of America
Institutional Review Board for the Protection of Human Subjects

Please complete this form and return it to the Office of Sponsored Research. Send the original and one copy.

Investigator(s)' Name: Michael J. Sheridan, Ph.D.

Protocol Title: "Investigation of the Effects and Mechanisms of Religious Involvement on the Physical and Mental Health of African American Caregivers"

Original approval date: January 23, 2008; renewed February 6, 2009

THE FOLLOWING ITEMS ARE REQUIRED FOR APPROVAL

(If the research covered by this renewal is limited to data analysis, please answer questions 1 and 4 only.)

1. Number of subjects accrued: 127
2. Additional anticipated number of subjects for period covered by this renewal: 193

Please attach the following

3. A copy of the current consent form(s)
4. A summary of progress to date, including findings.
5. For research with more than minimal risk or research that provides and evaluates behavioral or psychological interventions, a summary of recent literature related to the research topic. (Federal policy requires that investigators inform subjects of important new information that might affect their willingness to participate in the research. This information may be findings of this research or of that carried out by others.)
6. A description of any adverse events or unanticipated problems involving risks to subjects and proposed solutions, any withdrawal of subjects from the research, or complaints about the research. Adverse events include required reporting of suspected child abuse to authorities.

INVESTIGATOR'S CERTIFICATION

Please check one and supply the appropriate information:

- ☐ I (We) hereby certify that the research will be conducted in accordance with the currently approved protocol, including approved amendments.

Signature of Principal Investigator and Faculty Advisor (if applicable) Date: _____

- ☒ Changes have been made to the protocol. Attached are 1) a memo describing the changes, and 2) a copy of the most recently approved protocol with the changes in bold-faced type.

Michael J. Sheridan
Signature of Principal Investigator and Faculty Advisor (if applicable) Date: 2-27-09

Approved [Signature] Date: 3/5/09
IRB Chair or Expedited Reviewer or Human Protections Administrator (Circle One)

APPENDIX E

Quantitative Phase Consent Form



THE CATHOLIC UNIVERSITY OF AMERICA

*National Catholic School of Social Service
Washington, DC 20064
202-319-5458
Fax 202-319-5093*

“Exploration of Factors Related to Health Among African American Caregivers”

RESEARCH CONSENT FORM

This consent form gives you the information you need to make a decision about whether or not you are willing to participate in this study. Information on this consent form may contain words or information that may not be clear to you. Please feel free to ask the research staff member to explain any words or information that you have questions about. If you decide to participate in this study, you will be asked to sign this consent form after you have had all of your questions answered.

PURPOSE OF STUDY AND INVITATION TO PARTICIPATE: *What is this study about and why am I being asked to participate?*

I understand that the purpose of the study is to increase our understanding about different factors that may be related to the physical and mental health of African America caregivers. These factors could include such things as how much caregiving I am providing, how much support I have from others in providing this care, the stress I experience in caregiving, the ways I've found to cope with stress, any rewards I may feel I receive from caregiving, and any involvement I might have in religious or spiritual activities. I am being asked to participate because I have been identified as someone who is providing care for an elderly friend or relative – either now or within the past six months.

DESCRIPTION OF RESEARCH AND PROCEDURES: *What am I being asked to do?*

I understand that I am being asked to respond to a series of interview questions in the areas listed above, plus some general descriptive questions about myself (my sex, my age, etc.). I will also be asked questions about my health. A trained research interviewer will be asking the questions. The interview will take place in my home or another location that is convenient and comfortable to me. The interview should take about 2 to 2½ hours to complete.

Research Participant's Initials _____ Date _____

APPROVED CUA IRB 00000082	
JAN 29 2011	
Protocol	09-036

RISKS AND DISCOMFORTS: *What are the risks, inconveniences or discomforts that I might experience if I agree to participate in this study?*

I understand that, although no significant risks are anticipated, thinking about my caregiving experience and answering questions about it may cause me some discomfort. However, if I should become upset or experience any kind of discomfort, the researchers will help me get help to deal with this.

COSTS: *What are the costs for me if I agree to participate in this study?*

I understand that there are no costs to me to participate, other than the time and effort it will take to participate in the interview.

EXPECTED BENEFITS: *What are the benefits for me if I agree to participate in this study?*

I understand that there will be no direct benefits for me if I agree to participate. The information gathered in this study will be useful to practitioners who provide services to caregivers and to other professionals working in this area. Results of the study may also be beneficial to other members of the African American community who are providing care to elders.

PAYMENTS: *Are there any payments involved in this study?*

I understand that I will receive my choice of a coupon for \$50.00 to either a grocery store or drug store in recognition of my time and contribution to this study.

VOLUNTARY PARTICIPATION AND WITHDRAWAL FROM THE STUDY: *What if I choose to not participate in this study? What if I decide to stop participating in it once it has started?*

I understand that the decision to participate is completely up to me. If I decide that I do not want to participate in this study, this will not effect any services that I receive or that the person I am providing care for receives. Also, I understand that I can decide to end my participation at any point during the study. I understand that I must complete the interview in order to receive the coupon, but that I am free to not answer individual questions in the interview.

CONFIDENTIALITY: *What will happen to the answers that I give to the study questions?*

I understand that the researchers will keep both my participation in this study and my answers to study questions confidential. My specific answers will not have my name or any other identifying information attached to them. All information will have a number on it rather than a name and will be kept in a locked file cabinet until the study is completed and all data are analyzed, when it will be destroyed. When the researchers share the results of the study with other professionals and community members interested in caregiving, these results will be presented in group form only. For example, a report or presentation might say something like, "The majority of caregivers (60%) reported receiving the most support from other family members." Neither my identity nor my specific answers will be given in any presentation or publication.

Research Participant's Initials _____ Date _____

APPROVED CUA IRB 00000082	
Expires:	JAN 29 2011
Protocol:	09-036

CONTACTS: *Who can I contact if I have questions about this study?*

I understand that if I have any questions about this study I can contact Dr. Michael Sheridan, who is the Principal Investigator for this study. Her contact information is as follows:

Dr. Michael Sheridan
National Catholic School of Social Service
The Catholic University of America
(202) 319-6549; sheridam@cua.edu

RESEARCH PARTICIPANT RIGHTS: I have read or have had read to me all of the above.

_____ has explained the study to me and answered all of my questions. I have been told of the risks or discomforts and possible benefits of the study.

I understand that I do not have to take part in the study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty or loss of benefits to which I am entitled.

I understand that any information obtained as a result of my participation in this research study will be kept as confidential as legally possible. The results of this study may be published, but my records will not be revealed unless required by law.

NOTE: If I have any questions about the conduct of this study or my rights as a research participant in this study, I have been told that I can call The Catholic University of America Office of Sponsored Programs at (202) 319-5218.

I understand my rights as a research participant, and I voluntarily consent to participate in this study. I understand what the study is about and how and why it is being done. I will receive a signed copy of this consent form.

Research Participant's Signature

Date

Signature of Person Obtaining Consent

Date

Signature of Principal Investigator

Date

Research Participant's Initials _____ Date _____

APPROVED CUA IRB 00000082	
Expires:	JAN 29 2011
Protocol:	09-036

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