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I am submitting herewith a dissertation written by Julie Helen Grocki entitled "Social Support and Depression Among Community-Dwelling Older Adults." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Social Work.

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Social Support and Depression Among Community-Dwelling Older Adults

A Dissertation

Presented for the

Doctor of Philosophy Degree

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Julie Helen Grocki

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Dedication

I dedicate this to the Most High Great Creator who gives us all the breath of life. To the Lord Jesus the Christ, the most holy Mother, Mary, the most holy Foster-Father, Joseph, and the loving, healing, comforting angels and saints who are my "true" family. Thank you for always being there for me. To my "Pop," Stan Grocki, your love and assistance throughout my life have always been and will continue to be deeply appreciated. I love you all.

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I thank all who have allowed me to be "human." Until I can walk on water, I will always try not to expect you or anyone else to do so. Thank you for those who have been and are still challenging in my life. You have taught me that strength of character is not developed by idleness, but by prayer, determination, perseverance, and purposeful choices in activities and work.

May my life be made into a living prayer for the Glory of the Divine Architect of the Universe. For indeed: "I consider my life worth nothing if only I may finish the race and complete the task the Lord Jesus has given me" (Acts 20-24).

ABSTRACT

Late-life depression is a significant public and geriatric mental health concern and one of the most prevalent and common emotional disorders for all older United States citizens. This study examined how relationships with close friends and close relatives affected depressive symptomatology among African American and White older adults and explored how health, social and religious factors modified that relationship. The sample consisted of participants from the New Haven, CT cohort of the population-based longitudinal study, The National Institute on Aging project entitled "The Established Populations for Epidemiologic Studies of the Elderly" [EPESE]. Respondents were ages 65-75 and older (mean age = 72.3), of which approximately 82% were White and other Non-African American, 19% all African American and 2.2% other than White (N = 2,812).

A linear multiple hierarchical regression analysis was conducted to test the association between the severity of depressive symptoms (Radloff, 1977; Engel and Schutt, 2005), close friendships and close relatives for community-dwelling older adults while controlling for demographic, health, social support and religious covariates. Data were analyzed using SPSS 16 for Windows with an assigned significance level of p = .05 (two-tailed).

The results of the analysis of the correlation coefficients, (ΔR^2 of .002, F (2, 2324) = 3.185, p = .042) suggested our hypothesis to be true in that the relationship between social support and depression depended upon race. However, we specified that the relationship between social support provided by family and friends would each be stronger for African Americans than Whites. Contrary to this, outcomes indicated the

relationship provided by family members to be the same for both races while the relationship provided by friends to be stronger for Whites. These findings are substantial in fulfilling the request for evidence-based empirical research. Increased scientific research is needed in comprehending how specific social support and health-related factors might impact depressive symptomatology particularly among large samples of African American and White older adults.

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CHAPTER I

INTRODUCTION

Significance of the Problem

The issue of social support and its relationship with emotional depression among the aged is an expanding area of research. Late-life depression is a growing, significant geriatric mental and public health concern in the United States (Brown et al., 1995; Jeste et al., 1999; Mills, 2002; Mills, Alea, & Cheong, 2004; National Institute of Mental Health [NIMH], 2009a). For American older persons, it is one of the most common and prevalent mental health disorders (Blazer, Hughes, & George, 1987; Bowling, Farquhar, & Brown, 1991; Cummings, Neff, & Husaini, 2003; Substance Abuse & Mental Health Services Administration [SAMHSA], 2009c; Yang & George, 2005). Each year, approximately 6-6.5 million older Americans are affected by depression in later life (National Alliance on Mental Illness [NAMI], 2009b).

Demographics

The United States population of older adults is rapidly burgeoning in unprecedented proportions. Since 1900, the population of Americans age 65 and older has more than tripled. In addition to this, the baby-boom generation, born in 1946 begin age 65 by 2011. Two distinguishing characteristics of this generation are enhanced racial diversity and the presence of increased mental health issues. This accompanied with longer life expectancy (in 2009: 73 years for men and 80 years for women), leads to a dramatic expansion of older adults between 2010–2030 (American Psychological Association [APA], 2009d; National Center for Health Statistics [NCHS], 2009, p.16).

In the United States in 2007, those aged 65 and older comprised 37.9 million citizens or 12.6% of the total U.S. population: more than one in every eight Americans (Administration on Aging [AoA], 2009b). Those 85 and older are the most rapidly growing segment of this population (SAMHSA, 2009c). It is anticipated that over the next 40 years, they will triple and those 65 and older will double in number (AoA, 2009a).

The United States population is on the threshold of major demographic increases in the areas of the aged and ethnically diverse populations (Mui, Burnette, & Chen, 2001). In 2000, it was estimated that of those 65 and older, 84% of persons were non-Hispanic White and 8% non-Hispanic Black. It is projected that by 2050, 12% will be non-Hispanic Black and non-Hispanic Whites will decline from 85% to 64% (AoA, 2009a; U.S Bureau of the Census, 2000). With changing demographics, African Americans will continue to grow among those 65 and older and constitute a larger portion of the 85 and older population (U.S. Bureau of the Census, 1996). They have a stronger probability than Whites to be recipients of inadequate mental and physical healthcare services (Mui, et al., 2001), and experience higher rates of poverty (SAMHSA, 2009c). Today more generations of older persons are surviving (AoA, 2009b; Johnson & Troll, 1996) and persons age 65 and older of all ethnic and racial groups are expected to expand (AoA, 2009a).

Late-Life Depression

According to the World Health Organization (2009), globally about 121million people are affected by depression which is also the leading cause of disability. In the United States, millions of older Americans suffer from this condition in its many forms

(NAMI, 2009a; 2009b). Depression tends to increase with age, resulting in its being the most common mental health disorder for all older adults (Mills, 2002). High rates of recurrence of this disorder are experienced by all older persons (SAMHSA, 2009e).

Depression is a serious condition among the aged (Brown et al., 1995), yet it is frequently unrecognized and untreated (NAMI, 2009a; 2009b; Mills, 2000; Mills et al., 2004; Yang & George, 2005; Zylstra & Steitz, 1999). Among older persons, it repeatedly goes undiagnosed and is often attributed to other causes (Mills et al., 2004). The U.S. Surgeon General's Report on Mental Health (SAMHSA, 2009g) suggests that treatment for depression is successful in 60 to 80% of older adults. Unfortunately, older persons rarely seek help for this condition. Social stigmas are attached to being depressed and many older persons view this condition as a character flaw. Often they and their family members are not cognizant of how to recognize the signs and symptoms of depression and of the remedies available for it (NAMI, 2009a).

Untreated depression may lead an older adult to experience ideations of and attempt suicide. Alarmingly, the consequences of unaddressed depression among the aged lead to mortality as a result of suicide (SAMHSA, 2009c). The U.S. Surgeon General acknowledged this by providing a blueprint to prevent suicide in the United States in 1999 by their "Call to Action to Prevent Suicide" (U.S. Department of Health & Human Services [U.S. DHHS], 2009c). Among all age groups, older adults are disproportionately likely to die by suicide (NAMI, 2009a).

Across the life cycle, the association of depression and suicide is well-established in the literature (Blazer, 2003). For all age groups, it remains a major risk factor for suicide (SAMHSA, 2009c; 2009e), and in later-life, it is the single most significant risk

factor for suicide (NAMI, 2009b). In the United States, the highest rates of completed suicides are among White men age 65 and older (NAMI, 2009a; SAMHSA, 2009c) for whom suicide is 50% higher than for the population as a whole. This is a serious public health concern for the aged (APA, 2009a).

Aging and Mental Health

In the next several decades, the amount of older adults with mental disorders is expected to burgeon to extreme proportions (Mills, et al., 2004). The Archives of General Psychiatry in their 2004 consensus statement (Jeste et al., 1999) acknowledge a large upcoming crisis in geriatric mental health (SAMHSA, 2009d). With the projected growth of all older adults, these infer long-term implications for mental healthcare (Mills, 2002). Later in life a substantial number of all seniors are at risk for emotional disorders, many existent mental health problems are exacerbated and new ones may emerge (SAMHSA, 2009f).

SAMHSA (2009b) estimates that out of all U.S. citizens 65 and older, seven million (20%) currently have a psychiatric illness. This number is expected to double to 15 million by 2011. Such a projected increase of older adults with mental health disorders is attributed to increased longevity, improved healthcare and other social factors such as the expansion of the “baby-boom“ population who by the year 2011 will reach the age of 65 (SAMHSA, 2009b; 2009c). One of the distinguishing characteristics of this population which currently comprises 76 million United States citizens is the presence of considerably more mental health issues (SAMHSA, 2009c).

Late-Life Depression and Overall Health

Depression is considered a significant risk factor for mortality and numerous physical health outcomes (Skarupuski et al., 2005). Among the aged, it is very costly and leads to increased disability. Older primary care patients who are depressed use larger amounts of medications, visit physicians and emergency rooms more often leading to increased expenditures, incur higher outpatient costs, and experience longer hospital stays than those who are non-depressed (Blazer, 2003; Centers for Disease Control [CDC], 2009a). The risk of developing new illnesses expands as a result of late-life depression (Cummings et al., 2003).

The physical and emotional consequences associated with aging such as cellular degeneration, a decrease in functional abilities, chronic medical conditions, widowhood, and loss of independence frequently form the foundation for chronic depression and complicate existent health conditions. Ordinary long-standing conditions of older adulthood which cause physiological limitations such as cardiovascular, pulmonary and arthritic diseases among various other conditions are common sources of depression. Those with chronic conditions customarily encounter challenging mental and physical tolls. One of the strongest trepidations associated with persistent health conditions is the uncertainty that the illness will worsen over time. Unremitting health conditions require an enhancement in adaptation to new special needs. Significant adjustments to lifestyle changes must be made to accommodate physical limitations, stress, medical expenditures, and time usually spent in pleasurable activities, now done so with physicians.

The strongest risks of depressive symptoms occur within the first two years of those newly diagnosed with chronic diseases. Negative thoughts can result from a development in physical symptoms, loss of functioning and recovery. Depression may complicate recovery from long-standing ailments by diminishing energy, lack of exercise and poor dietary habits which can aggravate existent symptoms and conditions to cause them to expand (APA Help Center, 2009b). Depression can also cause feelings of loneliness resulting in higher mortality rates. It may lead to a decrease in memory and normal reaction times, which increase hazards associated with driving, cooking, self-administration of medications, and other tasks requiring full attention (APA Help Center, 2009a).

Late-Life Depression and Cognition

Depression, cognitive decline and aging are growing new areas of research in gerontology. In the past several decades, they have been some of the most critical areas targeted in geriatric mental health research. A certain decline in cognitive capacity is a norm experienced by all older persons (APA Help Center, 2009a). In later life, depression over the age of 65 is frequently ordinarily associated with cognitive impairment which may be the result of or co-existing with actual dementia or a true depressive disorder. Frequently older persons who are depressed exhibit signs and symptoms indicative of cognitive dysfunction (Wilkins, Mathews, & Celine, 2009).

Numerous robust associations have been found between late-life depression and Alzheimer's disease. Evidence exists that certain natural body changes associated with aging might increase the risk for the development of depression. Lower concentrations of folate in the nervous system and blood have been found to contribute to depression,

mental impairment, and dementia. Psychologists are accustomed to finding certain complaints in memory to be caused not by actual decreases in memory performance but depression. Other psychosocial factors combined with depression mimic the effects of dementia and lead to an over-reporting of cognitive disturbance from older adults (APA, 2009c; U.S. Surgeon General, 2009a).

Late-Life Depression, Social Support and Religiosity

Depression is clearly related to social support and religion (Koenig et al., 1997). Longitudinal research over the past three decades suggests that greater religious involvement predicts contacts with close friends, enhanced marital stability and an increase in nonreligious group memberships (Strawbridge, Cohen, Shema, & Kaplan, 1997). Hundreds of scholars representing many of the major universities in North America, Europe and Israel have published peer-reviewed scientific findings about the positive effects of religion on health in a wide array of settings (Koenig, McCullough, & Larson, 2001). Historically, religious-related variables such as social support have been recognized for their psychological relevance in social science research. A diversity of aspects of religiosity have beneficial effects on various dimensions of depression (Koenig et al., 2001). Religious attendance is one of the strongest predictors of decreases in symptoms of depression in community and non-clinical samples (Kennedy, Kelman, Thomas, & Chen 1996; Idler & Kasl, 1997b; Koenig et al., 1997).

Social Support

Social support is a critical component in the area of mental health and depression among the aged. The National Research Council of 2001, a committee on future directions for behavioral and social sciences research at the National Institute of Heath

[NIH] confirms that social ties and support are a vital source of emotional strength (CDC, 2009b). As evidence is expanding, the existent consensus among social scientists is also growing on the importance of social support, social networks and their consequences on total physiological health and well-being (Glass, Mendes de Leon, Seeman, & Berkman, 1997; Lubben & Gironda, 2003). This bodes true also on benevolent social ties and their relationship to improved mental health and well-being (Barnett & Gotlib, 1988; Kawachi & Berkman, 2001).

Social Support and Mental Health

For older adults, social support is paramount, particularly for those who are experiencing depressive symptoms, have major depression and/or are at risk for depression (Kafestios & Siderius, 2006). It has been linked to improvements in psychological health such as decreases in symptoms of depression and anxiety, improvements in self-efficacy, self-mastery, better functionality and other emotional issues (Blazer, 1982; Kubzansky, Berkman, & Seeman, 2000; Pennix et al., 1998). The 1965 Older Americans Act recognizes the need for social support by requiring that local Agencies on Aging provide in-home service group meals to foster social interactions.

Social Support and Overall Health

The CDC acknowledges (2009b) that general health can be influenced by a variety of psychological, behavioral and social factors. An increasing number of epidemiological studies report positive relationships between social relationships and mental and physical health outcomes including mortality (Berkman, 1984; 1986a). Abundant research demonstrates an affiliation between increased levels of social support and reduced risk for physical disease, mental illness and mortality. Public health experts

posit that the association between social support networks and health is as strong as epidemiological evidence linking smoking and health (House, Landis, & Umberson, 1988; Lubben & Gironda, 2003).

In the past 30 years, there has been a resurgence and growth in the interest of the effects of the social environment on health (Seeman & Crimmins, 2001). Social scientists have generated a substantial amount of knowledge on this subject (Kafestios & Sideridis, 2006). Numerous studies have focused on linking social support and outcomes to physical health. The connection between positive social ties and health has been consistent among all of the research. Despite there being such a diversity of studies measuring social support and depression in a variety of ways, these relationships remain constant (Lubben & Gironda, 2003).

Social Support and Race

A large body of research exists which documents differences in the nature of social support among African American and White older adults (Cummings et al., 2003). Outcomes are inconsistent as some contend that family is more important for one group than friends in mitigating depression and/or protecting against negative mental health. Some studies indicate that for African Americans, extended family networks may be more supportive than for Whites (Hays & Mindel, 1973; Mindel, Wright, & Starrett, 1986). New recent research has a variety of results (Lubben & Gironda, 2003).

Social Support and Family

The family is a primary social learning environment and a vital source of emotional and instrumental support for older people (Husaini, Moore, & Cain, 1994). Ample evidence exists implying that family support is paramount in avoiding or delaying

institutionalization of all older persons (Hooyman & Kiyak, 1998). Family often provides for the majority of the needs of older persons. In times of illness and disability, immediate family members are the major source of help. The likelihood of not having their availability increases the need and utilization of formal services (Lubben & Gironda, 2003). While typically family is considered the most central primary group a person belongs to, intimate friends can be as significant or more as reservoirs of support, particularly when there is an erosion of family relations (Lubben & Gironda, 2003).

Today, in families, not all members hold good intentions for their older loved ones. Plenty of evidence exists corroborating that certain family members are the primary perpetrators and sources of crimes among the aged ranging from physical abuse to financial exploitation. Such behavior may cause an older individual to be more distressed, feeling hopeless and depressed (National Center on Elder Abuse [NCEA], 2009). While social support may come from family members, friends and neighbors are also providers of social and personal ties into very old age.

Social Support and Friends

The presence and increased awareness of elder abuse and exploitation from family members today emphasizes the need to explore other resources of support such as friends who might assist depressed older adults. Friendship systems appear to be as equally or more important in the general health and well-being of older persons. In some instances, friends are the primary source of emotional support (Husaini et al., 1994). A substantial established body of literature provides evidence suggesting out of all social relationships, friendships are particularly beneficial for our health (Mendes de Leon,

2005). Several studies on older adults conclude that friends have a more positive influence on survival than children (Glass et al., 1997; Mendes de Leon, 2005).

Friends are found to be especially important sources of support (Hooyman & Kiyak, 1998). They may assist benevolent family members with the stressful demands involved in the care of their older members (Lubben & Gironda, 2003). New growing literature testifies to the significance of strong friendships. An abundance of researchers have produced findings on the importance of friends and their relevance to the psychological well-being of older adults (Antonucci, Fuhrer, & Jackson, 1990; Hooyman & Kiyak, 1998).

Why This Study is Important

This specific area of this research is chosen for several reasons. The primary being that depression among all older persons is a major public and geriatric mental health concern causing untold suffering. For every United States citizen, out of all common mental health disorders, depression is one of the most prevalent and frequently encountered (NIMH, 2009a; SAMHSA, 2009c). The rapid and projected expansion of the older adult population, the inclusion of the increasingly racially diverse baby-boom generation in 2011 with enhanced mental health issues (APA, 2009d; NCHS, 2009, p.16), and the serious potential consequences that can result from untreated and undiagnosed depression in later-life, such as increased morbidity and mortality, provide the impetus for the urgent need of this research.

This study responds to the national demands for additional evidenced-based research in all areas attributed to healthcare (New Freedom Commission on Mental Health [NFCMH], 2003, p. 66). It fulfills the need for an increase in prevention research,

the development of culturally appropriate treatment services, and an improvement in the understanding and effect of personal and socio-cultural factors on depressive illness (SAMHSA, 2009d; 2009f). This analysis provides answers to the numerous gaps in the literature, such as a need for further scientific knowledge produced on all older adults in the areas of depression, social support, medical and religious factors particularly on large samples of African Americans and Whites (Skarupuski et al., 2005).

Increasingly all health professionals are focusing on social, medical and religious factors particularly among substantial samples of the racial groups addressed in this study. Specific emphasis is on the discovery of preventative measures in order to assist with healthcare, mitigate suffering and decrease costs. Empirical evidence in the area of African Americans and Whites is critically needed given the increasing epidemic of depression among the aged, the projected demographic expansion in population estimates, decreases in state and federal resources and the current state of the economy. Supplying substantial scientific results of research will enable healthcare practitioners to improve recognition and treatment of depression and to ameliorate its numerous potential detrimental consequences for all older adults.

These reasons alone provide adequate justification for the rationale of this study. The empirical outcomes will contribute to the profession of social work in many ways ranging from the production of scientifically measurable results to supplement the existing knowledge base to the creation of services needed on micro, mezzo and macro levels. This subsequently will decrease mental and physical suffering and the need for more costly levels of assistance. The potential to save thousands of lives annually exists.

Purpose of the Study

The purpose and objective of this study is to explore the association that various demographic, social support and medical factors have on the severity of depressive symptoms (Radloff, 1977; Engel & Schutt, 2005) among community-dwelling older adults. Specifically, this research will examine the associations between depression and gender, age, race, two types of emotional support: the number of and frequency of contact with close friends, the number of and frequency of contact with close relatives, two types of social contact: current marital status and religious attendance and six health factors: shortness of breath, pain in ambulation, cognition, urinary incontinence, cardiovascular pain and perceived general health.

This is a significant problem area that needs to be addressed. As mentioned previously, the aging population is increasing rapidly as late-life depression, a major geriatric mental health issue expands to historically high proportions (NIMH, 2009a; SAMHSA, 2009d). This coupled with the paucity of research in the areas of emotional support and depression among all older persons, particularly African American and White individuals, heightens the need for this study.

CHAPTER II

Review of the Literature

This chapter is a review of existing literature related to depression and social support. This review is organized according to the following headings: (1) Late-life depression; (2) late-life depression and the CES-D; (3) late-life depression: community and institutional studies; (4) late-life depression and demographics; (5) late-life depression and age; (6) late-life depression and gender; (7) late-life depression and race; (8) late-life depression and older African Americans; (9) late-life depression and aspects of health; (10) late-life depression and activities of daily living; (11) late-life depression and cognitive function; (12) late-life depression and breathing disorders; (13) late-life depression and pain; (14) late-life depression and cardiovascular disease; (15) late-life depression and ambulation; (16) late-life and prevalence of urinary incontinence; (17) late-life depression and urinary incontinence; (18) late-life depression and perceptions of health; (19) social support; (20) social support and overall health; (21) social support and emotional well-being; (22) social support and older adults; (23) social support depression and older adults; (24) social support, depression and older adults: race; (25) racial differences and social support; (26) social networks; (27) receipt of and satisfaction with social support; (28) measures of social support; (29) marital status; (30) social support and race: friends and family; (31) social support, older adults and race: friends and family;(32) friendships, and (33) religion.

Late-Life Depression

Depression is the most prevalent and challenging mental health problem in later-life (Blazer, 1994; Blazer, 2003). It is frequently misunderstood, unrecognized and underdiagnosed in the older American population (Ettner & Hermann, 1997; Kraaij, Arensmen, & Spinhoven, 2002; NAMI, 2009a; 2009b). Depression often remains undetected being mistaken for normal signs of aging (Mills, 2002). The NIMH recognizes that depressive symptoms among those 65 and older are not a normal consequence of biological aging. Multiple factors may contribute to late-life depression making it a complex phenomenon (Cummings et al., 2003). Depressive symptoms are more frequent among the oldest-old. Yang and George (2005) note that in later-life, significant levels of depressive symptoms are commonplace (Zarit, Fernis, Gatz, & Johansson, 1999). While old age is not associated with high rates of diagnosed depression, reports of depressive symptoms by older people are generally high (Blazer et al., 1987).

Late-Life Depression and the CES-D

There is sufficient research providing evidence on the utility of the CES-D among all older adults (Baker, 1997; Blazer, Landerman, Hays, Simonsick, & Saunders, 1998; Callahan & Wolinksy, 1994; Cole, Kawachi, Maller, & Berkman, 2000). The CES-D, a four-factor structure of depressive symptomatology has been found to have acceptable internal consistency (Blazer, Burchett, Service, & George (1991). Blazer et al., 1998; Long Foley, Reed, Mutran, & DeVellis, 2002; Roberts, 1980; Roberts, Vernon, & Rhoades, 1989). The psychometric properties of the CES-D have been established in numerous community-based studies across age, socioeconomic and racial/ethnic groups.

It has become a standard indicator of depressive symptomatology for older adults (Berkman et al., 1986; Blazer, et al., 1991; Davidson, Feldman, & Crawford, 1994; Husaini, Neff, Harrington, Hughes, & Stone, 1980; Mui et al., 2001).

The CES-D is the most frequently used measure for determining depressive symptoms among community-resident populations and is highly reliable with samples from diverse ethnic backgrounds (Baker, Okwumabua, Philipose, & Wong, 1996; Mui et al., 2001; Plant & Sachs-Ericsson, 2004; Radloff, 1977). Very few depression screening or diagnostic instruments are formed on or adequately validated across cultures (Lebowitz et al., 1997; Mui et al., 2001). The CES-D has been more widely and rigorously evaluated cross-culturally than the Geriatric Depression Scale [GDS]. When compared with the GDS-15, the CES-D has been more reliable in detecting depressive symptoms in both older African American and White persons (Baker et al., 1996). For only older African Americans, the CES-D in a number of community surveys has been found to be useful as a first-stage screening device (Baker, Parker, Wiley, Velli, & Johnson, 1995; Okwumabua, Baker, Wong, & Pilgram, 1997).

Late-Life Depression: Community and Institutional Studies

Levels of depression are highest among institutionalized older persons (Cummings et al., 2003). The prevalence of depression has been estimated among those hospitalized 65 and older to be as high as 45% (Brown et al., 1995). In primary care settings, approximately 37% of older persons experience depression (SAMHSA, 2009e).

Significant symptoms of depression are common in the older community-dwelling population (Oxman, Berkman, Kasl, Freeman, & Barrett, 1992). Prevalence rates have been found to range from 8-16% (Blazer, 2003), and from 8-20 % (Gallo &

Lebowitz, 1999; Mui et al., 2001; SAMHSA, 2009c). It has been estimated that over 10% of community-dwelling older adults may have significant symptoms of depression (Brown et al., 1995) and approximately 15% suffer from depressive symptoms (Cummings et al., 2003). Some studies indicate that among non-institutionalized older persons, up to 30% of persons report significant depressive symptomatology (Cummings et al., 2003; Fry, 1993).

Among community-based research, equivocal outcomes have been produced on older persons that examine racial effects on depression (Cummings et al., 2003). For example, minimal differences were found in symptom frequency between African American and White older adults by Blazer and associates (1998). In community populations, evidence has shown that levels of symptoms of depression might not vary significantly by race or ethnicity, but risk factors for symptoms may (Blazer et al., 1998).

Late Life Depression and Demographics

Late-Life Depression and Age

The prevalence and existence of depression among all age groups is a rapidly changing area of mental health requiring continuous inquiry and exploration. Depression is the primary risk factor for suicide. Older males over the age of 65 have the highest rates of completed suicides for all age groups (14.3 persons per 100,000 annually), yet, young adults aged 20-24 follow next in line (12.5 deaths per 100,000 persons annually) with a decrease of only 1.8 persons per 100,000 (NIMH, 2009b). Considering that older adults are less likely to report depression than those of younger generations, the prevalence of this condition might be underreported. Generational differences and

age-associated changes concomitant with depression need to be considered (APA, 2009d; NCHS, 2009, p.16).

The outcomes of empirical investigations remain equivocal. In some studies older adults were just as likely to endorse depressive symptoms as younger adults (Hasin & Link, 1988; Blazer, Bachar, & Hughes, 1987). In other studies, age has been reported to be associated with larger rates of depressive symptoms (Blazer et al., 1991). In Brown et al.'s (1995) research however, advancing age was not found to be affiliated with greater use of antidepressant medications. In 2004, the outcomes of Mojtabi and Olfson suggested that the 12-month prevalence of major depression was 6.6%, declining with advancing age. In follow-ups, the likelihood of finding symptoms of depression grew. Mojtabi and Olfson also found evidence of increases in bereavement leading to the development of more depression in older adults.

In 1991, Blazer et al. published their research on 3,998 community-dwelling older adults (65 and older) for depressive symptoms using a modified version of the CES-D on the Duke cohort of the EPESE. Social support was measured by asking every respondent how many close relatives other than a spouse and children each felt close to. Social support was a significant correlate of depressive symptomatology. Statistically significant relationships were found between increased age and increased CES-D scores, being female, functional disability, being unmarried, cognitive impairment, social isolation and lower income. Using a multiple regression analysis, the association of age and depressive symptoms reversed when the above variables were controlled for simultaneously. Upon performing an ordinary least squares regression analysis, social support and marital status were found to be potentiality confounding variables when controlled for. They remained

affiliated with depressive symptoms in the expected direction when compared in a bivariate analysis.

Positive and statistically significant associations between age and depressive symptoms, when the potentially confounding variables were not controlled for, were also the results of Blazer et al. (1991). Age remained a significant predictor of depression, but reversed in direction of association. When CES-D scores were regressed upon age and potential confounders, these positive associations disappeared. This research reinforces a growing body of literature which confirms the crude association of age and depressive symptoms among community-dwelling older adults.

The results of Blazer et al. (1991) also confirm those of Kennedy et al. (1989). The latter conducted a cross-sectional study of 200 persons 65 and older living in households in a major metropolitan center on a hierarchy of characteristics associated with substantial levels of depressive symptoms (measured with the CES-D) which included isolation. In a rural population, the outcomes of O'Hara, Kohout, and Wallace (1985) were that that the association of social support and poor health were inadequate with depressive symptomatology.

Late-Life Depression and Gender

Women are twice as likely as men to experience depression and dysthmia. Indeed, depression is considered the most significant mental health risk for women. Consistently empirical evidence indicates the female preponderance of depression in all age groups. This pattern persists into middle and early old age and is unlikely to be related to gender role differences (APA, 2009a; Mojtabi & Olfson, 2004).

Depression was more common in women than men in the research results of Mojtabi and Olfson (2004) who reported depression to be consistent for all women down the age categories. In Brown et al.'s research in each of the four EPESE communities (1995), women were significantly more likely to take and be administered antidepressant medications and nearly twice as likely than men to report using them. When Chrischilles, et al. (1992) explored prescription and non-prescription drug utilization among all four sites of the EPESE, they found women taking more medications than men. Over half the men and two thirds of the women were using prescription medications. These differences retained statistical significance with one exception in that the relationship between depressive symptoms and prescription drug utilization was not significant among New Haven men.

Late-Life Depression and Race

Comprehending racial and ethnic differences in depression is essential (Plant & Sachs-Ericsson, 2004). The current literature on the prevalence of depression among older African American and White Americans provides no definitive direction (Blazer et al., 1998; Callahan & Wolinsky, 1994; Eaton & Kessler, 1981; Fiscella & Franks, 1997; Gallo, Cooper-Patrick, & Lesikar, 1998; Mills et al., 2004; Smallegan, 1989). A diversity of results have been reported in previous research that compares the frequency of depressive symptoms among African Americans and Whites (Berkman et al., 1986; Blazer et al., 1998; Cummings et al., 2003; Gallo et al., 1998, Sachs-Ericsson, Plant & Blazer, 2005; Somervall, Leaf, Weissman, Blazer, & Bruce, 1989).

Several studies have found few or no racial differences (Blazer et al., 1998; Cummings et al., 2003; Husaini, 1997). Scant differences have been found in symptom

and diagnostic frequency of major depression between older African Americans and Whites before adjustment of control factors such as socio-economic status [SES] and education (Blazer, Hybels, Simonsick, & Hanlon, 2000). Blazer and Williams (1980) did not find significant differences between African American and White older adults in an adult community-based survey (*n* =1,000) on dysphoria, major depression or medically-related depression. Age and race were suggested to have no significant relationship on depressive symptoms of African Americans and Whites at baseline by Taylor and Lynch (2004), although African Americans reported depressive symptoms less than Whites.

A few analyses which focused on the general adult population of symptom levels of depression resulted in African American and minority older adults tending to report stronger levels of depressive symptoms than Whites (Baker et al., 1995; Blazer et al., 1987; Cochran, Brown, & McGregor, 1999; Dunlop, Song, Lyons, Manheim, & Chang, 2003; Frerichs, Aneshensel, & Clark, 1981; Jackson-Triche, Greer, WeUs, Camp, & Mazel, 2000; Kennedy et al., 1990; Koenig et al., 1992; Skarupuski et al., 2005; Ulbrich, Warheit, & Zimmerman, 1989). Other research concluded in higher rates of depression among Whites (Callahan & Wolinksy, 1994; Kessler, Mickelson, & Williams, 1999; Turnbull & Mui, 1995). Several studies have produced outcomes of minimal differences (Blazer et al., 1998).

Late-Life Depression and Older African Americans

African Americans are identified as a high-risk group for depression (Barbee, 1992; Gazmararian, James, & Lepkowski, 1995; Sclar, Robison, Skaer, & Galin, 1999). Identifying depression in older African Americans may be complicated (Baker, Espino, Robinson, & Stewart, 1993). Steffens, Artigues, Ornstein, and Krishnan (1997) argue

there are many biological reasons to expect similar rates of late-life depression among African Americans and Whites. The onset of major depression after the age of 50 has been associated with vascular disease which is more prevalent among African Americans than Whites (Krishnan, Hays, Tupler, George, & Blazer, 1995; Steffens et al., 1997). Circumstantial evidence exists which indicates that a large segment of African American older persons are affected by major and minor depression as a mental health issue (Blazer et al., 1987; Kennedy et al., 1989; U.S. DHHS, 2009b). Yet, older African Americans in general report less symptoms of depression than Whites (U.S. DHHS, 2009a).

Fewer African Americans than Whites receive clinical treatment for major depression (Sclar et al., 1999). The U.S. Surgeon General acknowledges that when compared with Whites, African Americans are more likely to be diagnosed with schizophrenia and less with affective disorders when they present the same mental health symptoms of depression (U.S. DHHS, 2009a). Psychiatrists still are apt to diagnose African Americans in comparison to Whites with fewer symptoms of depression. African Americans have a lower probability of being prescribed antidepressants as often as Whites (Sclar et al., 1999).

Late-Life Depression and Aspects of Health

Symptoms of depression are the most common cause of suffering in later-life (Blazer, 2003; Cole & Dendukuri, 2003; Sachs-Ericsson et al., 2005). The onset of major depression after the age of 50 has been associated with vascular disease which is more prevalent among African Americans than Caucasians (Krishnan et al., 1995; Steffens et al., 1997). Depression among older persons can lead to a clinical picture of apathy, decreased cognition, poor concentration, memory complaints, decreased appetite, low

energy and difficulty sleeping. From the perspective of older persons, depressed mood significantly affects well-being and the ability to function.

Health conditions are diminished from incidences and occurrences of major depression or depressive episodes (Koenig et al., 1997; Mitchell, Matthews, & Yesavage, 1993). The status of ones' physical health is a strong predictor of depressive symptoms among older persons (Brown, Milburn, & Gary, 1992; Murrell, Himmelfarb, & Wright, 1989). Depression significantly decreases quality of life in older adults and is frequently accompanied by incessant pain and dysfunction (Mills, 2000).

Older persons have a stronger probability of experiencing at least one chronic health condition by the age of 60 when compared with those under 60. Depression impacts the existence and duration of these conditions (CDC, 2009b). The presence of depression alone among older persons has been associated with higher mortality (Everson, Roberts, Goldberg, & Kaplan, 1998; NAMI, 2009a; Rao, 2000). One-third of older persons hospitalized for depressive illness die within a year of discharge (Okwumabua et al., 1997).

Late-Life Depression and Activities of Daily Living

Limitations in Activities of Daily Living (ADLs) are consistent correlates and predictors of depression in later life (Berkman & Syme, 1979; Hays, Saunders, Flint, Kaplan, & Blazer, 1997; Franks, Lichtenberg, MacNeil, & Bank, 2003; Mitchell et al., 1993). This remains valid regardless of negative life events and lack of social support. Limitations in independent activities of daily living (IADLs) have also been found to be predictors of increased symptoms of depression among older African American and White persons (Clark, 1997; Ford, Haug, Roy, Jones, & Folmar, 1992; Oxman & Hull,

1997; Simonsick, Kasper, & Phillips, 1998). Most of the associations found between IDL's and IADLSs may be explained by the relationship of depression, loss of locus of control, self-efficacy, perceived inadequacy and performance (Broome, 2003).

Late-Life Depression and Cognitive Function

The subject of late-life depression and cognitive impairment is a growing area of scientific inquiry among gerontologists and all healthcare professionals. Some memory loss is a normal biological consequence of aging. Depression can be difficult to detect among older persons because of co-morbidity and memory loss leading to the frequently encountered issue of differential diagnosis (APA, 2009d; Reynolds, Alexopolous, & Katz, 2002). In older depressed persons, deficits in cognitive functioning may be more prominent leading to increased impairments in executive and memory functioning, and neurological brain abnormalities similar to those seen in dementia. The etiology of a possible episode of major depression may be the consequence of underlying neurological abnormalities in the central nervous system. The U.S. Surgeon General acknowledges depression and cognitive impairment to be an area of utmost importance in geriatric health and mental health research (U.S. Surgeon General, 2009a; 2009b).

Several studies on older adults suffering from depression have reported conditions in memory impairment to be a result of depression and not poor cognitive performance. Others have found no such associations (U.S. Surgeon General, 2009a; 2009b). The outcomes of Reynolds, et al. (2002) were that depression led to cognitive impairment among older adults. This along with medical illness were the hallmarks of depression.

Poorer mental health, decreased cognitive functioning and ageing were non-significantly related in the outcomes of Bunce, Tzur, Ranchum, Gain, and Bond (2009).

Late-Life Depression and Breathing Disorders

Numerous risk factors are higher for depression in persons with chronic breathing disorders including functional limitations, feeling loss of control over life circumstances, and increased serious life events. In the United States, chronic respiratory conditions occur in more than 10% of adults and lead to impairments in ADLs, social and psychological functioning and recreational activities. The presence of anxiety or depression can affect the physical and emotional implications resulting from disorders in breathing (Kunik, et al., 2005).

Existent results from research on the associations between depression and those with chronic breathing disorders indicates a great need for additional substantial and scientific inquiry (Kunik, et al., 2005). Empirical outcomes of controlled studies on the relationships between depressive symptoms and this condition remain inconclusive. The majority of research has methodological flaws, is based on inadequate sample sizes, varies in the types of breathing disorders examined and measures depression with a diversity of instruments (van Ede, Yzermans, & Broewer, 1999).

Seeking if the presence of depression would impact mortality on patients suffering from Chronic Obstructive Pulmonary Disease (COPD), the outcomes of Stage, Middelboe, and Pisinger (2005) suggested that depression was a significant independent predictor for mortality risk at follow-up ($p = 0.037$). Assessing the prevalence, recognition and screening of depression and anxiety in persons with chronic breathing disorders in a cross-sectional study of ($N = 1334$) Veteran's Administration [VA]

patients, Kunik, et al. (2005) reported 80% (n = 1067) persons screening positively for depression, anxiety or both. This research of Kunik et al. is the first ever to screen such a large number of patients with conditions of chronic breathing disorders and depression. The resultant high rates of depression found might be explained by the prevalence of depression and anxiety being stronger in VA recipients than for the community population as a whole.

Late-Life Depression and Pain

Physical conditions frequently interfere with recovery from depression. In primary care patients, pain, anxiety and depression are common co-morbid conditions. Considerable evidence exists these are clearly related and that depression is associated with multiple negative outcomes in patients treated for pain in increased limitations in physical and social functioning and reduced patient satisfaction (Bair, Robinson, Katon, & Kroenke, 2003).

Depression may affect the perception of pain (Dickens, McGowan, & Dale, 2003), a major contributor to a significant reduction in quality of life (Bair et al., 2003; Means-Christensen, Roy-Byrne, Sherbournce, Crasje, & Stein, 2008). Twenty-seven percent of primary care pain patients suffer from major depression. Emotionally distressed patients are more likely to describe physical than psychological symptoms to their primary care physician. Approximately 70% of depressed patients report only somatic symptoms (Means-Christensen et al., 2008).

In 2003, the outcomes of Bair et al. revealed that estimates of anxiety and depression were customarily present among patients with pain (Bair et al., 2003).

Treatment of depression was associated with decreased reports in pain intensity and improvements in pain-related disability in the outcomes of Lin et al. (2003). One large cross-national survey suggested that approximately 35% of respondents reporting arthritic pain suffered from an anxiety disorder and 22% with a mood disorder (McWilliams, Cox, & Enns, 2003). After controlling for other medical conditions, arthritis nearly doubled the risk for depression and other mental health conditions. In general, the presence of depression was significantly associated with disability from pain.

Symptoms and diagnoses of anxiety and depression of primary care patients were related with indications of pain in the conclusions of Means-Christensen et al. (2008). Depression predicted all symptoms and interference from pain. Those who endorsed muscle, stomach or headache discomfort were approximately 2.5-10 times more likely to screen positively for major depressive disorder. Overall, patients reporting pain symptoms were more likely to experience anxiety and/or depression. Those endorsing such also reported lower mental health functioning and higher scores on severity measures of depression.

Late-Life Depression and Cardiovascular Disease

Clearly, a direct relationship exists between late-life depression and cardiovascular disease (APA, 2009b). Chest pain symptoms are associated with at least a two to three-fold increased risk for co-existing symptoms of depression. Patients with multiple symptoms such as chest pain are three to five times more likely to be depressed than patients without pain. The presence of up to five different pain complaints such as those experienced in the chest are interrelated with an increase of depressive symptoms (Bair et al., 2003).

Prolonged depression is a known contributor to more heart attacks and stroke. Depression is a highly recognized risk factor for mortality in persons with cardiovascular disease. Heart attack survivors suffering from major depression are three to four times more likely to die within six months (Mojtabi & Olfson, 2004; Pennix et al., 2001). In epidemiological studies, lifetime prevalence of chest pain symptoms range from 24% to 37%. Chest discomfort is one of the leading reasons for why persons seek medical care (Bair et al., 2003). Specific complaints of pain experienced in the chest are ordinarily reported by depressed patients in primary care settings and by aged nursing home residents (APA Help Center, 2009a).

For older persons with cardiovascular disease and other major illnesses, treatment programs for those depressed customarily take longer in duration than average and are less successful (Mojtabi & Olfson, 2004; Pennix et al., 2001). One study reported that those with cardiovascular disease maintained a significantly higher risk for depression as long as eight years post initial diagnosis (APA, 2009b). In 2004, the outcomes of Mojtabi and Olfson indicated that physical conditions, particularly recent heart attack or stroke were associated with major depression.

Late-Life Depression and Ambulation

Depression is associated with and predictive of physical disabilities related to ambulation in older people and has a strong relationship with pain. The development of limitations in ambulation and mobility may be the consequence of depression interacting with pain. Joint pain is one of the most common complaints of depressed primary care patients and aged nursing home residents (Lamb et al., 2000). Evidence from epidemiological studies signify that lifetime prevalence of joint pain symptoms range

from 24% to 37%, with leg pain being one of the leading causes people seek medical care.

The affiliation between gait speed, community ambulation and variables such as depression in a cross-sectional analysis were explored by Van deport, Kwakell, and Lindeman (2008). They concluded that no significant distortion in gait speed resulted in depression. In 2000, Lamb et al. examined the relationship between pain and knee extension severity, muscle weakness, obesity, depression, activity on the association between recent knee pain, limitation in usual and fast paced walking and ability to rise from a chair. They reported depression to have a minor but statistically significant effect on walking mobility but not the ability to rise from a chair. With increased pain severity, the prevalence and risk of depression and inactivity increased. The effect of moderate to severe pain on walking was intensified in women with depression, but there was no statistically significant interaction between pain and depression.

Late-Life and Prevalence of Urinary Incontinence

Among all U.S. adults 65 and older, urinary incontinence [UI] is widespread. It is present in at least one to ten of all adults, with women being more prone than men (National Institute on Aging [NIA], 2009, age page). Among community-dwelling older adults, UI is commonplace with an estimated prevalence rate of 2.5%-50% (Markland, Gerety, Goode, Kraus, Cornell, & Hazuda, 2009; Nygaard & Heit, 2004).

Ordinarily definitions vary in research on UI. In the literature available, a plethora of specific types are measured (e.g., urge, overflow, functional, and stress incontinence). As a consequence, the results of studies are often diverse as one type of UI may not

represent all. “Any type of loss of bladder control or involuntary leakage of urine,” is the standard foundational definition of UI (NIA, 2009, age page, p. 1). Urge incontinence (i.e., when persons cannot hold their urine enough in time to get to a toilet) is the most frequent type and the form of UI this dissertation examines.

Previous research on older women with UI comparing various ethnic groups, found some consistency overall in that White European women, regardless of educational status or income reported higher rates of UI when compared to African American and Hispanic women (Markland, et al., 2009). The research of Thom et al. (2006), comparing the prevalence of urinary incontinence by type among White, African American, Hispanic and Asian American women revealed age adjusted prevalence of weekly incontinence to be highest among Hispanic women followed by White, African American and Asian American women (36%, 30%, 25%, and 19% respectively, $p > 0.001$). Types of incontinence differed among groups with weekly stress incontinence prevalence being 18%, 15%, 8%, and 8% ($p > 0.001$) and weekly urge incontinence prevalence being 10%, 9%, 14%, and 7% ($p > 0.001$).

The prevalence of incontinence in White and Mexican American women has been found to be at least two times that of men of the same ethnicity. In 2006, Anger, Saigal, and Litwin (2006) measured the prevalence of incontinence in community-dwelling women ($N = 9,965$). Outcomes indicated overall prevalence of UI to be 38%, increasing in age ranging from 12.2% to women aged 60-64 to 20.9% in women 85 and older. Of any women reporting incontinence, 13.7% reported daily incontinence and an additional 10.3% weekly. The highest prevalence was among non-Hispanic White

women (41%) versus non-Hispanic Black (20%) and Mexican American women (36%). African American women had the lowest prevalence rate (20%).

In one of the rare studies on males, Anger, et al. (2006) measured the prevalence of UI in community-dwelling American men. They compared these results with their aforementioned 2006 study on women. Their outcomes signified that the overall prevalence of UI among all men to be 17%, increasing with age from 11% in men ages 60-64, to 31% in men 85 and older. Of those reporting incontinence, 42% did so daily and 24% weekly. In summation, the highest prevalence for all men (21%) and the lowest for all women (20%) was found among African Americans.

Late-Life Depression and Urinary Incontinence

UI is widespread among the older adult population. It is estimated that 15 to 35% of community-dwelling ambulatory older adults 60 and older are impacted by this condition. As with other age groups, its highest prevalence is found among women. Similar to findings on different ages, these rates can vary because of inconsistent definitions of incontinence in questionnaires, settings and methodology (Broome, 2003).

Regardless, evidentially, psychological, social, and physiological domains are impacted by UI. Depression and anxiety often co-occur in older incontinent persons. For example, the prevalence and correlates of UI among European American (EA) and Mexican American (MA) community-dwelling women (age 65 and older) from a cross–sectional analysis of a longitudinal cohort were explored by (Markland et al., 2009). Their outcomes revealed the prevalence of UI to be 36.6 % (n =154). MA women reported less UI than EA women (29% compared to 45%, $p = 0.0001$). Overall, MA women with UI compared to MA women without experienced additional depressive

symptoms and reported lower self-perceived health status. EA women with UI compared to those without were more likely to have symptoms of depression and be older than 75 (Markland et al., 2009).

Late-Life Depression and Perceptions of Health

There is a direct association between symptoms of major depression, gender, perceptions of health and level of disabilities (Brown, et al., 1995). In analyzing the relationship among symptoms, diagnoses and severity of illness as indicators of depression and anxiety of adult patients, Wu, Parkerson, and Doraiswamy (2002) found substantial severity of pain associated with lower perceived health scores. Those with higher rates of anxiety and depressive symptoms reported poorer perceptions of health, enhanced pain and increased disability. Patients with lower perceptions of health scores were 1.3 times or 30% more likely to report higher anxiety and depression scores (i.e., they had a 1.3 % chance of a larger score). Female gender, self-perceived health, pain and disability were more closely associated with anxiety and depression than all other covariates explored. Persons with stronger levels of anxiety and depression had an increased likelihood of reporting a diagnosis of headache, osteoarthritis, abdominal pain and diabetes.

In research of antidepressant utilization among all four EPESE sites, the outcomes of Brown et al. (1995) revealed poor perceived health to be associated with higher anti-depressant utilization. Out of all health-related variables examined in a bivariate analysis, only poor perceived health retained statistical significance for all communities save for the New Haven site. Respondents most likely to use antidepressants were those who

described fair health in comparison to those who reported excellent health (Brown et al., 1995).

In all four sites of the EPESE, Chrischilles, et al. (1992), examined sociodemographic and health-related factors in relation to the utilization of prescription versus non-prescription medications. Their outcomes suggested that among medication utilization and symptoms of depression, those with larger reports of depressive symptoms took additional prescription and non-prescription medications. Those with poorer perceived health status had a stronger likelihood to use medications than those with good perceived health.

Social Support

Social Support and Overall Health

A plethora of evidence exists corroborating that positive social ties and support improve general mental and physical health (Antonucci, 1985; Kafestios & Sideridis, 2006; Lubben & Gironda, 2003). Feelings of being unwanted, unloved, uncared for and of not having a sense of belonging yield to negative impacts on overall health (Berkman,1984; 2000). People who lack social ties that provide for intimacy, a sense of belonging, opportunities for nurturance, and reassurance of worth have been found to be physiologically stressed.

Social resources remain an important health component into very old age. Unfortunately, declining health affects the ability to maintain active and extensive social contacts and networks (Mendes de Leon, 2005). Dozens of empirical studies consistently suggest that aspects of social relationships are related to health risk. In abundant

research, social networks predict a range of negative health outcomes (Bowling et al., 1991; Dean & Lin, 1977; Oxman et al., 1992; Thoits, 1982). In nearly all of these, those most disconnected are at increased jeopardy from a number of causes of deaths (Berkman, 1995).

The CDC to examine the impact of social support on health-related quality of life, analyzed data from the 2000 Missouri Older Adults Needs Assessment Survey (MOANAS) of adults aged 60 and older. Their study provided evidence of improved quality of life health outcomes, particularly in mental health as a consequence of receiving emotional support from close friends, visiting with friends and relatives and the perception of adequate help being available.

Seminal research by Berkman and Syme (1979) investigated the relationships between social and community ties and mortality among a random sample of adults (N = 6,926) from Alameda County, CA in a longitudinal nine-year follow-up study. Four sources of social relationships were examined: (1) marriage; (2) contacts with close friends; (3) church membership and, (4) informal and formal support groups. Their conclusions signified that individuals who lacked social support and community ties were more likely to die in the follow-up period than those with more extensive contacts. Mortality was predicted by all social ties with intimate being the most robust, rising sharply in the presence of disconnection. Their outcomes strongly suggest that social isolation may have pervasive health consequences.

On a sample of older adults from the New Haven EPESE, Berkman, Leo-Summers, and Horowitz (1992) found emotional support, regardless if received from a spouse, child, parent or sibling to be predictive of survival after myocardial infarction

(MI). A multiple regression analysis revealed a statistically significant association with a lack of emotional support and six-month mortality following initial MI. Specifically, 53% of older men and women who for whom sources of support were non-existent died within the first six months after initial MI compared to 23% of those who had two or more sources of support. Those who lacked emotional support were over twice as likely to die within this six-month period. In multivariate models, neither depression, marital status nor education were associated with an increased risk of death.

Nearly at the same time, other studies were published with similar results (Case, Morse, Case, McDermott, & Eberly, 1992; Williams, et al., 1992). The outcomes of Berkman et al.'s (1992) study were so astounding that the National Heart, Lung and Blood Institute hosted research to evaluate the effects of psychosocial intervention in post-reinfarction patients. Patients diagnosed with MI were found to be depressed who had little social support on a combined endpoint of mortality in their research titled: Enhanced Recovery in Coronary Heart Disease.

Social Support and Emotional Well-Being

A large body of evidence exists that social relationships, affiliations and ties have powerful effects on psychological well-being (Berkman, 1995; Berkman, 2000; Berkman, Glass, Brissette, & Seeman, 2000; Bloor, Sandler, Martin, Uchino, & Kinney, 2006; Cummings et al., 2003). Benevolent social contact with others may provide a sense of purpose, belonging and meaning (Antonovsky, 1979; Mendes de Leon et al., 1999). Social support and social networks of mutual obligation engender a sense that one is cared for, loved, esteemed and valued adequately and intimately. In several studies, these have been associated with improved health outcomes (Berkman & Syme, 1979; House

et al., 1988; Kubzansky et al., 2000; Oxman et al., 1992). This may foster certain benefits to health by a diversity of psychological and physiological mechanisms (Glass, Mendes de Leon, Marottoli, & Berkman, 1999; House et al., 1988; Mendes de Leon et al., 1999; Mendes de Leon, Gold, Glass, Kaplan, & George, 2001; Seeman, Berkman, Blazer, & Rowe, 1994).

Less perceived support and dissatisfaction with social contacts is strongly predictive of depressive symptoms (Antonucci, Akiyama, & Landsford, 1995; Cummings et al., 2003). Social isolation and loss of social ties in later-life are some of the most potent predictors of depressive symptoms among older persons (Kawachi & Berkman, 2001). Older adults who have extensive social support networks and increased satisfaction from such report lower levels of depressive symptomatology. Various measures have been used to conclude that decreases in depression are a consequence of receiving benevolent social support (e.g., Brown & Gary, 1987; Ensel & Lin, 1991). Social support can be critical for older adults who rely on family, friends, or organizations to assist with daily activities, provide companionship and care for well-being. Protective factors found that have been found to guard against late-life depression are social support from family, peers, informal relationships, formal support groups and opportunities for meaningful and new socially productive roles (SAMHSA, 2009e).

Positive social interactions with others evidentially can be beneficial in various psychosocial domains. Outcomes of research contend that social networks provide buffering effects against depression (Chodosh, Buckwalter, Blazer, & Seeman, 2004). Quality of social support is an important aspect in predicting relapse of depressive episodes and future levels of depressed mood and symptoms (Hobfoll, Johnson, Ennis, &

Jackson, 2003; Holahan, Moos, Holahan, & Cronkite, 1999; 2000; Joiner & Coyne, 1999).

Social Support and Older Adults

Seeman and Berkman (1988) using data from the 1982 New Haven site of the EPESE, analyzed relationships between structural characteristics of social networks, instrumental and emotional support. For each type of support they investigated two dimensions: (1) The availability of support, and (2) the perceived adequacy of support. Sociodemographic variables were measured such as age, gender, race and level of income.

The outcomes of their regression analysis revealed the amount of proximal ties were associated with greater availability of instrumental and emotional support. Instrumental support was affiliated with geographical proximity and ties while emotional support was less dependent on geographic distance. Marital status and having a confidant relationship increased the likelihood of emotional support availability. For those without a spouse, confidants assumed greater importance in providing emotional support. Contact with close friends and/or relatives were similar in their contributions to the availability of emotional and instrumental support regardless of whether one had children or not. Their results signify that the more network ties one has, the more both types of support are available.

In Seeman and Berkman's 1982 study, contacts with close relatives and friends for those without children were more powerfully associated with perceived adequacy of emotional and instrumental support. Unrelated to this facet of emotional support was the presence of a spouse. The presence of a confidant was a strong predictor of a greater

perception of sufficiency of both types of support. The perception of adequacy of both types of support were most potently related to the number of monthly face-to-face contacts. In summation, primary sources of support were not one's spouse or children, but the presence of a confidant which was associated with both types of instrumental and emotional support.

Social Support, Depression and Older Adults

In 1982, Oxman, Berkman, Kasl, Freeman, and Barrett (1982) published their research which examined the effects of the characteristics of social networks and support, perceived adequacy of emotional support, depression, functional disability, any change in disability and the presence of ties with a spouse and confidant on depressive symptoms on (N = 1,962) older adults from the New Haven site of the EPESE. Social networks were measured by amount according to kinship (children, close relatives and friends), and frequency of making two types of contact: Face-to-face visits and telephone or correspondence by writing.

The total 20-item unmodified CES-D was used. Social support was measured by perceived adequacy of two types of support: Tangible and emotional. Tangible was measured by the availability of support. Functional disability was measured by the Functional Disability Index. Means and correlations among all the independent variables were examined. Multiple regression analyses were conducted to simultaneously examine all variables.

The conclusions of Oxman et al. (1982) inferred that the largest contributions which explained variance in depressive symptoms were baseline depression, functional disability and any diversification in the latter condition. Loss of spouse, adequacy of

emotional support and its change between 1982-1985 suggested variance in depressive symptoms. The perception of sufficient emotional and tangible support received showed a clear relationship with symptoms of depression longitudinally.

This confirmed the findings of George, Blazer, Hughes, and Fowler (1989) and Henderson, Duncan-Jones, Byrne, and Scott (1980). Over a three-year time period, perceived adequacy of emotional and tangible support were clearly associated with depressive symptoms. Their regression models consistently concluded that visual contacts from children were more important on effects of depression when compared with relatives and friends. These outcomes are inconsistent with those of the previous cross-sectional analysis on this same sample produced by Seeman and Berkman in 1988. Their results revealed that older persons preferred to be in contact with friends and older relatives for emotional and tangible support rather than be dependent upon their children.

In 1989, George et al. initially assessed and reinterviewed 6-32 months later, 150 middle-aged patients between the ages of 35-60 diagnosed with major depression. They investigated the effects of social support as predictors of recovery from depression and hypothesized that: (1) Subjective social support would be more strongly associated with recovery status than objective social support dimensions, and (2) social support would be associated with poor outcome and recovery from depression.

Social support was measured with the Duke Social Support Index. Depression was measured with a modified (dichotomized) version of the 20-item CES-D. Subjective social support was measured with a nine-item scale. To examine bivariate relationships between the independent variables and outcome (recovered versus non-recovered), a contingency table analysis was used. To determine the efficacy and association of the

independent variables in predicting depressive symptoms they conducted a multiple regression analysis.

Their results supported their hypothesis that social support would affect the outcome of depressive illness. Subjective social support was the strongest dimension in terms of statistical significance, association with depression and theoretical findings. At follow-up, the size of social networks and subjective social support were statistically significant in predicting depressive symptoms with baseline depression scores and other predictors of outcome status statistically controlled for.

Hays et al. (1998) conducted a cross-sectional study and examined the relationships of selected social, clinical and demographic correlates with four dimensions of the CES-D (N = 3,401), in community-dwelling older adults who were 55% African American and 45% White from the North Carolina cohort of the EPESE. They used a modified CES-D with binary responses (yes/no format) with scores from each of the four CES-D subscales: (1) Depressed affect; (2) low positive affect; (3) somatic complaints, and (4) interpersonal problems.

The results of Hays et al. revealed positive associations with depressed affect and interpersonal problems from the size of social networks. Satisfaction with amount of social interaction was protective for depressed affect and somatic complaints. Confident availability was the single protective factor which consistently influenced all four dimensions of depression.

Social Support, Depression and Older Adults: Race

Husaini (1997) compared correlates of depression and depressive symptomatology over a period of 18 months from a random sample of 600 White and

African American urban older persons. Data were collected over a three-year time period (1987-1991) from census tracts of metropolitan Nashville, TN. A greater percentage of older adults, both African American and White were selected from high-rise apartments subsidized for the elderly. Both samples had 70% women and 30% men. Seventy-five percent were unmarried, 25% married, 56% lived alone and 40% lived in high rise apartments for older adults. The median education was 11th grade level.

The prevalence of depressive symptoms was measured by the 20-item unmodified CES-D. Medical problems and ego strength were examined. The former were assessed by the 1978 NCHS checklist for chronic medical disorders. This list includes problem areas of all organ systems which aging specifically affects, including heart disease. Social support was measured in four ways: (1) Network size; (2) frequency of contact with relatives and friends; (3) seeking assistance from relatives, friends and confidants, and (4) the Perceived Social Support Scale. A multiple regression analysis was employed to determine variation of predictors of depression over the three-year time period data were collected. Stress was measured by asking each respondent how stressed they felt at the time of the interview. Ego strength was measured by the 20-item Ego Strength Scale which examines executive ability, tension control, personal adequacy and ability to cope with environmental stressors.

The outcomes of Husaini (1997) revealed racial differences in social support. Whites reported larger network size, (composed of friends, confidants and people doing small favors), and African Americans reported more relatives and friends living nearby. Differences were evident in frequency of contact with network and amount of help

received. African Americans experienced stronger frequency of contact with relatives and friends and received much less help instrumentally and expressively than did Whites.

White persons who were depressed reported poorer ego, lower social integration, group attachment and reassurance of worth than did those non-depressed. Depression was also related inversely to small network size, lower reassurance of worth, and less social integration. Those depressed at baseline tended to be so at all other times, had additional chronic medical problems, smaller supportive networks, received decreased levels of reassurance of worth and experienced a diminishment in social integration.

For African Americans, predictors of depression over time were elevated depression being related to more chronic medical problems, general stress and poor ego strength. Increased depression was found for those who had fewer people doing favors and received lower levels of instrumental support. Neither network of relatives or help from networks were correlated with depression.

The conclusions of Husaini (1997) suggested that factors related with depression were similar for both groups. These included prior depression, social and medical stressors, poor ego and smaller social networks with which contact was infrequent and from which emotional support was lacking. Their outcomes on the role social and medical factors have on depression corroborate those found in Linn and Husaini (1985) and Husaini and Von Frank (1985). Their conclusions that the associations of smaller networks led to stronger levels of depression also confirm with the findings of Dean and Ensel (1982), Dean et al. (1989), Husaini et al. (1982), Linn and Husaini (1985) and Husaini and Von Frank (1985).

In 1990, Husaini et al. examined differences in the sociomedical correlates of depression among African American and White older persons (60 years and older) of Nashville, TN. They specifically explored the extent to which levels of depression among African American and White older adults were affected by medical problems, life events, and social support. Data were collected in 1985 from a random sample (n = 504) of persons aged 25 to 84 years, out of which 162 of 504 persons were at least 60 years old. The older subsample was comprised of African Americans (n = 92) and Whites (n = 70) similar in age (mean age = 68), marital status, income and education. Sixty-five percent of this sample had less than an 11th grade education. More than 60% were female and over 53% were unmarried. Approximately 20% were employed and nearly 40% lived alone. At baseline, the groups did not differ in items addressing number of medical problems, presence of depression or social support, but for poorer ego strength, which older Whites had reported. All respondents participated in a 75-minute in-home interview.

Ego strength was measured by the 20-item Ego Strength scale. Depression was measured by the full 20-item CES-D. Social support was assessed in two ways: (1) Size of social network (number of friends and relatives nearby and changes in current number of confidants compared to five years ago) and; (2) The Perceived Social Support Scale which addressed six different dimensions of social support: Attachment, social integration, reassurance of worth, reliable alliance, guidance and nurturance. For the total scale, the internal consistency coefficients ranged from .88 to .92. Chronic medical

problems were measured by the NCHS list of chronic disorders (1978). Life events were measured with a checklist of 32 stressful events that may have occurred to the respondent in the past 12 months.

A multiple regression analysis revealed different sets of depression correlates for each group. Slightly higher depression scores were found for Whites than African Americans (14% Whites and 4% African Americans). Statistical significance was found for ego strength where African Americans had larger levels than Whites. Among Whites, a deprivation in social integration, reduction in support network size, and increased medical problems contributed to more depression. For African Americans, depression was related to lower ego strength, decreased social support, and a diminished size in network of friends. Medical problems and depression were associated with White and not African American individuals.

For both groups, life events did not emerge as correlates of depression, which Blazer et al. (1980) found. Although ego strength was a common correlate of depression for both groups, among African Americans social support was stronger for depression than for Whites. For Whites, correlations of depression were different in that more medical problems, poorer ego strength and perceived support, poorer social integration, and decline in number of confidants contributed to higher levels of depression. Husaini's conclusions on the role that various dimensions of social support have on depression emphasize the need to expand opportunities for social support particularly among African American older adults.

Cummings et al. (2003) conducted a secondary data analysis on community-dwelling African American and White older adults and explored if a relationship existed

and varied by race between differences in levels of depressive symptomatology and functional impairment. They looked for racial variations and investigated if there was a relationship between social support, religiosity and the effects of functional impairment and depressive symptoms. The sample they evaluated consisted of a total of (N = 568) older persons (mean age = 70.7), of which (n = 387) were White and (n = 186) African American with no significant age differences between the two. Depression was measured with a 20-item unmodified CES-D scale. Perceived social support was measured by the Perceived Social Support Scale. The degree of functional impairment was measured by 11 dichotomous items which questioned if respondents needed help with the following tasks: Five ADL items such as getting in and out of bed, dressing, bathing, personal grooming, and using the toilet and the IADL items, using the telephone, preparing meals, housekeeping, doing laundry, going grocery shopping and transportation. Religiosity was measured by with an 11-item scale which inquired about the respondents' participation in both private and public religious activities.

Depending on the level of measurement of the variables of interest, to examine racial differences, *t* tests and Chi-square analyses were used. The *t* tests revealed significant differences between the two groups on education, monthly income, marital status and functional impairment. Initial findings revealed that older African Americans experienced significantly additional functional impairment than Whites. They also reported increased participation in religious activities and greater levels of social support than Whites. However, they did not indicate significantly stronger levels of depressive symptoms than Whites ($p > .05$). Analysis by race and gender revealed that the highest level of ADL and IADL impairments were reported by African American women. In

zero-order correlations, race, gender and marital status were not significantly related to depression.

Overall, this study resulted with no evidence in racial differences in reported symptoms of depression. Their analysis revealed however religious participation and social support to be beneficial for mental health. Their end results infer that a relationship between depression, functional impairment and difficulty carrying out IADL tasks are predictive of depressive symptoms. This analysis confirms the outcomes of earlier studies.

Racial Differences and Social Support

Comprehending racial differences of social support systems between African American and White older persons and their effects on depression can be a challenging task. No consensus exists in the literature on the effects social support has on mental health between the twain. Numerous analyses provide a variety of outcomes. The evidence remains mixed (Griffin, Amodeo, Clay, Fassler, & Ellis, 2006).

Replication of research is often difficult as it focuses on a diversity of populations composed of various age groups (Sagrestano, Feldman, Killingsworth-Rini, Woo, & Dunkrl-Schetter, 1999; Wallensten, 2000), and utilizes of a variety of social support measures. Many studies have that concluded social support has an overall positive impact on well-being. These however, usually failed to adjust for race, age, social class and separate support received from family versus friends (Griffin et al., 2006).

Nevertheless, some research has indicated strong social support networks to be protective factors which buffer minority group members from depression (Landrine & Klonoff, 1996; Plant & Sachs-Ericksson, 2004; Taylor, Hardison, & Chatters, 1996). Yet,

a relationship between selected dimensions of social support and well-being were not found by Brown and Gary (1987). In 1988, Thomas, Milburn, Brown, and Gary also did not find any association between frequency of contact with members of a social support system and depression. As well, no racial variations in emotional support and social contact predicting depression were reported in the results of Peirce, Frone, Russell, Cooper, and Mudar in 2000 (Griffen et al., 2006).

Social Networks

Equivocal evidence remains when comparing social networks of African Americans and Whites. Berkman et al. (1992) acknowledges that African American and White differences in social support vary in certain areas such as social networks. Several studies on this aspect of social support have concluded with similar findings for African Americans and Whites (e.g., Ball, Warheit, VanDiver, & Holzer III, 1980; Husaini et al., 1994; Kim & McHenry, 1998; Stewart & Vaux, 1986). Some research has produced evidence that juxtaposed with Whites, African Americans receive more strength from their social connections (Ball, Warheit, Van Diver, & Holzer III, 1979; Smerglia, Deimling, & Barresi, 1988). In their large community study of 1999, Wallensten, Tweed, Blazer, and George reported that African Americans had smaller social networks than Whites. A diminishment in size of networks for African Americans were also found by Pugliesi and Shook (1998) and Steffen, Hindeliter, Blumenthal, and Sherwood (2001).

Receipt of and Satisfaction with Social Support

As with social networks, inconsistent results exist on African American and White differences on the satisfaction with and sources of social support. Earlier research from the 1960's and 1970's (e.g. Feagin, 1968; Stack, 1974) based in response to the

Moynihan report of 1965, suggests that African Americans have stronger kinship networks than Whites. However, these analyses are often criticized for studying low-income families and lacking comparison groups of Whites (Griffin et al., 2006).

Numerous investigations have found non-existent racial differences in informal social support between African Americans and Whites and others slightly more support for Whites than African Americans (Belgrave & Bradsher, 1994; Burton, Dilworth-Anderson, & Merriwether-de Vries, 1995). Research by Roschelle (1997) and Hogan, Hao, and Parish (1990) suggested that many African American families experienced a serious lack of support socially. In a national probability study adjusted for social class, the outcomes of Silverstein and Waite (1993) signified that African Americans and Whites were the recipients of similar amounts of emotional support. These results confirmed those of Kaniasty and Norris (1995) completed on a community population.

Additional similarities than differences in maintenance of social relationships between African American and White older persons were the conclusions of George (1988). The investigation of Raymond, Rhoads, and Raymond (1980) reported variations by race in their study of household surveys. The conclusions of Steffen et al. (2001) were that African Americans had more satisfaction with social support and stronger closeness with network members. Evidentially, the outcomes of these findings remain equivocal.

Measures of Social Support

Marital Status

The conclusions of the results of research on marital status and depression are diverse contingent upon many facets of nuptial life. Gender and marital satisfaction are

extremely paramount subjects to address in this area of inquiry. Widowhood, which is customarily experienced by older individuals must be considered.

Widowhood is one of the most distressing life events for any individual. It has a direct effect on levels of depression, subsequent feelings of loneliness and isolation which can and often do lead to the development of depression and also may lead to suicide (Mojtabi & Olfson, 2004). Widowhood along with living alone are two of the highest age-associated risk factors for depression (Carr et al., 2000).

Carr et al. (2000) explored the mental health consequences of depression and anxiety on widowhood among (N = 1,532) married individuals 65 and older. Their results revealed widowhood to be a significant predictor of depression. They also found different levels of depression, anxiety and yearning following the loss of a spouse.

After time, associations with depression and widowhood often mitigate, and can and do reverse. Several studies have concurred that only 15-30% of those in their first year after losing their spouse suffer from clinically significant depression (Carr et al., 2000). In the research of Jacobs, Hansen, Berkman, Kasl, and Ostfeld (1989), the mental health effects of widowhood attenuated over time.

When addressing depression and marital status, a diversity of conclusions remain. In 1991, Blazer et al. found a significant relationship between increased CES-D scores and being unmarried. In their study on the EPESE New Haven and Iowa sites, Berkman et al. (1986), arrived at the same conclusions. The outcomes of Mojtabi and Olfson (2004) indicated the prevalence of depression to be stronger among those widowed, divorced, separated or living apart than among those married or never married.

When including gender in exploring the relationships between depression, aging and marital status, statistically, when compared with unmarried women, those married experienced higher rates of depression. Women in unhappy marriages are three-times more likely than men to be depressed. Overall, married men are consistently less likely to be depressed than married women (Mojtabi & Olfson, 2004).

Tower and Kasl (1996) examined among 317 community-dwelling older husbands and wives three aspects of marital closeness: (1) Having one's spouse as a confidant; (2) perceiving one's spouse to be a source of emotional support, and (3) reciprocity between spouses' reports of marital closeness. They evaluated associations of the respondents with depressive symptoms and examined gender differences and similarities using the New Haven EPESE. They found an association existed between a closer connection with a spouse and a decrease in depressive symptoms for women. Wives who felt their husbands to be important emotionally had fewer depressive symptoms. For men these same variables resulted in an increase in depressive symptoms. Paradoxically, husbands with emotionally dependent wives had fewer depressive symptoms.

Social Support and Race: Friends and Family

Mixed differences exist in the paucity of research which specifically focuses on social support, African Americans, Whites, friends and family. Several reasons account for this. Two are primary. The first is that a variety of measures are utilized for social support. The second is that the existent literature is based upon different age groups and genders.

When exploring friendships, African Americans received less emotional support and contact with friends in the research of Stewart and Vaux (1986) and Waite and Harrison (1992). The research of Maton et al. (1996) and Wood and Parham's (1990) revealed that African Americans and Whites were the recipients of the same level of emotional support received. In the outcomes of Haley et al. (1995), African Americans experienced extra visits from friends when compared with Whites.

As with friends, equivocal conclusions remain on family. Research on national probability samples drawn from community populations has suggested that African Americans receive diminished emotional support from family (e.g. Hogan, Hao, & Parish, 1993; Spreitzer, Schoeni, & Rao, 1996) and less contact with grown children (Waite & Harrison, 1992). Yet, in 1993, the conclusions of Jayakody, Chatters, and Taylor revealed African Americans to be the recipients of stronger emotional support from family. Their outcomes confirm those of Maton et al. (1996) and Stewart and Vaux (1986). To contradict this, in 1992, Waite and Harrison reported that African Americans received more contact with grown siblings and in 1995 Haley et al. concluded that African Americans received more visits from family.

In 1980, the outcomes of Raymond et al. were that African Americans indicated stronger satisfaction with family involvement leading to increased positive affect. For Whites, lower satisfaction with social involvement contributed to additional negative affect. The analysis of Hays and Mindel (1973) on Whites and African Americans which adjusted for SES concluded with African Americans suggesting more robust frequency of contact with family and rating the importance of these relationships higher.

In 2006, Griffin et al. examined social support from family, friends and satisfaction with emotional support among a community sample of 290 women, mean age = 37.8, approximately half African American (45.5%) and 55% White. They explored racial differences and investigated if support from friends was associated with more or less support from family. They hypothesized: (1) Race is not related to social support, adjusted for social class, and (2) social support is associated with well-being.

To assess the effect of race on measures of social support, multiple linear regression models were developed relating to each support variable considered separately while adjusting for education and age. Their conclusions revealed evidence of racial differences and similarities on a variety of measures of social support when adjusting for education and age. Whites compared with African Americans reported better support from friends on several measures.

For family support, few racial differences were found. Whites and African Americans indicated similarities in the number of times family were named as emotional support systems. African Americans however, reported more visits with both immediate and extended family. For Whites, a slight relationship was found associating more visits with friends than family. Correlations were not evident between the frequency of naming friends versus family as supports for either race. Social support measures were significantly related to each measure of well-being. Memberships and religious attendance increased with age. All in all, social support network size did not vary by race. Social support was related to well-being regardless of race.

Social Support, Older Adults and Race: Friends and Family

After a thorough review of the literature, not one study could be found specifically on older African American and White adults comparing differences between family and friends as sources of social support. The research most closely related to this topic is that of Ulbrich and Warheit (1989). They explored sources of stress, support and psychological distress among African American and White community-dwelling older adults among a subsample of persons 65 and older (total $n = 741$, of which $n = 165$ were African American, and $n = 576$ White) with a mean age = 73.

To measure mental health, an 18-item depression and 12-item anxiety scale were used. Stressful life experiences were measured by deaths, financial concerns and ADL limits. A regression analysis was used to determine racial differences in sources of stress, availability of network support, resources of support and the additive effects of specific sources of stress and social support. Interaction effects of each stressor were tested on each source of support.

Significant racial differences were found in each source of stressful experience and between sources of stress and support. No effect was found for family support in buffering stressors for both groups. There were different ways that calling on relatives for help in times of need benefited each group. Among African Americans, it played a stress deterrent role and cancelled out the association between money concerns and depression. Whites experienced stronger levels of depression than African Americans who called on nearby relatives for assistance with problems.

For both races, calling on close friends was beneficial in ameliorating depression. Differences were that Whites were less likely than African Americans to seek help from relatives or friends. Statistical significance for these differences was found however only for friends. Ordinarily, older African Americans were more likely than Whites to call on friends for assistance. In the end, their results infer that for both races, the majority have close family and friends to call on for help with problems. African Americans reported slightly more than Whites (84.3 % versus 81.4%). Less than 1% of both races reported they had neither to call on.

Friendships

Social relationships and especially friendships are good for the general health of all older persons as analyses have signified. Feeling connected to other human beings by friends who are trusted, valued, and loved may provide essential meaning and purpose to life and increase longevity as well (Mendes de Leon, 2005). Giles, Metcalf, Glonek, Luszcz, and Andrews (2004) suggest that as older adults age, selectivity increases in the type and number of social relationships in which is invested emotional attachment. This is a paramount concept in Socioemotional Selectivity Theory.

Benefits to health from social relationships may be restricted to discretionary ties with friends and not relatives as Giles et al. (2004) and Mendes de Leon et al. (1999) reported from the outcomes of their research. Their conclusions suggest that friends more than children decrease mortality and increase longevity. Ironically, the majority of evidence indicates that older persons tend to trust members of the nuclear family more for emotional and instrumental support particularly when challenging health issues arise.

Religion

In the past two decades there has been a resurgence of interest in the connection between religious practice, participation, belief and its' impact on overall health and well-being (Newlin, Knafl, & Melkus, 2002). A variety of dimensions of religiosity have been found to have positive effects on different aspects of depression (Koenig et al., 2001). Religious involvement provides unique insights into the health status and health related behaviors of adults. Studies suggest religious involvement to be affiliated positively with life satisfaction, self-esteem and other aspects of well-being (Ellison, 1993; Thomas & Holmes, 1992). Religiosity improves reports of self-rated health (Musick, 1996), and is inversely related to depression, distress, long-term physical disability (Idler & Kasl, 1997a), and mortality risk (Bryant & Rakowski, 1992; Strawbridge et al., 1997).

Religious attendance has been found to be one of the strongest inverse predictors of depressive symptoms in community and nonclinical samples (Kennedy et al., 1996; Idler & Kasl, 1997b; Koenig et al., 1997).The most common form of organizational participation for older adults is religious affiliation. Fifty percent of all older persons report attending weekly religious services (APA, 2009d).

Main Methodological Limitations and Gaps

In this literature review, there are a multitude of studies which explored associations between depression, social support, race and a variety of dimensions of demographic, health and religious factors. While several pieces have used data from the New Haven site of the EPESE, all differed in some manner. To the best of my knowledge no analysis exists specifically related to the topic of this dissertation, making it the first study of its kind. The following compendium explores this further.

The analyses most closely related to the topic of this study which explored African American and White differences in depression, social support and medical factors among a community sample of older persons and used an unmodified 20-item CES-D to measure symptoms of depression were those of Husaini (1997) and Husaini et al. (1990). Yet, the 1997 longitudinal research of Husaini differed in several manners. First, social support was defined in four ways by network size, frequency of contact with relatives and friends, seeking assistance from relatives, friends and confidants and by the Perceived Social Support Scale. Second, medical factors were measured with a check list of unspecified chronic medical disorders save for cardiovascular disease and diabetes. They also did not investigate individual health covariates and their relationship with depression and how this interacted with social support, religion and varied by race. Their study also measured and included stress and ego strength.

The research of Husaini et al., (1990) differed in that ego strength was included and social support was defined as: (1) Size of social network (number of friends and relatives nearby and changes in current number of confidants compared to five years ago) and; (2) The Perceived Social Support Scale which addressed six different dimensions of social support. Chronic medical problems were measured by the same methods used in the previous study. Life events were also included as well as ego strength which measured two dimensions: executive ability and tension control.

The only other analysis found on a community sample of African American and White older adults which had as one of its specific primary foci, social support and depression, was that of George et al. (1989). However, depressive symptoms were measured with a modified (dichotomized) version of the 20-item CES-D. The sample

also differed drastically in size (n = 150) and did not focus exclusively on older adults. The size of the sample left a lack in the inability to generalize outcomes to all populations including exclusively older adults. Similar to Husaini's analyses (1997), the research of George et al (1989) defined social support differently.

The last significant analysis which explored racial differences which specifically addressed social support received from friends and family was that of Griffin's et al. (2006). However, their sample was not that of older persons, but of N = 290 women with a mean age = 37.8 (+ or - 10.3 years). They also used a combination of different measures for social support and depression. Emotional support and social network size were measured with a six-item scale: the Social Support Questionnaire Satisfaction Index [SSQSI]. Depression was measured by the Depressed Mood Index.

The research of Hays et al. (1998), using data from the North Carolina EPESE site of the EPESE explored social correlates of dimensions of depression in older adults and specifically focused on four subscales of a dichotomized modified version of the CES-D. The 1982 Oxman, et al. research on the New Haven site of the EPESE used a subsample of the total sample (n = 1,962) of only those who were available for a follow-up interview. Their analysis examined the effects of the characteristics of social networks and social support on symptoms of depression. They defined social support by social networks with family (children, close relatives and friends), and frequency of making two types of contact: Face-to-face visits and telephone or correspondence by writing assessed on a six-point scale. This dissertation uses other social support measures, samples, and a different design.

There are major dissimilarities between George et al.'s (1989) research and this study. George, et al. defined social support by focusing on perceived adequacy of two types of support: tangible and emotional. The former focused on the availability of support and the latter was assessed by two questions. Functional disability was also included, measured by the 15-item Functional Disability Index. These are obvious major contrasts from the variables used in this dissertation.

Researchers have used a variety of measures for depressive symptoms and social support as is apparent in the relevant contents of this literature review. For example, symptoms of depression were measured utilizing a modified version of the CES-D with binary responses (yes/no format) by the following: Blazer et al. (1998), George et al. (1989), Hays et al. (1998) and Oxman et al. (1982). In contrast, Husaini (1997) and Cummings et al. (2003) used a 20-item unmodified CES-D and Ulbrich and Warheit (1989) measured depression with an 18-item instrument.

Of studies which included social support, Cummings et al. (2003) measured social support variables by the Perceived Social Support Scale and George et al. (1989) with the Duke Social Support Index, and a nine-item scale. Griffin et al. (2006) examined social support and emotional support with a six-item scale, Hays et al. (1998) measured perceived social support by two items, and Husaini (1997) measured social support in four ways. Oxman et al. (1982) measured structural characteristics of social networks with a six-point scale and perceived adequacy of tangible and emotional support of social support, and Seeman and Berkman (1988) focused on the availability of and the perceived adequacy of support.

While Cummings et al. (2003), examined depression, social support, functional impairment and religion, there were dissimilarities in definitions. First, the degree of functional impairment was measured by 11 dichotomous items which asked respondents if they needed help with the following tasks: Five ADL items such as getting in and out of bed, dressing, bathing, personal grooming, using the toilet and six IADL items, using the telephone, preparing meals, housekeeping, doing laundry, going grocery shopping and transportation. Second, religiosity was measured by an 11-item scale which asked respondents about their participation in both private and public religious activities. Third, social support was defined by the Perceived Social Support Scale.

Theoretical Framework

Socioemotional Selectivity Theory (SST) suggests that reduced rates of interaction in later life are "the result of lifelong selection processes by which people strategically and adaptively cultivate their social networks to maximize social and emotional gains and minimize social and emotional risks" (Carstensen, 1992, p. 331). Activity theory postulates that older age may be characterized by high levels of social interaction with others, particularly if the "others" are a select group of close friends or relatives. Disengagement theory postulates that older age may be characterized by social isolation from others, particularly if others are more casual social partners. SST is a different but compatible view with the main premises of Activity and Disengagement Theory. SST predicts that because of increasing awareness of mortality, the oldest-old choose social networks that emphasize intimate and positive emotional ties and reduce contact with peripheral relationships. Under SST, social networks are characterized as

emotionally close with high levels of social integration. With advancing age, there is a decline in the overall size of social networks.

Results of empirical literature that support SST have been found in samples of the U.S. population (Antonucci & Akiyama, 1987), exclusively African American older population (Ajrouch, Antonucci, & Janevic, 2001), and the German older population (Lang, Staudinger, & Carstensen, 1998). These studies confirm that it is typical for the oldest-old to have small, emotionally close networks. Findings for age effects for size, composition and contact of social networks have also been generally consistent with SST (Carstensen, 1992).

The results of Fung, Carstensen, and Lang (2001) revealed that for African Americans and Whites, both younger and older persons reported similar numbers of close social partners but fewer peripheral social partners in their social networks. Lansford, Sherman, and Antonucci (1998) found that across three age cohorts of nationally representative samples of African American and White adults, older persons tended to express more satisfaction with size of informal networks, and concomitantly report less frequent contact on networks overall. African American respondents were found to have smaller networks with a higher proportion of family members compared to Whites. They also reported more contact with their networks and were more likely to receive emotional support from extended kin (Johnson & Barer, 1995).

Taylor and Chatters (1986b) found more than 25% of older African Americans signified emotional assistance such as companionship, advice and comfort as the most important type received from support networks. Best friends and church members were noted as important for providing companionship, advice and encouragement. Comparable

levels of emotional support from children and grandchildren were received by African American and White respondents with African Americans more likely to receive emotional support from extended kin. The analyses of Lansford et al. (1998) concluded with older respondents tending to report less frequent contact with social networks despite generally strong findings of high levels of satisfaction with their social networks.

In research exclusively on older African Americans, Taylor (1985) and Taylor and Chatters (1986a) reported finding no age differences in declinations of support from family and church members with advancements in age. This was also found in level of contact and emotional closeness to extended kin networks. Potts (1997) used SST as a framework to describe the extent to which social support from friends inside and outside a retirement community were associated with depression. Results indicated quantitatively high levels of social support from friends within the retirement community, but no significant effect on depression.

Face-to-face and telephone contact provide opportunities to involve older persons in social interaction with family and friends. These are associated with feelings of emotional closeness (Krause, Liang, & Keith, 1990; Taylor, 1985; 1986). For personal relationships that are viewed as negative, social contact is likely lessened. Primary and intimate personal relationships that facilitate feelings of social embeddedness and emotional closeness are represented by marital and parental status (Lang et al., 1998). Differences exist in social networks of older adults who are married and parents compared to unmarried and childless older persons who embody greater levels of social emotional selectivity.

CHAPTER III

Methodology

Methodological Limitations and Gaps

Previous research on social support, depression and older persons is limited by: (1) The rationale for its use; (2) demographic factors of samples utilized; (3) a lack of consistency in measures of depression, social support and health factors; and (4) a paucity of adequate sample sizes used in previous analyses. There is very little empirical literature in the area of the focus of this dissertation. This thorough review of relevant literature suggests this study may be the first of its kind.

Research Questions and Hypotheses

The following variables were used as covariates in a regression analyses: the number of and frequency of contact with close friends, the number of and frequency of contact with close relatives, gender, age, shortness of breath, pain in ambulation, cognition, bladder control (urinary incontinence), cardiovascular pain, perceived general health, frequency of religious attendance, current marital status and race.

Based upon the perspectives of Socio-Emotional Selectivity Theory which states in later-life it is common for older adults to have small, emotionally close networks, reduced contact with peripheral relationships, and choose social networks that emphasize intimate and positive emotional ties, the following research questions and hypotheses were explored:

Research Question #1:

Is there an inverse relationship between the severity of depressive symptoms as measured by the CES-D, and social support provided by close family members, while controlling for covariates?

Hypothesis #1:

As social support from close family members increases, controlling for covariates, the severity of depressive symptoms as measured by the CES-D will decrease.

Research Question #2:

Is there a stronger inverse relationship for African Americans than for Whites between the severity of depressive symptoms, as measured by the CES-D, and social support provided by close family members, controlling for covariates?

Hypothesis #2:

As social support from close family members increases, controlling for covariates, the severity of depressive symptoms as measured by the CES-D will decrease to a greater degree for African Americans than for Whites.

Research Question #3:

Is there an inverse relationship between the severity of depressive symptoms, as measured by the CES-D, and social support provided by close friends, while controlling for covariates?

Hypothesis #3:

As social support from close friends increases, controlling for covariates, the severity of depressive symptoms as measured by the CES-D will decrease.

Research Question #4:

Is there a stronger inverse relationship for African Americans than for Whites between the severity of depressive symptoms, as measured by the CES-D, and social support provided by close friends, controlling for covariates?

Hypotheses #4:

As social support from close friends increases, controlling for covariates, the severity of depressive symptoms as measured by the CES-D will decrease to a greater degree for African Americans than for Whites.

Description

The participants of this dissertation were persons from The National Institute on Aging project entitled "The Established Populations for Epidemiologic Studies of the Elderly" (EPESE), a public use data set which was initiated in 1980 in order to provide pertinent information on representative samples of entire communities of older persons. The goals of the EPESE project were to describe and identify predictors of mortality, hospitalization, and placement in long-term care facilities and to investigate risk factors for chronic diseases and loss of functioning.

The EPESE consisted of prospective epidemiologic studies of approximately 14,000 persons 65 years and older in four different communities: East Boston, Massachusetts, two rural counties in Iowa, New Haven, Connecticut, and segments of five counties in the north-central Piedmont area of North Carolina. The design included an initial baseline household interview followed by continued surveillance of morbidity and mortality. Participants were re-contacted annually in conjunction with the collection

of data on cause of death and factors related to hospitalization and nursing home admissions. The design was longitudinal.

The EPESE addressed the demographics of age, sex, race, income, education, marital status, number of children, employment, religion, height, weight, social and physical functioning, chronic conditions, related health problems, health habits, self-reported use of dental, hospital, nursing home services and depression. Data were collected at baseline and from six follow-up surveys. Information from death certificates for deaths occurring in the first six years of follow-up was also collected.

A competitive solicitation process was used to select the study locations. Age was determined by date of birth and if not available, age reported at baseline. The numbers and age distribution of men and women in the populations paralleled those of the U.S. population aged 65 and older as noted by the U.S. Bureau of the Census in 1983. The data obtained established baseline information on participants and provided estimates of the prevalence of specific conditions and health problems. Following the baseline survey completed in 1982-1983, each participant was contacted annually within two weeks of the anniversary of the initial interview. The first and second follow-up surveys were conducted by telephone in 1983 and 1984. The third follow-up survey was a face-to-face interview conducted in 1985 in the participants' homes.

The initial household survey interviews were planned during the first year of the project (1980-1981) and conducted during the second year (1981-1982). This initial household interview was followed by an annual re-contact by either telephone or household interview until the sixth follow-up interview was completed. Questionnaires for the annual telephone interviews pertained mainly to the end points and were almost

identical with the primary questionnaire with only a few additional questions that varied by location. The purpose of the second household interview was to evaluate change in status over the three-year period. Many of the same questions asked on the initial baseline questionnaire were repeated in this interview, but questions requesting a report of lifetime history such as, "Have you ever had a heart attack?" were not repeated. Only current status, new events, or behavioral items were included.

When a respondent was too ill or otherwise unable to provide useful information, an appropriate proxy, (e.g., a close family member or staff member(s) in a nursing home) was asked to provide certain basic information about the respondent. Proxies were not asked to respond to any items of the questionnaire that called for the respondent's judgments of attitudes. Proxies were asked to provide data on certain demographic characteristics such as present health status and functional capacities. Investigators established a standardized procedure for determining when a proxy was needed. Proxy interviews were restricted to cases where subjects were unable to participate because of physical or mental problems. Blood pressure was measured at the initial baseline and second household interview. Three measurements were taken at the New Have site.
A mortality surveillance system was established at each center. Self-reported information on chronic conditions and impairments were acquired at the initial interview and reported at all follow-up contacts. Information on related hospitalizations was obtained through outside sources such as state data systems and direct notification from major hospitals. Standardized sets of items were also obtained from federal data so that hospitalization records on the participants were as complete as possible.

Information on admission to nursing homes was obtained from annual follow-up interviews and institutional records. Participants who entered a nursing home continued to be followed-up by annual contacts. If possible, a personal interview was completed at the nursing home or by telephone. Physical disability was determined by responses to a series of questions including a modified selection of Katz Activities of Daily Living (ADL) Scale, Branch's addition to the ADL scale, and a portion of the Rosow-Breslau Functional Health Scale. Cognitive functioning was assessed by a Mental Status Questionnaire (MSQ). For quality control of the interview, a systematic sample of participants were selected at each location to test and evaluate the reliability of the questionnaire. For the New Haven site, the baseline questionnaire was pretested in West Haven, Connecticut, adjacent to the study site.

Continual surveillance of the participants included monitoring of all deaths, hospitalizations, nursing home admissions, and changes in functional abilities. Basic information was provided through annual contact, follow-up interviews, and additional data were obtained from healthcare facilities and organized data systems. During the progress of the study the investigators developed sub-studies of specific problems of the elderly. Each location developed nine different sub-studies of health and behavioral problems.

Subjects/Participants

The subjects of this dissertation were from the New Haven cohort of the EPESE. The EPESE data were collected in a manner permitting male-female comparisons by two racial groups. The demographics measured were marital status, education, income, occupation, work and retirement status. The sample was stratified for three different types

of residents: Those dwelling in public housing for the elderly, private housing for the elderly and elsewhere in the community. For those not living in housing for the elderly, the sampling frame was a 1979 utilities listing, shown to be an acceptable listing of households when combined with a concurrent listing of bulk meters. The sampling was done by dividing this list into segments of clusters of 12 housing units. Every 62nd unit was selected and the next 12 units were screened for eligible respondents. To provide an equal number of males and females in the sample, all enumerated males were selected, while every two or three females were selected. By this procedure, 8,700 addresses were selected, and an additional 57 household units were identified by a relisting procedure. The enumeration and screening process yielded 1,577 eligible persons of whom 79% of men and 76% of women agreed to participate. Thus there were 1,215 respondents in general community housing.

In public housing, 1,058 households were identified as having a high probability of including a person 65 or over in residence. Of the 1,002 housing units found to be occupied, all eligible persons were included in the sample. The response rate was 89.5 % for men and 89.2% for women, yielding a total of n = 728 respondents. In private housing, 1,742 household units were identified of which 1,700 were occupied. To equalize the number of men and women, every man was interviewed but only 40% of the women were included in the sample. The response rates for private housing were 82% for men and 84% for women, providing a total of n = 868 respondents.

The entire estimated population of New Haven older adults in 1981 was 15,334, whereas the total number of individuals in the sample is N = 2,812, yielding an average weight per individual in the sample of approximately 5.5. Each person

interviewed in the New Haven baseline survey therefore represented on average more than five persons in the population. The New Haven study sample of the EPESE was a stratified cluster sample of 3,337 persons of New Haven aged 65 years or older. The response rate was 82% with 2,812 persons participating. The New Haven sample was comprised of the following: Whites and all Non-Blacks ages 65-69 (n = 611), 70-74 (n = 590), 75-79 (n = 491), 80-84 (n = 335), and 85 plus (n = 256) yielding a total of n = 2,283; All Blacks: 65-74 (n = 351), and 75 + (n = 178), yielding a total of n = 529. This resulted in a total sample of N = 2,812 with a mean age = 72.3.

The entire New Haven sample included 81.2% White and other Non-Black participants and 18.8% all Black participants. Of the total sample, 2.2% were other than White (n = 62). Whites comprised n = 2,221, a total of 97% of the White and all Non-Black category (n = 2,283) and 78.9% of entire sample (N = 2812). The all-Non Whites/Non-Blacks (n = 62) constituted 2.2% of the total sample (N = 2,812), and 2.7% of the White and all non-Black category (n = 2,283). All Blacks, (n = 529), comprised 18.8% or 19% of the entire sample. Religious preferences for the total sample were: 51% Catholics, 28.6% Protestants, and Jews, 13.26 %. For all Whites and other Non-Blacks (n = 2,283), Catholics comprised 62.9%, Protestants, 15.54%, Jewish 16.3 %, and 1.6% identified as “Other” or left the item blank. For all Blacks only (n = 529), 85.4% were Protestant, 12.8% identified as “Other” and 1.7% left the item blank. The size of the sample permitted presentation of the data by only White and “all other” ethnic groups. The rates were weighted population estimates for the New Haven communities.

Data Collection

The variables included in this study were depression, health and social support items. Depression was measured by the Centers for Epidemiological Studies Depression Scale, a 20-item self-report index of depressive symptoms designed for use in large-scale surveys developed by the Center for Epidemiologic Studies, National Institute of Mental Health. The New Haven site used the CES-D in its original form.

The CES-D has four separate factors: depressive affect, somatic symptoms, positive affect and interpersonal relations. This form asks 20 statements which each describe a symptom (e.g., “I felt sad”) or the absence of a symptom of depression or diminished morale (e.g., “I enjoyed life”). Respondents are asked how often they experience each symptom during the past week. Each statement provides respondents with four options: “Rarely or none of the time," “Some of the time,” “Occasionally or a moderate amount of the time,” or “Most or all of the time.” Each item is scored 0-3, except for the items that indicate an absence of symptoms which are scored in reverse order. This yields a range of possible summary scores of 0-60, with higher levels indicating more frequent depressive symptomatology.

The CES-D focuses on obtaining information on a range of depressive symptoms but does not assess severity relevant to diagnosis or clinical assessment. The CES-D has very good internal consistency with coefficient alpha reliability estimates of .85 for the general population, .90 for psychiatric and patient populations. Cronbach’s alpha values of .80 or better are typically reported.

Studies of the psychometric properties of the CES-D indicate it has adequate reliability and validity. Internal consistency as measured by Cronbach’s alpha is high

across a variety of populations (generally around 0.85 in community samples and 0.90 in psychiatric samples). Differences between these populations also establish construct validity. Split-half reliability is also high, ranging from 0.77 to 0.92. Test-test reliability studies ranging over 2-8 weeks show moderate correlations (r = 0.51-0.67). No differences in internal consistency measures were found in studies of African American versus Anglo American versus Mexican Americans.

The validity of the CES-D is similar and comparable to other self-report depression scales used as first-stage screening devices in general community or primary care studies. This has been found with the Beck Depression Inventory and the Zung Self-Rating Depression Scale (SDS) when they are used as first stage screening devices. Studies on older persons suggest only fair agreement between scores on the CES-D and the short form of the Geriatric Depression Scale and a correlation (r) of 0.69 between the CES-D and the Zung SDS. In studies of outpatient samples with depression, depression subscale scores were high, ranging from 0.73 to 0.89 and correlations with the Hamilton Rating Scale for Depression were variable and ranged from 0.49 for patients with acute depression to 0.85 for patients with schizophrenia. Correlations with the Raskin Scale were also variable, ranging from 0.28 for patients with acute depression to 0.79 for patients with schizophrenia. Convergent validity is supported by significant correlations with other scales designed to measure depression (Radloff, 1977).

The demographic variables examined were gender, race, and age. Gender was measured by “Male and Female” as response options. Race was measured by “White and Other Non-Black” and “Black” as response options. Age was measured by < 75 and 75 + as response options.

Social support was examined by respondents replying to questions related to relationships with close friends, close relatives, marital status and religious attendance. The primary social support questions were measured by respondents replying to the following four initial baseline survey interview questions: (1) "(Other than your children), how many (other) relatives do you have that you feel (really) close to?" with "none, one or two, three to five, six to nine, 10 or more and blank" as response options; (2) "how many of these (close) relatives do you (usually) see at least once a month?" with "none, one or two, three to five, six or more or blank" provided as response options; (3) "how many close friends do you have?" with "none, two, three to five, six to nine, 10 or more and blank" as response options, and (4) "how many (of these) (of your) (close) friends that you have just mentioned do you see at least once a month? with "none, one or two, three to five, six to nine, 10 or more and blank" as response options. The reliability of total score over these items as estimated by Cronbach's alpha was .641.

Marital status was measured by the question, "Are you now married (legally), separated, divorced or widowed?" with "married," and "separated, divorced or annulled, widowed and blank" as response options. Religious attendance was measured by the question, "About how often do you go to religious meetings or services?" with "never/almost never, once or twice a year, every few months, once or twice a month, once a week, more than once a week and blank" as response options.

Also included were two interaction variables created out of relationships with close friends and race and relationships with close family members and race. Race was measured by the total sample (N = 2,812) comprised of all persons that are categorized as White and all Non-Blacks, All Blacks and Other. The 2 variables on close relatives were

measured by the questions, (1) "(Other than your children), how many (other) relatives do you have that you feel (really) close to?" with "none, one or two, three to five, six to nine, 10 or more and blank" as response options; (2) "how many of these (close) relatives do you (usually) see at least once a month?" with "none, one or two, three to five, six or more or blank" provided as response options. The 2 variables on close friendships were measured by the questions, 1) "how many close friends do you have?" with "none, two, three to five, six to nine, 10 or more and blank" as response options, and (2) "how many (of these) (of your) (close) friends that you have just mentioned do you see at least once a month? with "none, one or two, three to five, six to nine, 10 or more and blank" as response options.

Six health variables were examined. Respiration was measured by the question, "Do you get shortness of breath that requires you to stop and rest? with "yes" or "no" as response options. Ambulation was measured by the question, "Do you get pain in either leg on (while) walking?" with "yes" or "no" as response options. Cognition was measured by the question, "What is the date today?" with "Correct," "Incorrect," "Refused" and "Blank" as response options. Bladder control was measured by the question, "How often do you have difficulty holding your urine until you can get to a toilet? With "Never, hardly ever, some of the time, most of the time, all of the time and blank as response options. Cardiovascular function was measured by the question, "Have you ever had any pain or discomfort in your chest?" with "Yes, "No" and "Blank" as response options. Perceived general health was measured by the questions: "(As) compared to other people your own (same) age, would you say that your general health is excellent, good, fair, poor (or very poor)? How would you rate your health at the present

time?" with "Excellent," "good," "fair," "poor," "very poor" or "bad" as response options.

A power analysis was conducted to determine the effect size associated with social support that could be detected with a power of .80 given the sample size of N = 2812. Given the sample size reported, an alpha of .05, and power of .80, an increase in R^2 as small as .01 can be detected associated with the independent variable of focus, social support.

The two variables representing social support from close family members were highly correlated (r =.72, p < .001), creating problems with collinearity when both were entered into a regression analysis. Following Cohen, Cohen, West, and Aiken (2003), these two variables were combined, by addition, into a single variable representing overall support from close family members. The reliability of the scores from this summed variable was .82. Similarly, the two variables representing support from close friends were highly correlated (r=.83, p < .001), creating problems with collinearity when both were entered into a regression analysis. These two variables were combined, by addition, into a single variable representing overall support from close friends. The reliability of the scores from this summed variable was .91. The interaction between the summed variable representing overall support from close family members and race was represented in the regression analysis by the product of the summed family support variable and the dichotomous race variable. Similarly, the interaction between the summed variable representing overall support from close friends and race was represented in the regression analysis by the product of the summed support from friends variable and the dichotomous race variable.

Data Analysis

A multiple regression analysis was employed to test the successive research questions and hypotheses to explore (1) if there was a significant relationship between depression and close friendships for community-dwelling older adults, after controlling for the covariates and if this relationship was inverse and stronger for African Americans than Whites, and (2) if there was a significant relationship between depression and close relatives for community-dwelling older adults, after controlling for the covariates and if this relationship was inverse and stronger for African Americans than Whites.

The analysis used hierarchical procedures to test a two-tailed hypothesis of nondirectionality on the relationship of the dependent variable, severity of depressive symptoms (Radloff, 1977; Engel & Schutt, 2005) and on four different models created by the independent variables and covariates to assess potential predictors of depression. In the first step, the demographic covariates age, gender and race were entered. In the second step, the health covariates respiration, ambulation, cognition, bladder control, cardiovascular function and perceived general health were entered. In the third step, the following social support and religious covariates were entered: relationships with friends, relationships with family members, marital status and frequency of religious attendance. In the fourth and final step, two interaction covariates, relationships with close friends X race and relationships with close family members X with race were entered.

The purpose of using the linear multiple regression analysis was to examine the values of the response (dependent) variable, the explanatory variables (IVs) and covariates to investigate the relationship between the variables noted in the hypotheses. Data were analyzed using SPSS 16 for Windows with an assigned significance level

of $p = .05$ (two-tailed). To test the hypotheses, the dependent variable was the severity of depressive symptoms (Radloff, 1977; Engel & Schutt, 2005); the independent variables of foci were relationships between close friendships, close relatives and race; the covariates were gender, age, race, respiration, ambulation, cognition, bladder control, cardiovascular function, perceived general health, current marital status, religious attendance; and the interaction covariates were friends X race and family X race.

CHAPTER IV

Results

Sample Characteristics

The stratified sample of focus in this dissertation was comprised of 2,283 New Haven, Connecticut community-dwelling elders residing in public and private housing for older adults. Respondents were gathered between 1982 and 1983 (mean age = 72.3; range: 65 and older; males, 43.6% and females, 58.4%). Participants were 81.9% "White and all 'Other Non-Black' " and 18.8% all "Black." Of the total sample, 51.1% were Catholic, 28.6% Protestant, 13.3% Jewish, 3.8 % identified as "Other," and .3% left the item blank. Of the subsample of all Blacks, 85.4% were Protestant, 12.8% identified as "Other" and 1.7% left the item blank.

Reliability

A reliability analysis was conducted of the CES-D scores. The Cronbach's alpha estimate of the reliability of the CES-D scores in the data for this dissertation was .863. The mean CES-D score was 28 (SD = 8.28; n = 2,340).

Missing Data

The percentage of missing data on CES-D scores was 16.7% of the total sample. The following were the percentages of missing data on independent variables: .56% for respiration, .71%, ambulation, 1.5 %, cognition, .81%, bladder control, .43%, cardiovascular pain, and 1.3% perceived general health. For the social support covariates, the missing data percentages were marital status, 10.3%; and religious attendance, 1.8 %; number of close relatives was 1.8%; frequency of contact with close relatives was 28.2%; number of close friends, 2.8 %; and frequency of contact with close friends, 26.6%.

For all health and the social support variables, expectation maximization [EM] was used to impute missing values. The very small amount of missing data for religious attendance (1.8%) was imputed using mean substitution following recommendations by Acock (1997) and Cohen et al. (2003).

Results of Multiple Regression Analysis

Results for Increase in R^2 for Each Set of Independent Variables

Table 1 summarizes the outcomes of the regression analysis. The increase in R^2 associated with the demographic covariates was .020, F (3, 2336) = 15.9734, $p < .001$. Adding the health covariates to the regression model which included the demographic variables led to a ΔR^2 (i.e., an increase in R^2 of .242, F (6, 2330) = 127.024, $p < .001$). The addition of the social support variables to the model with the demographic and health covariates led to a ΔR^2 of .023, F (4, 2326) = 19.029, $p < .001$. The partial regression coefficient for the relationship between social support from close family and depression, controlling for covariates, was -.2, t (2326) = - 2.43, $p < .02$. The partial regression coefficient for the relationship between social support from friends and depression, controlling for covariates, was -.27, t (2326) = - 4.34, $p < .001$. Both of these results were consistent with the research hypotheses that as social support increases, the severity of depressive symptoms as measured by the CES-D decreases.

The addition of the interaction variables to the regression model with the demographic, health and social support main effect variables led to a ΔR^2 of .002, F (2, 2324) = 3.185, $p \leq .05$. These latter results suggested that the relationship between social support and depression depended upon race. The hypotheses stated earlier conjectured that the strength of the relationship between social support and depression would be

stronger for African Americans than for Whites; that is, as social support increases, the expected level of depression will decrease, and the slope of this relationship will be such that the same increase in social support will be associated with a greater decrease in depression for African Americans than for Whites.

Results Concerning the Research Hypotheses

The research hypotheses stated that the relationship between social support and depression, controlling for the covariates, would be stronger for African Americans than for Whites; that is, as social support increases, the expected level of depression will decrease, and the slope of this relationship will be such that the same increase in social support will be associated with a greater decrease in depression for African Americans than for Whites. This implied that the regression coefficients for the interaction between social support and race would be negative and statistically significant. The negative signs for the interaction terms would indicate that the slope of the regression surface for the relationship between social support and race was steeper (and hence indicated a stronger relationship) for African Americans than for Whites.

Contrary to hypothesis, the estimated partial regression coefficient for the race-by-family support interaction was +.04, t (2324) = .18, $p > .05$. Also contrary to hypothesis, the partial regression coefficient for the race-by-friend support interaction was +.38, t (2324) = 2.39, $p < .02$. Thus, the results were not consistent with the hypothesis that the relationship between social support and depression was stronger for African Americans than for Whites. The relationship between social support provided by friends and depression was actually stronger for Whites than for African Americans, contrary to the hypothesis (See Table 1).

Table 1

Regression Coefficients for Test of Research Hypotheses

Variable	*B*	*SE*	ß	*t(2324)*	*P*
(Constant)	29.710	1.532		19.391	<.001
Race	-3.771	1.859	-.182	-2.028	.043
Gender	1.355	.318	.081	4.255	<.001
Age	.806	.303	.048	2.660	.008
Respiration	-2.515	.335	-.142	-7.513	<.001
Ambulation	-1.133	.317	-.066	-3.573	<.001
Cognition	1.108	.237	.083	4.671	<.001
Bladder	.878	.136	.119	6.473	<.001
Cardiovascular	-1.746	.347	-.095	-5.037	<.001
Health	2.864	.201	.275	14.255	<.001
Religion	-.423	.088	-.088	-4.824	<.001
Friends	-.341	.069	-.105	-4.951	<.001
Marital status	-1.074	.325	-.063	-3.301	<.001
Family	-.205	.090	-.049	-2.279	.023
Friend-by-race	.381	.160	.173	2.388	.017
Family-by-race	.037	.205	.015	.181	.856

Tests of the Assumptions of the Regression

Tests for violations of the assumptions upon which multiple regression analyses are based were conducted. The values of the Cook's Distance measure (Cook's D) were all less than 1.0, suggesting that there were no unusual observations. The largest Cook's D value was .019. To check for possible violations of the assumption of normality of residuals, a histogram of residuals was investigated, along with a Normal Probability, or P-P Plot (see Figures 1 and 2). The patterns in these figures suggested no serious departures from the assumption of normally distributed residuals. The histogram suggested that the distribution of residuals was slightly skewed and leptokurtic.

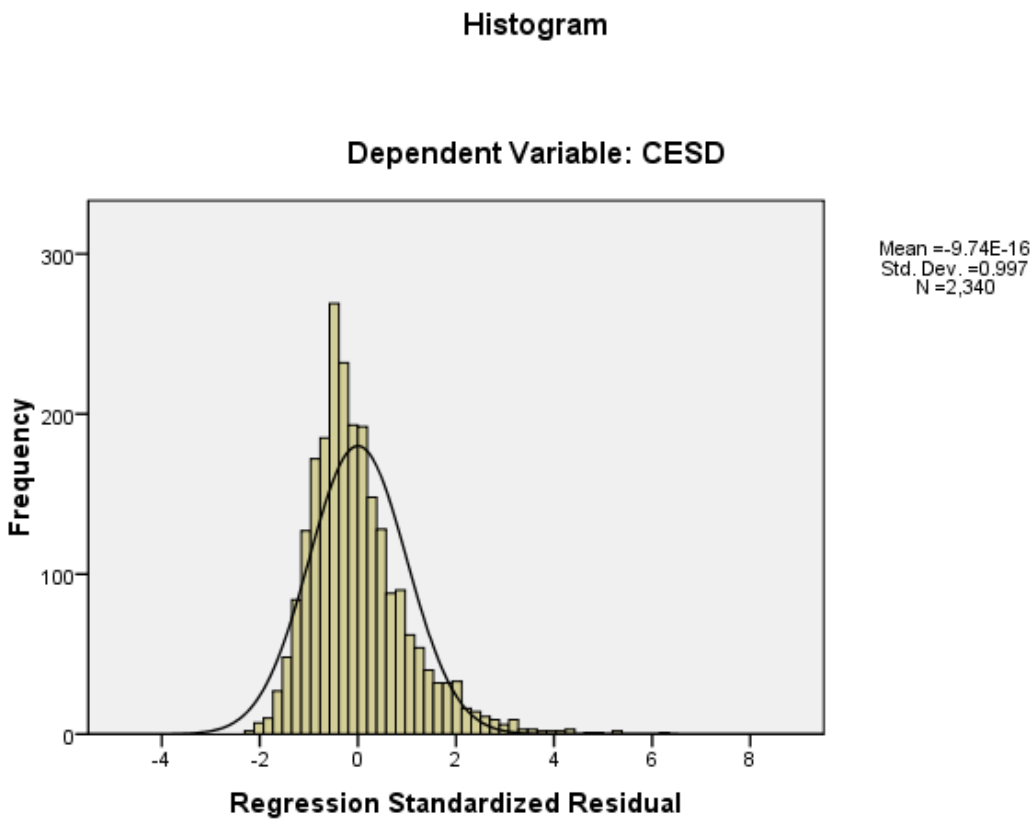

Figure 1

Histogram of Regression Standardized Residuals.

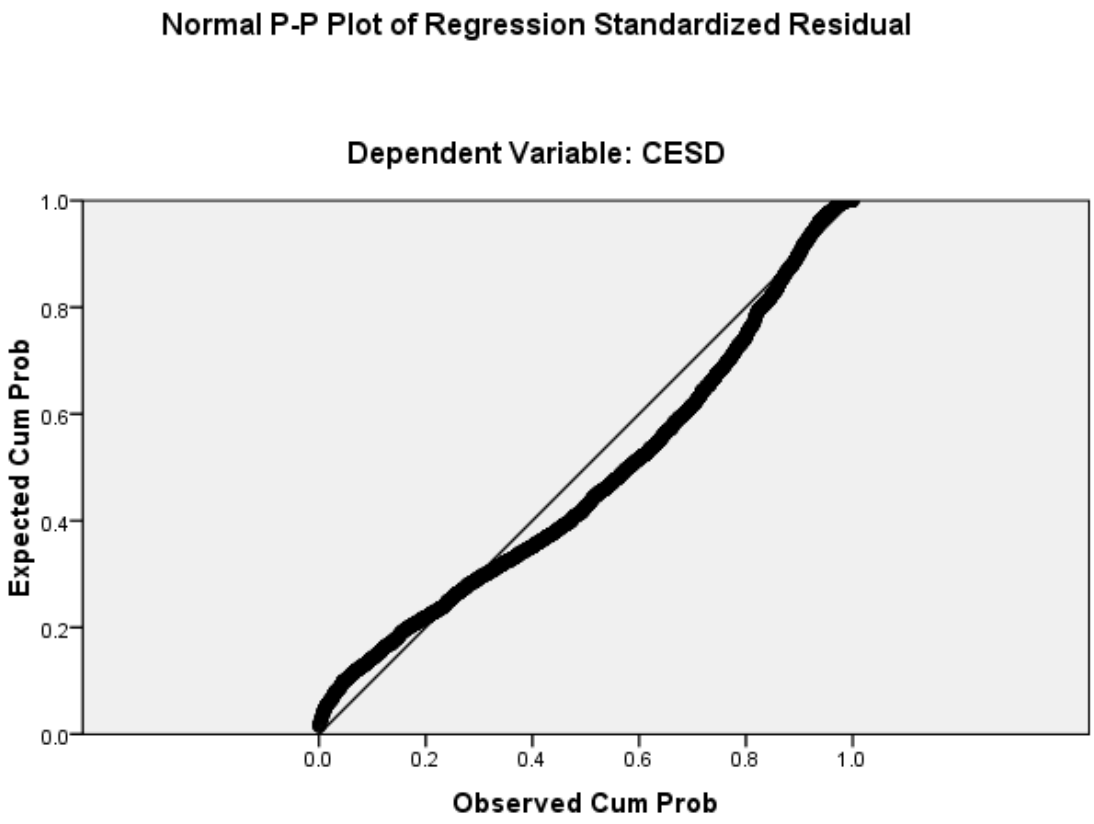

Figure 2

P-Plot of Regression Standardized Residuals.

An examination of a plot of the standardized residuals versus the standardized predicted values was done to check for a possible lack of homoscedasticity (i.e., for hetereoscedasticity of residuals). The patterns in this scatterplot suggested a violation of the assumption of homoscedasticity, as can be seen in Figure 3.

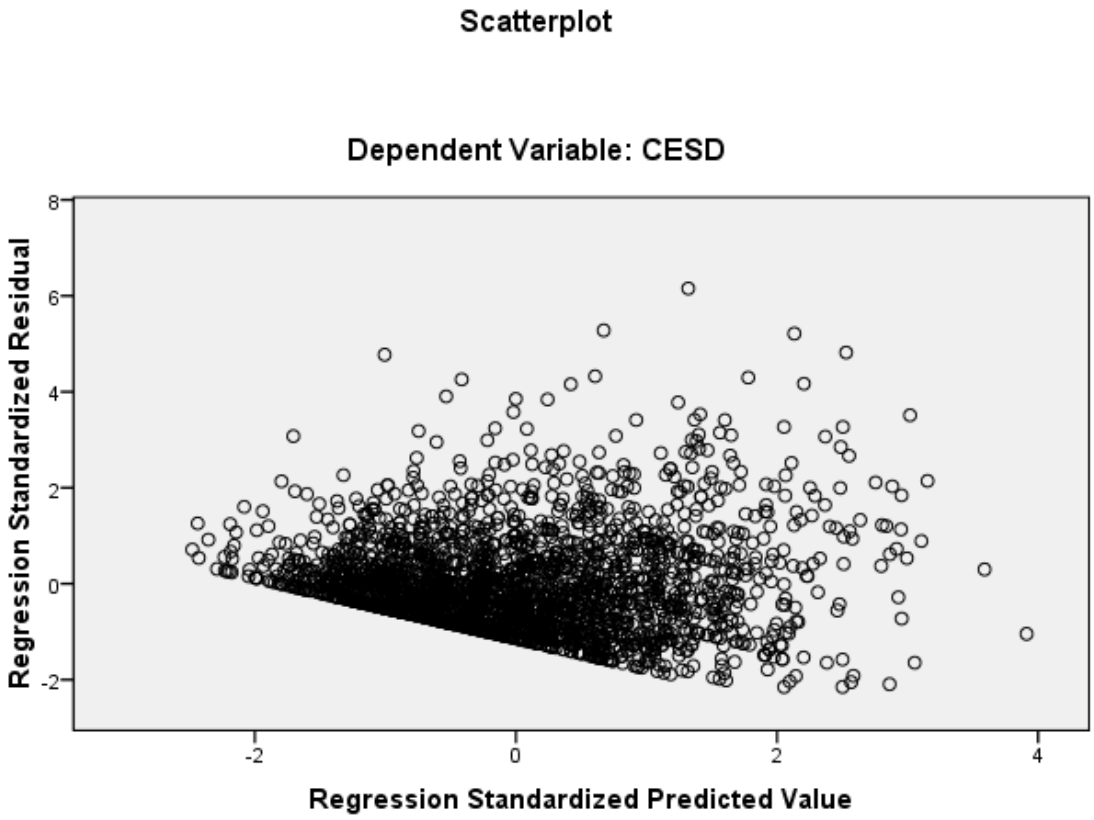

Figure 3

Scatterplot of Regression Standardized Residuals versus Standardized Predicted Values.

To assess the level of magnitude of the violation of this assumption, a test recommended by Cohen et al. (2003) was conducted. The residuals in Figure 3 were "sliced" into ten equal sized sections and the variances of the residuals in each of the ten slices estimated. The ratio of the largest variance to the smallest was computed. The value of this ratio was 7.3. Since this value was less than 10, no correction for heteroscedascity was employed, as recommended by Cohen et al. (2003), and the ordinary least squares results of the regression analyses were interpreted.

Table 2

Descriptives

Descriptive Statistics for Lowest Variance Residuals "Slice"

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Unstandardized Residual	259	-2.73674	21.56291	1.7251868	3.84428513	14.779
Valid N (listwise)	259					

Descriptive Statistics for Highest Variance Residuals "Slice"

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Unstandardized Residual	210	-15.10411	36.54692	2.0267440	10.36228439	107.377
Valid N (listwise)	210					

Summary of Results for Hypotheses

The above results suggested that:

1. The relationship between social support from close family members and severity of depressive symptoms as measured by the CES-D was negative: as social support from close family members increased, the severity of depressive symptoms decreased;
2. The relationship between social support from close friends and severity of depressive symptoms as measured by the CES-D was negative: as social support from close friends increased, the severity of depressive symptoms decreased;
3. The negative relationship between social support from close family members and severity of depressive symptoms as measured by the CES-D was the same for Whites and African Americans; and
4. The negative relationship between social support from close friends and severity of depressive symptoms as measured by the CES-D was stronger for Whites than for African Americans.

The findings (3) and (4) were contrary to the research hypotheses.

CHAPTER V

Discussion

Depression in later life is one of the most prevalent and common mental health disorders for all Americans and a major public and geriatric healthcare concern (NIMH, 2009a; SAMHSA, 2009c). The current and projected growth of the older adult population with the addition of the baby-boom generation suggests this population will be considerably more racially diverse and likely have substantially higher levels of prevalence of mental health problems (APA, 2009d; NCHS, 2009, p.16). Serious consequences may occur for older persons who suffer from untreated and undiagnosed depression, including increased morbidity and mortality. It is well-established that the highest rates of suicides completed are among White adult males 65 and older. These facts underscore the need for an expansion in the recognition and understanding of relevant psychosocial and sociocultural variables specific to the older adult population which can serve as protective factors for overall well-being, and for physiological and mental health.

Research Hypotheses

The two research hypotheses which predicted a negative, or inverse, relationship between social support and depression, controlling for covariates, were supported in this dissertation research. That is, as social support increased -- either from close family members or close friends -- the severity of symptoms of depression as measured by the CES-D decreased. However, the specific hypotheses concerning the moderating effects of race were either not supported, as in the case of social support from close family

members, or went in the direction opposite that conjectured as in the case of the relationship between social support and depression being stronger for Whites than for African Americans.

Why the hypotheses concerning a stronger relationship between social support and depression for African Americans than for Whites were not supported is unclear. The large sample size precludes low statistical power as an issue. There is no evidence reported in the literature which suggests reasons why the effect of social support from close family members on the severity of depressive symptoms was the same for both races. There is also no evidence that would suggest why close friendships had a stronger inverse relationship on the severity of depressive symptoms for Whites than for African Americans. Historically, African Americans have been a marginalized race in the United States, with extended family and friends playing key roles as primary social support systems. It would, therefore, on the face of it seem logical to infer that these factors would have a greater benefit on mental health outcomes for African Americans when compared with Whites. However, the results discussed above fail to support such a conjecture.

It is possible that the relationship between social support and depression is the same for African Americans and Whites and that the failure to find a differential relationship as predicted in this research indicates that there is no differential relationship. It is also possible that the relationship between social support and depression is stronger, in an inverse manner, for African Americans than for Whites, but this was not found in the current research for a couple of reasons. One possibility is that the measures used for social support in the current study lacked the validity necessary to identify the differential

relationship. A second possibility is that the form of the statistical regression model was incorrect and that important variables were left out of the model. If this is the case, the results obtained in the regression analysis in this dissertation were biased and incorrect (Cohen et al., 2003). Had the model been correctly identified, the results might have been consistent with the research hypotheses concerning the differential relationship between social support and depression as a function of race. In particular, variables representing the moderating effects of social support on the relationship between certain model conditions and depression-- such as the potential moderating effects of social support on the relationship between general health problems and depression- need to be included in future research. It is possible that the moderating effects of social support on the relationship between health problems and depression might differ for African Americans than for Whites. This possibility needs to be investigated in future research.

Limitations

While this dissertation has a number of strengths, it is important to acknowledge significant limitations:

- The independent variables under scrutiny are a variety of social support measures;
- The population under study is from one northeastern metropolitan region of the United States;
- There are a number of demographic, social support, and health-related variables not included;
- There are potential moderating effects of aspects of social support on health and depression not included in the current study;
- There is a small potential for Type I error; and

- The sample is from 1981.

The first limitation is that social support is measured in different ways. This is commonly found in social science research and may lead to a variety of differing conclusions, which can make it challenging to pinpoint explicit areas of support which may cause, exacerbate or buffer symptoms of depression. It seems plausible to propose that to the best extent possible, population-based surveys designed to more broadly measure social support in older populations use common conceptual frameworks.

The second limitation is that the specific regional characteristics of the population under study may lead to restrictions in external validity. The outcomes of this dissertation may not be generalizable to older adults who reside in rural areas and in the southern, western and Midwestern regions of the United States.

The third limitation is that numerous demographic, social support, and health variables were not included which might have an affect on depression among the aged. These need to be included in future research. Socio-economic status is a demographic variable to consider, as those who are socioeconomically disadvantaged have fewer choices and opportunities in many healthcare matters, including access to health insurance. This may lead to increased reliance on public assistance such as Medicare, limit the selection of medications actually used (as a result of affordability), detrimentally affect living conditions, increase allostatic load thereby leading to attenuated health, and restrict choices in diet and nutrition. Education, a strong indicator of and influencer of socio-economic status should also be included in future research. Typically, higher levels of education are associated with above average health, better standards of living, and improved incomes.

Social support questions might be asked which contain more response option choices focusing on participation in supportive communities, such as involvement in senior citizen activities and on-line support groups. The latter might be particularly beneficial for those who have an abundance of physical challenges that limit their ability to move around. In addition, a question on pet ownership should be included as older individuals might consider a pet to be one of their most significant sources of emotional support.

Health issues frequently encountered by older individuals today should also be included as independent variables. Hearing and vision loss as a consequence of senescence are important to include. Malignant neoplasms, (the second highest cause of mortality among all older persons), and cerebrovascular disease, (the third leading cause of mortality), should also be included. Cognitive functioning should also be measured using multiple items, including orientation to person and place. A question on previous episodes of, and treatment for depression, a major predictor for future episodes of this condition, should also be included.

Another limitation is that certain moderating effects of social support on the relationship between health and depression were not included in the regression analysis. Evidence exists that positive social support can mitigate symptoms of depression as noted in the literature review (Berkman, 1984; 2000; Kafestios & Sideridis, 2006; Lubben & Gironda, 2003). The effects of some health problems on depression may be buffered or ameliorated by benevolent social support. These possible moderating effects need to be further explored.

The potential for Type I error is also a limitation. The overall statistical test of the regression model, which included all variables (including the interaction terms), was statistically significant beyond the .001 level. While this F–test provided some degree of protection against overall Type 1 error (Cohen, et al., 2003, pp. 187-190), the four tests of statistical significance of the hypotheses do carry a potential for inflation of Type I error. Following Cohen et al. (2003), in a worst case scenario, the probability of at least one Type I error across the set of four tests of statistical significance was $1 – (1 - .05)^4 = .19$. This is especially the case for the interaction term found to be statistically significant, as the very low unique R^2 associated with this term was so very small (.002). Thus, the statistical significance of the interaction suggesting that the relationship between depressive symptoms, as measured by the CES-D, and social support provided by friends was stronger for Whites than for African Americans should be interpreted cautiously.

Lastly, the age of the data used in this research is a limitation in that the sample is from 1981. The age of the data may pose a threat to the ability to be able to generalize the results to what older adults experience now in the first decade of the 21st century. For example, since the 1980's, technological advancements have transformed how we communicate. There are now ways for friends and family to communicate, even face-to-face, without the need to physically travel, and these means for the most part are readily available and accessible. Examples of this are the customary utilization of cordless in-home and cell phones, the ordinary use of private and public computers, and new long-distance telecommunication formats.

While this is an asset, for many older adults, its use may be problematic. Older individuals may not be interested in learning how to utilize new ways of connecting with

others. Many new technological advancements are not a necessity for survival and maintenance of independence. For some older adults, the cost of technology may make it unavailable. Rural-dwelling older persons may be at a disadvantage in terms of the ability to access some of this technology. This also applies to those who are socio-economically disenfranchised.

Another limitation possibly affecting generalizability is the way the social support questions were asked. The way these questions were presented was more applicable to older individuals two decades ago in a variety of ways. The United States was less culturally diverse. This might have affected the way the question on religious attendance was asked and limit response options. In future research, questions about religious social support need to be more inclusive of other popular religions practiced in America today such as the Islamic, Buddhist, and Hindu faiths.

It should be recognized that the possibility exists that the relationship between social support and depression among all older persons, regardless of ethnic or racial backgrounds, may vary across time as a consequence of temporal changes in the diversity of socio-cultural factors of the U.S. population. Thus, a limitation of this study is that any relationships found between social support and depression as measured by the CES-D may not be generalizeable to the current population of older adults. New research using contemporaneous samples needs to be done to test this possibility.

While the age of the data may limit to some degree generalizeability, it is important to note that all of the published research to date on the relationship between social support of any type and depression in older persons is based upon data gathered in the 1980's and the 1990's. One researcher (Griffin et al., 2006), utilized somewhat more

recent data gathered in 2003, but older adults were not specifically examined and the relationship between social support and depression not exclusively focused upon. Cummings et al.'s (2003) secondary analysis investigated a sample collected between 1987 and 1989. The research publication (2006) on social engagement and depression by Glass, Mendes De Leon, Bassuk, and Berkman used the same New Haven EPESE data as that for this study.

After a thorough review of the literature examining the relationship between social support and depression in older adults, it appears that no research has been done to date that either addressed the possibility of changing relationships between social support and depression in older persons across time, or that allowed such a hypothesis to be tested. The topic of cohort differences in the relationship between social support and depression (i.e., examining if there are variations in results based on data obtained at different points in time), has yet to be addressed in empirical research. Thus, no evidence at the moment exists to support or refute the possibility of such a temporal change in relationships between social support and depression in older persons.

While it is important to recognize the potential threat to external validity posed by use of the existing data set, it is equally important to note that to date, no analysis has been done which focused on the possibility of a differential relationship between social support and depression in the elderly as a function of race. Hence, the results of the current dissertation provide a first contribution to filling in this gap in gerontological research. The results can serve not only as a first estimate of the differential relationship between social support and depression in older adults as a function of race, but may also be used as a point of comparison for future researchers who gather data on other cohorts

of older persons and who want to empirically test the possibility that relationships between social support and depression in older adults differs across time.

Lastly, the social support measures and definitions in this dissertation are limited to older adults who use venues of communication that require higher levels of direct human contact. The results are less applicable to older adults who rely more on forms of electronic communication, such as email and web cams, than on face-to face interaction. Future research needs to be done that focuses on how social support, provided by way of electronic communication such as email and web cams, affects depression in older individuals. Such research could provide evidence on how different forms of communicating may affect significant physiological and emotional health issues. One example of such research would be determining if depressive symptoms are mitigated to a greater degree by communication which requires in-person contact, such as a face-to-face visits, than forms of interaction that rely on electronic means, such as email, web cams, or phones which may also allow persons to see the individual with whom they are speaking.

Strengths

There are several strengths of this study. First, this research examined the relationship between social support and depression in one of the most rapidly growing segments of the total United States population, older adults, and on an under-explored portion of all older individuals, African Americans. Second, it utilized a readily accessible public use data set so that others might easily replicate the analysis. Third, the large sampling methodology used in the original study provided a reasonable basis for generalizing the study findings to the population sampled. Fourth, the sample was taken

from a large pool of metropolitan community-dwelling older adults. The recent rapid expansion of the United States population to urban areas allows the outcomes of this dissertation to be potentially more generalizable to larger numbers of today's older United States citizens.

Fifth, the total 20-item unmodified original version of the CES-D was used. It was important to utilize accurate and reliable instruments to measure depression among the aged who had particular healthcare needs that created distinctive challenges most other age groups do not have to cope with. Such health issues can affect the levels of depression experienced and subsequent reports of depressive symptomatology. The 20-item version of the CES-D used in this dissertation research is a widely studied 20-item self-report measure for depressive symptoms (Berkman et al., 1986; 2000; Berkman et al., 1992; Cole et al., 2000; Radloff, 1997). It has been generally considered a reasonably valid adequate measure for both African American and White older persons (Baker et al., 1996). It is recognized as a reasonably valid standardized tool for measuring the severity of symptoms of depression experienced by the aged (Blazer, 2003).

Remaining Gaps

Research Gaps

Large gaps continue to exist in research on various types of social support and their relationships with depression among the aged. Nationally, there has been a call for an increase of scientific research in the areas of health and healthcare. In 2004, the President's New Freedom Commission on Mental Health [NFCMH], and the federal government recommended that national agencies identify and consider payments for core components of "evidenced-based collaborative care" to be delivered to primary care

settings, particularly case management systems (NFCMH, 2009, p. 66). SAMHSA (2009d) recently acknowledged there is a need for more preventative information on older adults in mental health areas as the large body of current evidence focuses predominantly on children and adolescents.

A call has been made for research producing outcomes that will supply evidence to improve the effectiveness of the market-based healthcare system in the United States, as the available information is particularly limited on minority groups and healthcare service utilization (Hines-Martin, 2002). There is a need for knowledge on cultural influences and their impact on symptoms of depression (Gallo et al., 1998; Mui et al., 2001). There is also a paucity of research which compares rural and urban-dwelling older individuals and those who are socioeconomically disadvantaged with those who are not.

There is a call for more studies on age-related health conditions, depression, and the moderating effects different types of social support may have on these conditions as well as on the possible symbiotic relationships that exist among them. The science of psychoneuroimmunology, which examines the influences that psychological, emotional, and environmental factors have on immune responses, is also an area that is largely underexplored, particularly among older adults from different minority populations. More research is clearly needed in these areas.

There is also a need for knowledge on the identification and treatment of depression in all older adults, and in particular those of African American descent (Skarupuski et al., 2005). A request exists for more scientific inquiry on how older African Americans use professional and mental health services (Hines-Martin, 2002; Snowden, 2003). Available empirical literature on the African American population with

the condition of depression is scarce and limited (Baker, Velli, Friedman, & Wiley, 1995; Mills, 2000; Okwumabua et al., 1997). Research on intervention strategies used by informal support systems is also seriously lacking.

A dearth of scientific research also exists on older African Americans, Whites, and the influence on mental health from the interactions of negative social support, health, and religious factors (Lincoln, 2000; Lincoln, Chatters, & Taylor, 2005). There is a paucity of knowledge on African American and White differences in social participation in later-life.

Policy Service Gaps

Filling in these research gaps will supply information that may be utilized for the creation of services to assist thousands of older adults afflicted with depression. Much suffering can be alleviated and ameliorated by such efforts. The President's NFCMH warns there is a critical lack of adequate service systems for older adults with serious mental illnesses (SAMHSA, 2009f).

One priority noted by the Agency for Health Care Quality and Research Institute for Medicine is the identification of gaps in access to and use of healthcare services in order to address the needs of minority populations. The most recent report of the U.S. Surgeon General, "Mental Health: Culture, Race, and Ethnicity" (SAMHSA, 2009f; U.S.DHHS, 2009b) recognizes the ever expanding demand for cultural and age-appropriate services for all adults, especially for minority older persons as they rapidly increase in number.

Relevant to those who are socioeconomically disadvantaged, social workers can continue to advocate and lobby for legislative changes that encourage affordable

healthcare for those who are marginalized. This is particularly significant as older Americans use more health services than any other age group. Expenditures in healthcare are expanding rapidly as the baby-boom generation is approaching retirement age. Social work as a preventative profession can target cost, quality, and availability of healthcare, since access to health services is determined by these factors (NCHS, 2009).

Practice Gaps

The NASW encourages that social workers ensure cultural competency in their chosen area of practice. The demographic changes in America are creating a more pluralistic society. It is therefore essential for social work practitioners to be able to comprehend and be sensitive to the multidimensional constructs which capture various cultural aspects across people's lives. Individuals and social groups experience the world in different ways. This may affect communication in clinical practice, such as reporting of symptoms, clinician interpretation, and in social services suggested for the person(s) in need. Current and past ethnic and cultural influences should be considered in all areas of clinical practice (NASW, 2006). Assessments should include some items that would inquire about these facets and how they might impact a person's life choices.

The demand to improve understanding and knowledge of the dynamics of mental healthcare of minority populations with psychological needs has been brought into focus by the U.S. Surgeon General in their recent reports, "Mental Health: A Report of the Surgeon General" (SAMHSA, 2009g) and "Culture, Race, Ethnicity-A Supplement" (U.S. DHHS, 2001). It is recommended by SAMHSA (2009a; 2009f) that cultural and age sensitive outcome measures be implemented for older adults belonging to minority groups by trained and educated practitioners to create appropriate interventions which

include lifespan, developmental, and cultural variables. The NASW also promotes such initiatives (NASW, 2001; 2006).

Implications

Social Work Implications

The results of this dissertation clearly suggest that health factors have a stronger relationship with the severity of symptoms of depression, as indicated by the unique R^2 of .203 (i.e., 20.3% of the overall variation in depression uniquely accounted for) than does social support, which only uniquely accounted for about 2% of the total variation. This has important implications for social work in practice, policy, and research. First, the physiological health of an older person should be primarily considered when assessing the individual for services. A thorough psychosocial evaluation should include relevant baseline information on overall physiological health as reported not only by the client but also by a trained medical professional. A thorough physical evaluation is an essential foundational tool in all assessments and should be considered to be of fundamental importance whether the social worker is in a health or mental health setting.

The role of physical health problems in an older adult client with depression must also be considered. The role that ancillary health services might play, in addition to treatment for depression, should be routinely considered by practitioners. The results of the current research suggest this should be done before considering the role that social support might play in the treatment of depression in an older adult.

Social workers need to be educated on psychopharmacology and trained to be adept in utilizing updated resources on pharmaceuticals in order to establish competency in comprehension of medication side effects and contraindications. Basic knowledge on

human physiology, its components and potential influence on emotional behavior needs to emphasized and integrated more in education. Any physical health complaint should be considered as a potential source of symptoms that initially suggest a mental health condition such as depression (Morrison, 1997).

For many social work treatment programs, the use of physical activity is significant. This should, as always, begin with a thorough medical and psychosocial evaluation to discern proper activities to implement and suggest for treatment. Abundant evidence exists which confirms that physical activity is beneficial for the health and well-being of persons of all ages, including those over 65. Exercise may relieve symptoms of depression, reduce the risk of certain chronic diseases, assist in the maintenance of independent living, and enhance overall quality of life. Even among frail and very old adults, research has clearly shown that mobility and functioning can be improved through physical activity (NCHS, 2009).

For social work prevention, promotion of healthy aging programs is paramount. For those to whom it is applicable, information should be made easily available and accessible. Social workers as interdisciplinary practitioners should be educated and trained to address these areas.

It is well-recognized that negative health conditions detrimentally affect quality of life and contribute to declines in functioning. It is also highly acknowledged that depression is an important indicator of general well-being for all older adults. People who report numerous symptoms of depression often experience greater functional disability, higher rates of physical illness, and utilize more healthcare services (NCHS, 2009).

Fortunately, many mental health conditions can be ameliorated by bio-psychosocial interventions. Chronic health conditions can be modified and/or prevented by behavioral interventions (NCHS, 2009). Social workers need to utilize these resources to assist older adults afflicted with depression.

Understanding the perception of older adults' social support is critical in order to enhance social network connections (Cummings et al., 2003). Often, social workers are the only members of an interdisciplinary team who work from an ecological perspective in health and aging. It is their responsibility to consider the effect of other systems' impact on their client's functioning. In order to do this, internal and external resources must be evaluated in order to be utilized to their optimum benefits.

Social work assessments which evaluate mental health issues and examine social support areas that may pose potential problems need to be completed to prevent any severe consequences of depression (Cummings et al., 2003). Serious implications can be the by-products of undiagnosed or misdiagnosed depression in older adults making accurate identification of protective factors which guard against depressive illness paramount (Cummings, et al., 2003). Social workers need to highlight this potential threat of depressed affect among all older persons.

For social work policy, allocation of funds for programs for older adults must be disseminated with extreme judiciousness in the areas for which it is targeted. The results of this dissertation conclude that physiological issues may affect psychological well-being above and beyond any social support factors among the aged. It is plausible therefore to propose that social work policy address the promotion and integration of healthy aging programs on all governmental levels.

Social work can implement initiatives that enhance for the aged, education, accessibility, availability, and affordability on the new technological ways of communicating that have been developed. These can open wide vistas for an expansion in connectedness to others. Such in turn could assist in increasing a sense of belonging, purpose, and support. For those who are socioeconomically disadvantaged or reside in rural areas, these aspects also must be targeted. For adults dwelling in public housing for the elderly, residential homes for the aged, long term-care residences such as skilled care nursing facilities, nursing homes, private housing and elsewhere in the community, this must also be done. Such measures could assist in amelioration, treatment, and prevention of the onset of depression and future episodes.

The gaps in research in the social sciences open new windows of possibilities in the heretofore underexplored areas of social work research in physiological health and its integrative affects on mental health outcomes. Regardless of any age group, physiological health factors have powerful effects on emotional behavior. Since older adults experience more health challenges and use inordinately more health resources than all other age groups, it is logical that social work as a preventative profession focus on these components in research. Supplying empirical evidence from well-controlled studies which focus on the paradigms of physical, emotional health, and social support factors can be used to assist all persons globally.

Conclusion

It is socially imperative to focus on depression and social support research on all older individuals cross-culturally. Older adults are the most rapidly growing client population for social workers (NASW, 2009a). As a response to the major demographic

changes that are upon us as a nation with the enormous expansion of those advancing in age, the NASW has established an aging initiative. They acknowledge there will be an unprecedented demand from social work as a profession for aging-related services, policies, and programs (NASW, 2009a).

The NASW promotes conducting research in health disparities, increasing cultural competence in education and healthcare. They encourage social work practitioners to be leaders and active on health disparity research teams (NASW, 2009b). In 2001, the NASW published, "The Standards for Cultural Competence in Social Work Practice" in order to establish guidelines for culturally competent social work practitioners. In this, they concede that social workers must ensure they are culturally competent in their chosen area of practice. As well, the NASW recognizes that immense racial and ethnic disparities exist in the areas of physiological and mental health.

The NASW Code of Ethics (2006) emphasizes that cultural competence is an ethical obligation of all social workers. A foundational role of the social worker's primary responsibility is to address social problems and assist every person in privation (NASW, 2006). Social workers are expected to contribute to the development of knowledge by facilitation and promotion of research addressing culturally relevant needs of all populations (NASW, 2006). The results from this research will enhance social work practice, social work education, and improve the quality of services for all older adults experiencing the emotionally difficult and painful consequences of depression.

Mental health and social support are both multidimensional constructs which capture various aspects across individuals' lives. Cross-culturally, social groups

experience the world in different ways. In the United States, this may be largely due to historic social inequalities. Such facets might have implications for depression as they may affect the interpretations of life's circumstances and experiences.

It is crucial that more empirical knowledge be generated in this area given the increasing epidemic of depression among all older persons and the projected demographic expansion of population estimates. Decreases in state and federal resources and the current state of the economy all warrant attention to this subject. It is paramount that substantial evidence be produced to provide scientifically valid results which can improve the lives of countless older persons.

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Vita

Julie Helen Grocki was born January 7, 1963 on Long Island, N.Y. She graduated from Lindenhurst High School, N.Y, in 1981. Prior and post 1981, she took university courses in music, was the major drummer for the Suffolk Community College jazz band, and received several music scholarship offers. Julie opted to perform as a professional musician and has appeared with many highly acclaimed and world renown jazz and rock musicians culminating in the opening act for an Aerosmith tour in 1981. Soon after, she followed the call to religious life as a Roman Catholic nun and began her education at South West Missouri State University, Springfield, Missouri in 1987 majoring in Social Work. After having to leave education for several years, she resumed in 1996 at East Tennessee State University [ETSU], Johnson City, graduating magna cum laude in 1999 with a Baccalaureate in Social Work degree, receiving a Master's in Social Work Degree magna cum laude from Radford University, Virginia in 2001. She began pursuing the doctorate of philosophy degree in Social Work from the University of Tennessee, Knoxville in 2002. At ETSU, Julie was the recipient of the Women's Re-entry Scholarship in 1998 and 1999, the Highest Academic Standing in the Senior SWK Class award, the Social Work departmental award, "Academic Excellence Convocation" and on the dean's list from 1998-1999. In 2002, she received the "Student Achievement Award" from Radford University. She has been a member of the Pi Gamma Mu and Phi Alpha honor societies and past President of the University of Tennessee, Knoxville, Ph.D. social

work organization, PSWO. Julie has several peer-reviewed and non-refereed publications in the areas of gerontology, spirituality, mental and physical healthcare. She has been the main presenter at several social work, healthcare and church conferences. Julie has over 20 years of employed and volunteer experience as a lay minister in the Roman Catholic Church and in the disciplines of health, mental health and gerontological healthcare. Julie's goal in life is to make sure that the world is a better place because she has lived. Then she considers her life not having been lived in vain.