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THE RELATIONSHIP OF DEPRESSION WITH INTRINSIC AND EXTRINSIC COMPONENTS OF RELIGIOSITY IN THE OLDER ADULT FEMALE

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ABSTRACT

The purpose of this doctoral research was to determine whether religious activity and general health would predict depression in older adult women living alone in the community who are widowed, divorced, separated, or never married. Variables considered included intrinsic and extrinsic components of religiosity, level of depression, anxiety and panic attacks, general health, and a group of behaviors classified as Religious Attitudes and Behaviors (RAB), which considered importance of religion, religious participation, regularity of religious observance, and religious organization/social support. Components of extrinsic religiosity and intrinsic religiosity were measured by Intrinsic/Extrinsic – Revised (I/E-R). Levels of depression were measured by the Center for Epidemiological Studies in Depression (CES-D). A demographic questionnaire measured the other variables. Of the 118 participants, 82 fit the research criteria, which was that they were over 65 years old, unmarried, living independently and without roommates, not working, and having had no hospitalization within the past two years. A simultaneous regression of this sample resulted in self-perception of health being the only predictor of depression.

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CHAPTER 1

INTRODUCTION

Depression has been identified as "the most frequent cause of emotional suffering in later life, and it significantly decreases quality of life in older adults" (Blazer, 2003, p. 249). Researchers have suggested that spiritually or religiously informed interventions for depression are efficacious (Propst, Ostrom, Watkins, Dean, & Mashburn, 1992). One study revealed inconsistent results regarding the association between religious involvement and depression (Strawbridge, Shema, Cohen, Roberts, & Kaplan, 1998). Other authors have reported associations between various aspects of religious involvement and reduced levels of depression (Nelson, 1990; Pressman, Lyons, Larson, & Strain, 1990). On the contrary, Williams, Larson, Buckler, Heckmann, and Pyle (1991) found no direct relationship between frequency of religious attendance and depressive symptoms. Strawbridge et al. (1998) found that, whether or not religious involvement has an independent effect on mental health, it appears to be a significant coping mechanism during stressful times for the older adult.

This study examined participants' intrinsic and extrinsic components of religiosity, length of time widowed, length of time living alone, presence of medications for depression, diagnosis of depression, history of anxiety and panic attacks, importance of religion, participation in religious activities, regularity of religious observance, religious organization/social support, general health, and frequency of hospital admissions in the past year to predict levels of

depression in older women.

While many life events and personal characteristics affect depression, the relative strength of these events and factors is the focus of this study. Ultimately, the usefulness of this study is in identifying the variables examined in this study which have the most effect on depression among the participants. Programmatic and interpersonal interventions can then be employed to treat depression among this population. By examining personal behaviors, health status, and religious activities, this study provides a way to understand how these variables affect depression in the sample studied.

Depression and the Elderly

Depression is a common problem among older adults (Blazer, 2003), and as the U.S. population ages the prevalence of depression in older adults is also expected to increase. The rate of depressive disorders for women over 65 has been measured at 35% (Koenig et al., 1992). Depression has been shown to reduce quality of life, delay recovery from physical illness, increase length of hospital stay, and increase mortality (Blazer, 2003). Medical comorbidity, functional impairment, and comorbid dementing disorders all adversely influence depression while depression adversely affects the outcome of the comorbid problems (Blazer, 2003). Depression in late life was found to be an independent factor for heart failure among elderly women but not for elderly men (Frasure-Smith, Lesperance, & Talajic, 1993). Depression has been found as a major cause of weight loss in late life (Morley & Kraenzle, 1994). Depression has also been found to complicate and delay the recovery period from medical and physical illnesses and found to be a risk factor for poor self-rated health over time (Han, 2002).

Religion and Depression

Religious beliefs and behaviors are prevalent among older adults and are reported to be a coping mechanism to deal with and manage emotional distress (Blazer, 2003). Koenig, McCullough, and Larson (2001) cited a National Gallup poll finding that 95% of people in the U.S. believe in God or a Universal Spirit. Additionally, they found that 85% of Americans consider religion "very important" or "fairly important." Religious institutions are the single most widely available social organizations for the older adult, and older adults are more likely to be involved in a religious organization than in any other organization (Koenig et al., 2001.)

Gladding, Lewis, and Adkins (1981) contended that there were significant correlations between religious belief and mental health in both positive and negative directions. Though most results have consistently shown a positive correlation between religious involvement and life satisfaction (Coke, 1992), there have been mostly inconsistent results associating religious involvement and depression. While Mirola (1999) indicated no direct relationship between frequency of religious attendance and depressive symptoms for men, other reports have indicated reduced levels of depression with various aspects of religious involvement (Pressman et al., 1990).

Religious practice was found to be associated with less depression in elderly Europeans, especially if the religious practice was embedded into their value system (Blazer, 2003). Koenig, George, and Peterson (1998) found that religious coping and the belief that religion is the most important coping device were positively correlated with improved emotional and physical health. Specifically, religious coping was associated with a decrease in depressive symptoms such as loss of interest, feelings of worthlessness, withdrawal from social interactions, and loss of hope,

though not with reduction in somatic symptoms.

There is evidence indicating how an individual's degree of religiosity and spirituality are statistically related to, and could affect levels of, depression in various populations. Koenig et al. (1998) found that medically ill hospitalized men over age 60 who scored higher on intrinsic religiosity had more rapid remissions of depressive symptoms than those with lower scores. Koenig, George, and Meador (1997) found church attendance to be negatively correlated with depression with medically ill men and women over age 60. Spiritual aspects of coping, such as prayer, were associated with decreased depression and decreased general distress in coronary artery bypass grafting. Ellison (1994) has theorized that religious involvement may result in reduced exposure to some stressors, but could increase the likelihood of depression for some stressors involving family and work relationships because of the emphasis placed on harmony by religious groups.

Intrinsic and Extrinsic Religiosity

Allport and Ross (1967) identified two types of religiosity in their research: extrinsic religiosity and intrinsic religiosity; both are measured on the Religious Orientation Inventory (ROI). Extrinsic religiosity refers to church attendance, volunteer activities related to religion, and religious activities involving at least two people. Intrinsic religiosity refers to solitary activities such as praying, Bible reading, and personal beliefs in God. Extrinsic activities provide social support, which is important to well-being and has been inversely related to depression. Neill and Kahn (1999) indicated that religious communities could provide social support without the stress and dependence on family members. However, as one ages it may become more difficult to participate actively in the religious community.

The findings regarding the effect of religiosity on depression are inconsistent for race,

ethnicity, gender, and religious denomination (MacKenzie, Rajagopal, Meibohm, & Lavizzo-Mourey, 2000). Regarding religion, spiritual and religious commitment has been reported as being more prevalent in women than in men (Koenig et al., 2001). Gallup (1990) indicated that over two-thirds of women identified religion as a most influential aspect of their daily lives versus only 52% for men. King, Cummins, and Whetstone (2005) conducted a study looking at religion and mental health in midlife women. Mental health scores of women who attended religious services regularly was significant after controlling for baseline health status, race, and marital status. They also found that women who attended religious services on a regular basis declined in health status more slowly than women who attended religious services infrequently or not at all.

Blazer (2002) has demonstrated a significant correlation between intrinsic and extrinsic religiosity and aspects of mental health. Knowing which aspects of intrinsic and extrinsic religiosity are correlated with lower levels of depression could be valuable information in aiding older adults.

Statement of the Problem

Between 5% and 30% of the U.S. population are affected by depression (Westgate, 1996). While the suicide rate is decreasing for most American age groups, it is rising among people 75 and older, and the association between depression and suicide is well documented across the lifespan (Conwell et al., 2000). Conwell et al. also stated that at least 20% of elderly Americans who committed suicide had seen a physician in the preceding 24 hours, and more than 80% had seen a physician within the previous month.

Until recently, depression studies have focused on the somatic, affective, and cognitive aspects of depression. Burke, Hackney, Hudson, and Mirantie (1999) state that because of the

recent interest in holistic approaches to treatment, researchers have started to inquire about the relationship between religion and depression, and include religion, or spirituality, in counselor training programs. A National Gallup survey indicated that two thirds of respondents, when dealing with a serious issue, preferred to see a counselor who held similar religious values and beliefs (Burke et al. 1999).

Knowing the importance of religion as a coping skill in the lives of older adults, it seems appropriate to be knowledgeable about the role of religion when engaging in therapy. Religious cognition and behavior has been demonstrated to be especially helpful to older adults in situations where there is a change in functional ability and in other situations where sense of control is lost (Koenig et al., 1998).

Heterogeneous studies have indicated that women of all ages participate in religious practice more than men (Koenig et al., 1998; McFadden, 1995), yet there have been no studies specifically examining the effect of religiosity on depression in older adult women. Neill and Kahn (1999) described how women past childbearing years are often subjected to a double discrimination based on their status as a woman and as an older person. Women constitute a majority of the older adult population; consequently women's issues and problems are the majority population problems. Aging women are rarely the focus of geriatric research, but when they have been the focus of research, the focus has been on their hardships and losses rather than their strengths (Neill and Kahn).

As stated earlier, depression rates for older adult men and women are high. Depression appears to be more prevalent in women than men as reported by the Epidemiologic Catchment Area Study report (King et al., 2005). A lifetime prevalence rate of major depression is 8% in women and 3.5% in men. Weissman, Bland, and Canino (1996) reported that lifetime

prevalence of depression for women in the United States is two times higher than the lifetime prevalence rate for men. Kessler, McGonagle, and Zhao (1994) reported prevalence rates of depression as 21% in women and 13% in men when reporting both major and minor types of depression. Birrer and Vemuri (2004) reported that rates of depression are higher as women age, and are usually associated with co-morbidity.

Spiritual and religious commitment has been reported as being more prevalent in women than in men (Koenig et al. 2001). Gallup (1990) indicated that over two-thirds of women identified religion as a most influential aspect of their daily lives versus only 52% for men. King et al. (2005) conducted a study looking at religion and mental health in midlife women. Mental health scores of women who attended religious services regularly were significantaly higher than women who did not after controlling for baseline health status, race, and marital status. They also found that women who attended religious services on a regular basis declined in health status more slowly than women who attended religious services infrequently or not at all.

In a study looking at members of the Church of Latter Day Saints, Norton et al. (2006) found significant gender differences in the effect of religious involvement on depression. Women who attended church periodically, as which was defined as one to two times per month, had a reduced risk for depression in comparison with women who never attended church. Women who attended church infrequently, defined as less than monthly, showed more psychological distress than women who received home based church services. It appeared that the women who attended church infrequently felt disconnected and were possibly experiencing religious doubt.

In contrast, men in this study (Norton et al., 2006) who attended church services one to two times per month showed higher levels of depression than those who never attended. Norton

et al. explained that men in this study possibly experienced a higher level of depression due to organizational power differentials by gender. Men in this sample of Latter Day Saints church attendees held more organizational power than women, which is typical with the Latter Day Saints, where the leadership positions are primarily occupied by middle aged men. Thus, men over age 70 who continue to attend church may experience a sense of displacement. Another reason for higher depression rates in men who attended church may be due to their focusing more on administrative aspects rather than utilizing church attendance as a social outlet. Based on a higher prevalence of depression in women than in men, women constituting a majority of the older adult population, and the importance of religion in women, a study looking at the relationship of depression and various aspects of religion seemed worthy.

Research Question

The variables of interest in this study are as follows: participants' extrinsic religiosity and intrinsic religiosity scores as measured by the Intrinsic/Extrinsic-Revised Scale (I/E-R) (Gorsuch & McPherson, 1989); participants' length of time widowed; participants' length of time living alone; participants' use of prescription of medications for depression; participants' previous diagnosis of depression; presence or absence of participants' anxiety and panic attacks; participants' general health; number of participants' hospital admissions in the past year; importance of religion to the participants; participants' religious activities; regularity of participants' religious observance; and presence or absence of participants' religious organization/social support. These variables have been associated with decreased or increased levels of depression in older women as measured by the Center for Epidemiological Studies for Depression scale (CES-D) (Radloff, 1977). The research question is as follows: Which of these variables, or combination of these variables, will best predict levels of depression among a

population of older adult single women who were either widowed, divorced, separated, or never married.

Operational Definition of Terms

To facilitate a better understanding of various terms used throughout this document, operational definitions are provided below.

Extrinsic religiosity. Types of religious behaviors which consist of religious activities involving social interaction and are motivated by social prestige (Es) or used for personal gratification (Ep) are extrinsic religiosity. Examples of this include church services and church socials. This was measured using the I/E-R.

Intrinsic religiosity. This refers to types of religious behaviors that involve private religious practices that are not always readily observed. These activities would include personal beliefs, Bible reading, private prayer, and meditation. This was measured using the I/E-R.

Length of time widowed. This was measured using a self-report of the years of widowhood.

Length of time living alone. This was measured using a self-report of the years of living alone.

Presence of medications for mood. This was measured using a self-report of whether or not each participant is taking psychotropic medications for depression, anxiety, or panic attacks.

Diagnosis of depression, anxiety, and panic attacks. This was measured using a self-report of any current diagnosis or history of diagnosis of depression, anxiety, or panic attacks.

Importance of religion. This was measured using a self-report of the importance of religion in each participants life.

Religious activities. This was measured by combining participants' self-reports of participation in religious ceremonies as a child, the importance of being married to someone in same faith or religious group, whether or not participants brought their children up in their faith or religion, whether or not their children participated in religious ceremonies growing up, and whether or not religion was important to participants as young adults.

Regularity of religious observance. This was measured by a self-report of whether they attend religious services daily, 1-2 times per week, 1-2 times a month, for major holidays, or not at all.

Religious organization/social support. This was measured by a self-report of whether all, most, half, some, or none of the participant's friends attend the same religious organization.

General health. This was measured by a self-report describing one's health as excellent, good, fair, or poor.

Hospital admissions in the past year. This was measured by a self-report of having two or more hospital admissions in the past year.

Level of depression. Level of depression was evaluated on a scale of 0 to 60 using the CES-D Scale. A higher number reflects more symptoms and higher frequency of depressive symptoms. This scale was based on the depressive criteria as outlined in the Diagnostic Statistical Manual for Mental Disorders-III-R (American Psychiatric Association, 1994).

Older Adult. Participants was at least 65 years of age to be classified as an older adult in this study. While senior citizen status is often recognized at 55, this study used 65 because it is the age at which individuals typically cease full-time work.

Assumptions

The following assumptions were made for this proposed study:

1. Participants will respond accurately and honestly to all the instruments.

2. Participants in this study will be representative of the residents in the active retirement community from which this study will be taking place.

3. All instruments accurately measure the constructs.

Limitations

Conclusions drawn from the data collected in this study will be limited by the following:

1. The use of participants from the active retirement community who volunteered to participate will bias the sample in unknown ways.

2. The fact that all information collected is self-reported data.

3. The assumption that the composition of the residents who volunteer to participate are average to above average socioeconomic status given the nature of the retirement community.

CHAPTER 2

LITERATURE REVIEW

Depression Among Older Adults

Reports of the prevalence of clinically significant depressive symptoms among community-dwelling older adults range from approximately 8% to 16% (Blazer & Williams, 1980). There have been few studies of depression among the very elderly, aged 85 years and older, even though this segment of the population is one of the fastest growing. Hegal, Stanley, and Arean (2002) stated that the older adults over age 65 may experience many of the symptoms of depression but not at the threshold required to meet diagnostic criteria. Lyness, King, Cox, Yoediono, and Cane (1999) reported that sub-syndromal depression in older primary care patients was more prevalent than major depression, minor depression, and dysthymia, and was associated with functional disability and medical comorbidity similar to that seen in major or minor depression. Overall, most agree that increasing age and increasing health problems result in an increased risk for depression.

Rates of depression have been found to steadily increase with age after the age of 65 (Kessler, Foster, Webster, & House, 1992; Palsson, Ostling, & Skoog, 2001). Factors found to be associated with an increased risk of new onset depression in late life include a prior history of depressive symptoms (Palsson et al. 2001), female gender (Sonnenberg, Beekman, Deeg, & van Tilburg, 2000), functional impairments (Cummings, Neff, & Husaini, 2003) and life events

(Shear, Roose, Lenze, & Alexopoulos, 2005).

The positive association between depression and suicide has been well established in the literature across the lifespan. Blazer, Bachar, and Manton (1986) cited suicidal ideation as high among older adults, ranging from 5%-10% of the population. Those older adults attempting suicide were more likely to be widowed, living alone, perceiving their health status as poor, experiencing poor sleep, lacking confidence, and experiencing financial or interpersonal discord. Their attempts also appeared to be more successful with approximately four attempts for each completed suicide in late life compared with 10 or more attempts per completed suicide in earlier life (Blazer, 2003).

The rationale for including only single women in the present study is related to the literature on women, aging, depression, and religion. Klerman and Weissman (1989) reported that women are twice as likely as men to be diagnosed with depressive symptoms. Though married women show higher rates of depression than married men, levels of depression are higher in widowed men than in widowed women (Umberson, Wortman, & Kessler, 1992). The present study is looking specifically at widowed women because more than four times as many women (8.9 million) are widowed as men (2.0 million) as reported by the U.S Department of Commerce (2003). Among women aged 65 and over, 46% were widowed, compared with 41% who were married and living with their spouses. Among men in the same age group, 73% were married and living with their spouses and only 14% were widowed (U.S. Department of Commerce).

Conversely, there are several facts explaining the significantly higher percentage of widowed women than widowed men. Increases in life expectancy among both men and women have delayed the age at which most men become widowed (Van Grootheest, Beekman, Broese

Van Groenou, & Deeg, 1999). Men are more likely than women to remarry following widowhood. Widowed women may appear to be depressed because the healthiest and most well-adjusted individuals remarry, which could exaggerate the effect of widowhood on depression (Van Grootheest et al. 1999).

Women who had surgery in the past year were not included in the present study because of the findings that these individuals used significantly more community services and support systems than usual while recuperating (Wang, Mitchell, Smith, & Leeder, 1999). Examples of such services include Meals-on-Wheels, Home Help, and community nursing. This use of services may constitute a set of coping behaviors that are not generally used by women who have not recently had surgery.

Some have argued that dementia, disability, physical illness, loss of independence and security, and bereavement are all much more common in old age which increases the prevalence of depression (Blazer, 2003). Depression in late life is often comorbid with other physical and psychiatric conditions, especially in the very elderly (Blazer, 2000). In a study of community dwelling Mexican American elders, depression was associated with diabetes, arthritis, urinary incontinence, bowel incontinence, kidney disease, and ulcers (Black, Goodwin & Markides, 1998). On the other hand, Caucasians experienced the highest level of comorbities of depression with hip fracture, stroke, myocardial infarction and other heart conditions, and diabetes (Black et al. 1998). Depressive symptoms are common in older adults with mild dementia of the Alzheimer's type (Rubin, Veiel, Kinseherf, Morris, & Storandt, 2001). Major depression has been present in approximately 20% of Alzheimer's patients (Krishnan, Hays, & Blazer, 1997).

The prevalence rate for major depression of older adults hospitalized for medical procedures is 12-58%, which is significant, considering that presence of depressive symptoms

can hinder improvement of medical problems (Arnold & Kafetz, 2002). A study by Lyness et al. (2002) looked at 247 patients in a primary care setting. Of these patients, 9% were diagnosed with major depression, 6% with minor depression, and 10% with sub-syndromal depression. Fifty-seven percent of these participants experienced active depression at a one-year follow-up appointment.

Depression is clearly associated with functional impairment (Blazer, Burchett, Service, & George, 1991) and has been found to have an effect on disability status over time. In a study by Penninx, Leveille, Ferrucci, van Eijk, and Guralnik (1999), depression increased the risk for disability of daily living skills by 67% and mobility disability by 73% in six years. This study also revealed that less severe symptoms of depression are associated with physical decline. One explanation for the devastating effect of depression is that emotional disability can lead to restriction of valued social and leisure activities, isolation, and reduced access to social support.

Several studies have found that traditional physician-based therapy is ineffective in the treatment of major depression and subsyndromal depression (Koenig et al., 1998). Such results are typical as most clients are not treated by a specialist in psychology or psychiatry. Most of the older adults who are treated for depression are treated by family physicians who give sub-therapeutic doses of tri-cyclics and excessive doses of selective serotonin reuptake inhibitors and who do not conduct appropriate follow-up or dose monitoring, and these result in short duration of treatment due to discontinuation (Koenig et al., 1997).

Recognition of depression among the elderly has shown to be consistently poor. In a study by Teresi, Abrams, Holmes, Ramirez, and Eimicke (2001), only 50% of patients with depression in a long-term care facility were recognized as being depressed by nursing and social work staff. Internists tend to accept responsibility for treating late-life depression but perceive

their clinical skills as inadequate and are frustrated with their practice environment (Callahan, Hendrie, Neinaber, & Tierney, 1996). Screening of depression is considered critical as depression rates are high and consequences severe. The association between depression and suicide across the life cycle has also been well established in literature, making it a serious life-threatening problem (Conwell et al., 2000; Huang et al., 2000; Waern et al., 2002).

Suicide rates approach 5% among older adults who report significant depressive symptoms (Callahan et al., 1996). Suicide frequency in the United States among those aged 65 and over was 16.9/100,000 in 1998 with the frequency for White men increasing with age to 62/100,000 in the age group 65 and over range (National Center for Health Statistics [NCHS], 2001). The rate of completed suicides increased with age. Alexopoulos (2005) reported that suicide occurred almost twice as frequently in elderly individuals than in the general population. Depressive syndromes were present in 80% of people 74 years of age and older who commit suicide. The prevalence and incidence of major depression doubled after age 70-85 years. A follow-up study by Alexopoulos indicated that contemporaneous severity of depression was the most important determinant of suicidal ideation over time.

Importance of Religiosity

Religion has been shown to be of great importance to elderly Americans. In the United States, 52% of people age 65 and over attend religious services at least once a week, which is the highest percentage of any age group (Princeton Religion Research Center, 1994). McFadden (1995) found that older persons show highest level of religious participation of any age group, with women being more religious then men. Seventy-six percent of older adults rate religion as very important. Wink and Dillon (2002) found that individuals become more devout as they age. Several studies have concluded that older adults frequently turn to religion to cope with

emotional turmoil, to deal with terminal illness, to find comfort, and to reconcile fears related to death and dying (Idler, Kasl, & Hays, 2001; Koenig, George, & Siegler, 1988).

Intrinsic religiosity involves religious behaviors that involve private religious practice, such as prayer, which is "a frequently used form of religious expression among adults in general and older adults in particular" (Levin and Taylor, 1997, p. 85). As Levin and Taylor did not find a significant relationship between intrinsic religiosity and lower levels of depression, Aranda (2008) also did not find a significant relationship between the two. Aranda looked at 230 low-income US-born and immigrant Latinos residing in a large metropolitan U.S. city. Aranda study found a significant relationship between religious attendance and lower level of depression after controlling for physical functioning, stress exposure, and social support.

Moderate to higher levels of religious well-being were associated with 1.5 higher odds of depression in a study by Maselko, Gilman, and Buka (2009). These authors defined religious well-being as "the quality of a person's relationship with God or higher power" (p. 1009). Participants for this study were the 35-44 year old offspring of the New England Family Study. Of the 918 subjects, 64% were female, 87% were white, and 62% were married, and the prevalence of subjects who had a lifetime history of a major depressive episode was 30%. Though these participants looked at middle aged adults rather than older adults over age 65, reasons for the results by Maselko et al. included the fact that a subject who is depressed relies more on religious coping methods, which would lead to higher levels of religious well-being. Harrison, Koenig, Hays, Eme-Akwari, and Pargament (2001) also found that religious coping is prevalent among clinically ill populations.

Strawbridge et al. (1998) found no association between non-organizational religiosity and depression but a negative relationship between organizational religiosity and depression even

when physical health was taken into account. This study also found evidence of how non-organizational and organizational religiosity buffered or increased certain stressors and depression. Religiosity acted as a buffer with non-family issues, but also acted as a stressor increasing depressive symptoms with family related stressors.

O'Connor and Vallerand (1989) looked at a person's motivation toward religious activities in hopes of clarifying some of the inconsistencies in the literature. They distinguished four types of religious motivation based on a model by Deci and Ryan (1987): intrinsic, self-determined extrinsic, non-self-determined extrinsic, and amotivation. Non-self determined extrinsic occurs when feeling obligated to participate in a religious activity because of a possible reward or constraint. On the contrary, self-determined extrinsic motivation is behavior valued and chosen by one. Amotivated behavior is neither intrinsic nor extrinsic and the person sees no purpose and no expectation of reward in continuing this behavior which will eventually cease. The authors concluded that "forcing individuals to participate in an activity may lead to an external perceived locus of causality for the activity, which reduces intrinsic motivation, increases non-self-determined extrinsic motivation, and may eventually lead to amotivation and withdrawal" (O'Connor & Vallerand, 1989, p. 58).

Research has suggested that religion is an effective means of coping with cancer (Musick, Koelig, Hays, & Cohen, 1998). These researchers also observed no differences in levels of religious activity between cancer and non-cancer groups, suggesting the importance of intrinsically religious activity such as private prayer and meditation. There are also studies indicating that there is an association between decreased levels of depression and religious involvement (Ellison, 1993; Nelson, 1990; Pressman et al., 1990).

Research indicates that older persons with an intrinsically motivated faith demonstrate increased capacities to cope with changes in their physical health and living circumstances because of their sense of hope and their perspective that things will turn out for the best. In other words, religion has served as a buffer against depression (Strawbridge et al., 1998). Koenig et al. (1998) observed that intrinsic religiosity was a strong predictor of time to remission when patients' physical functioning had worsened or improved minimally. Religion seems to have fostered emotional recovery when hope for physical recovery was dismal.

In a study by Koenig et al. (1988), 45% of 100 older adults living in the community reported using religious coping behaviors to deal with stressful events. The most commonly mentioned activities were trust and faith in God and prayer. Social church activities were less commonly noted. In another study by Blazer (2003), of 255 older adult men and women, 75% reported the use of faith as the most common coping mechanism. Blazer indicated that 74% of chronic dialysis patients reported religious beliefs to be most helpful in coping with their disease and treatment regime.

Pargament et al. (1992) developed a conceptual framework of coping to examine the relationship between coping and religion. This framework of coping was described as highly interactive and consisting of several elements; appraisal, coping, and outcome. A person would first look at the life event and appraise how this event would affect them. The appraisal stage consisted of the individual assessing how threatening the event was to them in combination with the individual's perception of their ability and options to handle the event. Personal and social resources and constraints affected the individual's process of coping. Examples of these resources included the individual's level of competence, personality characteristics, attitudes and beliefs, financial resources, physical health status, and social networks. Outcomes of the coping

process looked at various ways the event would affect a person: either short-term or long-term, psychologically or physically, and positively or negatively. Finally, Pargament et al. (1992) found that religion had been positively linked with several constructs, including self-esteem, control, meaning, growth, belonging, emotional restraint and comfort, and emotional release.

Pargament et al. (1992) identified three ways in which religion could be involved in coping. First, religion can be part of each element of the coping framework as many life events can be seen as religious in nature. An example is that tragedies can be interpreted as part of God's plan. Confession, support from the congregation, anger towards God, praying for a miracle, and looking to God for emotional strength are all considered different religious coping activities. Coping was also considered by Pargament et al. to be a way for some to establish a closer relationship with God.

Contribution was the second way in which religion was involved in coping (Pargament et al., 1992). Pargament discussed how religious activity can contribute to a person's ability to cope and be involved in the coping process through religious practice and relationships through the church. Hill, Angel, Ellison, and Angel (2005) discussed how religious activity improved a person's ability to cope simply by living a healthier lifestyle. Hill et al. conducted a study on adults younger than 65 resulting in religious activity being positively correlated to living a healthier lifestyle and engaging in less risky behavior to include decreased likelihood of drug abuse, alcohol abuse, decreased cigarette smoking, and increased physical activity.

Religion, in the form of increased faith, was the third aspect and product of the coping process. This was demonstrated by Pargament et al.'s (1992) study examining religious responses of college students to four types of imagined life events: positive, negative, just world, and unjust world. All of these were attributed to God. Positive outcome events were attributed to

God's love. Negative outcome events were attributed to God's anger and disapproval. Unjust events resulted in attributions to God's will. Another study conducted by Pargament et al. (1988) indicated that increased faith through religious coping followed the birth of a child, periods of loneliness, incidence of emotional difficulties, and work promotions.

A study on Latino participants found that improved health makes involvement in religious activities, as church attendance, possible (Hill et al., 2005). Aranda (2008) found an increased risk of depression among respondents with poor physical role functioning, illustrating that important limitations were found in performing or accomplishing typical physical activities. Hill et al. (2005) state how "physically and functionally robust older adults are more likely to attend religious activities than are less healthy older adults because of their more favorable health status" (p. S103). Idler and Kasl (1995) found that self-ratings of health are strongly associated with change in functioning. They found that older adults who reported poor health were almost two and a half times as likely as their peers with excellent health to experience a decline in functional ability as many as six years later. There was no difference between men and women, but there was a stronger association in younger previously non-disabled rather than older elderly persons. Oxman, Freeman, and Manheimer (1995) have suggested that physicians could encourage religious involvement in the same way physical exercise is emphasized.

There has been evidence indicating that people become more religious as they grow older (Koenig, 1995). The reasons provided included that: (a) older adults who attended church services more frequently received more religious support than those who did not attend religious services often; (b) one function of religious support was to instill and maintain religious coping mechanisms; (c) older adults who adopted religious coping mechanisms dealt more effectively with stressful events than older adults who did not rely on religion (Pargament et al., 1988).

One study found that infrequent church attendees were twice as likely to be clinically depressed as people who attended church activities more consistently, but also that the effect of religion was insignificant when controlling for education, caring from spouse, health, and income (Gartner, Larson, & Allen, 1991). Ellison (1993) found an association between religious attendance and depression for Whites but not Blacks. There was no correlation found between religious involvement and depression for older Mexican Americans. There were also lower levels of depression for women than for men. Levin and Vanderpool (1987) indicated an association between more frequent use of religious coping and cognitive symptoms of depression but not somatic symptoms of depression. It was hypothesized that some religious denominations might increase stress and depression in members by making excessive demands on their resources, such as time and financial contributions.

Ryan, Rigby, and King (1993) indicated that religiosity was unrelated to psychological well-being but that different types of religiosity could either facilitate or inhibit mental health. They therefore concluded that if one is religious, it matters how they are religious. A person can be religious in a private way through prayer, Bible reading, and meditation or in a more public way through church attendance or social activities through the church. Yinger (1969), using religion as a verb to denote religious activity, concluded that 69% of people are "religious" in some way. He proposed that the more appropriate question to be asked is not whether a person is religious, but rather how a person is religious. In an effort to recognize the ways in which people could be religious, he redefined religion as: (a) where one finds awareness of an interest in the continuing, recurrent, "permanent" problems of human existence; (b) where one finds rites and shared beliefs relevant to that awareness which define the strategy of an ultimate victory; (c) where one has groups organized to heighten that awareness and to teach and maintain those rites

and beliefs.

Intrinsic Religiosity and Extrinsic Religiosity

Allport and Ross (1967) defined extrinsic orientation in the following way.

> Persons with this orientation are disposed to use religion for their own ends. Extrinsic values are always instrumental and utilitarian. Persons with this orientation may find religion useful in a variety of ways – to provide security and solace, sociability and distraction, status and self-justification. The embraced creed is lightly held or else selectively shaped to fit more primary needs. In theological terms, the extrinsic type turns to God, but without turning away from self. (Allport & Ross, 1967, p. 434)

Intrinsic orientation was defined as follows.

> Persons with this orientation find their master motive in religion. Other needs, strong as they may be, are regarded as of less ultimate, significance, and they are, so far as possible, brought into harmony with the religious beliefs and prescriptions. Having embraced a creed the individual endeavors to internalize it and follow it fully. It is in this sense that he lives his religion. (Allport & Ross, 1967, p. 434)

In summary, Allport and Ross (1967) stated the briefest way to characterize extrinsic and intrinsic religiosity is as "two poles of subjective religion … the extrinsically motivated person uses his religion, whereas the intrinsically motivated lives his religion" (p. 434). Extrinsic religiosity could be seen as self-serving and fluctuating depending on the needs of the moment. It was also seen as the choice that offered the greatest perceived value. Intrinsic values were defined as a framework by which one's life was understood. These were stable and guided one's life regardless of external consequences.

There is substantial literature supporting Allport and Ross's (1967) assertion that religious individuals with an intrinsic faith are more psychologically adjusted than are those who are extrinsically oriented toward religion (Donahue, 1985). Brown and Lowe (1951) and Watson, Hood, Foster, and Morris (1988) found lower levels of depression to be associated with intrinsic religiosity, and higher levels of depression to be correlated with extrinsic religiosity. Donahue found that religious orientation could be correlated with various personality characteristics. Persons with an internal religious orientation were found to be less socially conforming, less prejudiced, and less ethnocentric. They were also more forceful about their religious beliefs towards others, more manipulative of others, and more likely to see God as punitive.

CHAPTER 3

METHODOLOGY

On September 25, 2007, The Institutional Review board determined that this present study, pursuant to Indiana State University's *Policies and Procedures for the Review of Research Involving Human Subjects* and 45 CFR 46, fell within an exempt category and was therefore considered exempt from Institutional Review Board Review.

Participants

Participants consisted of 82 single adult females at least 65 years of age who had no more than two medical hospitalizations in the past year. Of the 131 completed questionnaire packets, 118 were completed, but only 82 were considered valid and used. Thirty-six were omitted because they were completed by men, by women who were not yet 65 years of age, currently married, living with family and/or friends, or had a hospitalization within two years of their participation in this research, or were currently working.

This study includes only widowed, divorced, separated, or never married women aged 65 and older who did not work full-time and lived alone at the time research was conducted. Non-working women who lived alone were picked as they do not typically have the social support network associated with work settings.

Procedure

Female residents of an active retirement community and a senior citizens' center in the southeastern United States were asked to participate in this study. Participants were given the project description with contact information in case the participants had any questions regarding the study (Appendix A) before completing the remainder of the packet. Each participant was then given one packet including the informed consent form, demographic questionnaire, the I/E-R, and the CES-D. The informed consent form, demographic questionnaire, the I/E-R and the CES-D together took most participants approximately 15 minutes to complete. The information obtained from the I/E-R, CES-D, and the demographic questionnaire were matched to one another by packet number.

In the active retirement community permission was sought from staff in the main office to conduct this research. This researcher was given a list of groups and clubs, their meeting times and places, and a contact person for each group. This researcher called nine of the contact people for the clubs or groups to seek permission to use their activity time and space to conduct this research. Four contact people agreed to allow me to use their activity time and space to conduct the research. These included interest groups in New York State, golfing, gardening, and an exercise group. At the time of the data collection, this researcher was introduced by the contact person and this researcher gave a general overview of the purpose of this study and asked for volunteers. Those individuals who consented to participate were told about the research and this researcher spoke with them about informed consent. Research materials were distributed along with writing implements and everything was collected after participants had completed the forms. It was typical for half of the audience to leave the room after having the study explained, and one group returned the data collection materials without completing the data collection.

At the senior citizens' center, this researcher spoke with the activities coordinator seeking permission to collect data during the center's activities. The coordinator selected groups that she felt would be most receptive to participating in this research and which would also have the largest number of participants. These activities occurred at different locations in the same city. Participants were recruited at two health and wellness fairs, and at one luncheon on pet health. There were scheduled speakers at each of these events, and at each of these three events this researcher was introduced at the beginning of the event and an announcement was made asking for research participants. At the conclusion of the event individuals were invited to stay and participate in the research. This researcher explained the purpose of the research and informed consent, and individuals took the research materials back to their luncheon table and completed the forms. Many of the same individuals were in attendance at all three events so the number of participants diminished at each event.

Other participants came from three exercise classes at the senior citizens' center. This researcher was introduced by the instructor at the beginning of each class or at the beginning of a break and participants were directed to contact me at a table in the room. In a general announcement during the break and again once the sessions were over people were also asked to participate. This researcher explained the purpose of the research and informed consent and participants at the table in the exercise room.

Additional participants came through a senior citizens' center craft event where this researcher was introduced by the instructor. Participation in the research was presented in place of their craft activity for that day. This researcher explained the purpose of the research and explained informed consent, distributed assessment materials and writing implements, and collected completed research packets. Individuals may have participated in their craft activities

after data collection was completed.

Instrumentation

Instrinsic/Extrinsic-Revised Scale. The Intrinsic/Extrinsic-Revised Scale (I/E-R) is a self-report measure consisting of 14 items used to assess one's religious orientation toward an extrinsic or intrinsic dimension. The participants report agreement or disagreement on a 5-point Likert-type scale (1 = I strongly disagree, 2 = I tend to disagree, 3 = I'm not sure, 4 = I strongly agree, 5 = I strongly agree). A summary score was determined for each of the extrinsic and intrinsic scales. The I/E-R is valid and reliable with Cronbach's alphas ranging from .93 and .81 for the intrinsic subscale and from .82 to .69 for the extrinsic subscale (Gorsuch & McPherson, 1989).

The Intrinsic/Extrinsic-Revised scale (I/E-R; Gorsuch & McPherson, 1989) was developed to discriminate between people who were intrinsically motivated and those who were extrinsically motivated in their religious behavior. The 14 items on the I/E-R are based on Allport and Ross (1967) Religious Orientation Scale consisting of 20 items. The original Allport and Ross scale was revised by Gorsuch and Venable (1983) to simplify the language to be used with children, fifth grade and above, and adults, without changing the basic content of the original scale while maintaining the 20 items. Gorsuch and Venable conducted three studies to ensure the age universality, thus being referred to as the Age Universal Religious Orientation Scale.

Gorsuch and McPherson's (1989) revision was based on the workings of Kirkpatrick (1988), who reanalyzed the older I-E scale and concluded "the extrinsic scale subdivides into categories of extrinsicness: namely, what we call "Ep" for extrinsic items that are personally oriented and "Es" for extrinsic items that are socially oriented. Furthermore, some E items

seemed to be revised I items" (p. 348). Gorsuch and McPherson also found that certain measures could be effectively measured in a single item of sufficient quality, reducing the number of items from 20 to 14. They called the resulting scale I/E-R.

For this study, four items on the I/E-R were altered to include people of all religious and non-religious beliefs. Wherever church was mentioned, "mosque, temple, or other religious meeting place" was added. It is not anticipated that this changed the reliability or validity of the I/E-R. An example statement from the Es subscale, updated for this research, is "I go to church, mosque, temple, or other religious meeting place mostly to spend time with my friends." An example question from the Ep subscale is "What religion offers me most is comfort in times of trouble and sorrow." An example statement from the I subscale is "I try hard to live all my life according to my religious beliefs."

Numerous analyses regarding the Allport-Ross I-E scales have questioned the construct validity of the subscales. Kirkpatrick (1988) has demonstrated in multiple samples that three factors were identified in the I/E-R. Factor analyses of intrinsic and extrinsic religion had identified two subcategories of extrinsicness, which are extrinsic social (Es) and extrinsic personal (Ep) (Donahue, 1985; Gorsuch & McPherson, 1989). Multiple group factor analyses were conducted by Gorsuch and McPherson to identify extrinsicness associated with social relationships and with personal benefits.

Center for Epidemiologic Studies Depression Scale (CES-D: Radloff, 1977). Assessment of depression typically takes one of three forms: clinical observation, self report, or self report through an assessment tool. The researcher in this study chose to use a self report assessment tool as an efficient and standardized data collection tool. The CES-D was chosen for the present study as it is the most widely used self-report depression measure in community

studies (Lewinsohn, Seeley, Roberts, & Allen, 1997). The Measurement of Depression was originally designed to measure depression in a general population for research purposes.

The difference between the CES-D and other depressive inventories such as the Beck Depression Inventory (BDI) is that the CES-D was not designed as a "clinical intake measure and/or for evaluation of severity of the illness over the course of treatment" (Radloff, 1977, p. 385). The CES-D is a 20-item scale composed of six components: depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance.

A sample of 4,133 participants over the age of 50 was used to evaluate the validity and efficacy of the CES-D (Radloff, 1977). Diagnosis was initially based on criteria provided by the Research Diagnostic Criteria (RDC) and later revised by using the Diagnostic Statistical Manual-III-R (DSM-III-R: American Psychiatric Association, 1994). Cronbach's alphas for the CES-D were reported as .83 for females, .81 for males, .83 for age group 50-59, .83 for age group 60-69 and .78 for age group 70 and over (Lewinsohn et al., 1997). The results supported the use of the CES-D in community dwelling older adults.

The CES-D is composed of 20 questions where responses indicate the frequency of symptoms experienced within the past week. The responses include: "rarely or none of the time (less than 1 day)," "some or a little of the time (1-2 days)," "occasionally or a moderate amount of time (3-4 days)," and "most or all of the time (5-7 days)." A numerical score ranging from 0 (rarely or none of the time) to 3 (most or all of the time) is assigned to each frequency level. Scores range from 0 to 60, with higher scores reflecting a higher frequency of depressive symptomatology. Cronbach's alphas for the CES-D were reported as .85 for the general population, .90 for psychiatric population, .83 for females, .81 for males, .83 for age group 50-

59, .83 for age group 60-69 and .78 for age group 70 and over (Lewinsohn et al., 1997). Split-half and Spearman-Brown reliability coefficients ranged from .77 to .92. The CES-D has fair stability with test-retest correlations ranging from .51 to .67 over two to eight weeks and .32 to .54 over 3 months to one year.

Demographic questionnaire. This questionnaire contains 22 questions regarding the participants' age, gender, marital status, past and current diagnosis of mood disorder, past psychotropic drug use, and the importance of religion in their lives. Use of psychotropic drugs was asked as a supplemental indicator of past and current diagnosis or treatment of depression, anxiety, and panic disorders. These are listed in Appendix C. The results from the demographic questions on age, gender, and marital status were used to eliminate participants who do not meet the criteria of this study.

Gender was asked in order to eliminate any men from the study. As participants were recruited from a retirement community and a community senior center, a few men accidentally completed the survey. Rather than ask the men not to participate in what may be an important social experience in their day, they were permitted to complete the assessment tools and were eliminated at the data analysis stage.

A religious attitudes and behavior activities score was calculated from four demographic questions that reflect typical religious activities: (a) importance of religion, (b) religious activities, (c) regularity of religious observance, and (d) religious organization/social support. Participant responses to these items were summed to create a single score.

Analysis

A simultaneous regression analysis was run to examine the research question. A simultaneous regression analysis treats all variables equally and does not remove variables based

on non-significance which allows the researcher to incorporate all of the data and results in the analysis despite their level of significance. One important advantage of using simultaneous regression in this study is the possibility of identifying a combination of independent variables that provide a deeper understanding of the research question (Cohen & Cohen, 1975.)

Initially, the following variables were included in the analysis: extrinsic religiosity and intrinsic religiosity; length of time widowed; length of time living alone; presence of medications for depression; diagnosis of depression, anxiety and panic attacks; importance of religion; religious activities; regularity of religious observance; religious organization/social support; general health; hospital admissions in the past year. However, because of the smaller number of participants than anticipated in the original design, the list of variables included in the analysis has been reduced. These variables include; intrinsic and extrinsic components of religiosity, level of depression, anxiety and panic attacks, general health, and a group of behaviors classified as Religious Attitudes and Behaviors (RAB), which considered importance of religion, religious participation, regularity of religious observance, and religious organization/social support. This follows the recommendation that regression research include ten participants per variable.

CHAPTER 4

RESULTS

The purpose of this study was to determine whether a single variable or combination of variables would predict depression in older adult women: intrinsic and extrinsic components of religiosity, level of depression, anxiety and panic attacks, general health, and a group of behaviors classified as Religious Attitudes and Behaviors (RAB), which considered importance of religion, religious participation, regularity of religious observance, and religious organization/social support. Components of extrinsic religiosity and intrinsic religiosity were measured by the I/E-R. Levels of depression were measured by the CES-D. Six demographic questions were used to measure (a) length of time widowed, (b) length of time living alone, (c) presence of medications for depression, (d) diagnosis of depression, anxiety and panic attacks, (e) general health rating, and (f) hospital admissions in the past year. Religious attitudes and behaviors was the sum of responses to the four religious questions (a) importance of religion, (b) religious activities, (c) regularity of religious observance, and (d) religious organization/support.

Descriptive Statistics

Participants included 82 women over age 65 who ranged in age from 65 to 87 (M = 76). The majority 69%, (*n* = 57) of the sample was widowed, 21% (*n* = 17) were divorced, 6% (*n* = 5) were separated, but not divorced, and 4% (*n* = 3) were never married. In terms of religious affiliation, the majority (53%, *n* = 43) of the participants were Protestant (non-catholic

Christian), 32% (n = 26) were Catholic, 14% (n = 11) declined a religious affiliation, and 1% (n = 1) were Jewish. For this study, Christians were categorized as Catholic vs. Non-Protestants. While this label may be open to debate among Non-Catholics, it is commonly used. The results from the demographic questions on age, gender, and marital status were used to eliminate participants who did not meet the criteria of this study.

Multiple Regression Analysis

Multiple regression was used to determine if the independent variables in this study, Extrinsic Personal Religiosity, Extrinsic Social Religiosity, Intrinsic Religiosity (as measured by the I/E-R), and Religious Attitudes and Behaviors, calculated from demographic variables, would be predictive of the independent variable of depression, as measured by the CES-D. According to Ferguson and Takane (1989), the study of the relationship between two or more variables not only requires procedures for defining and measuring the variables under study but it also requires an analysis of all variables simultaneously to predict the independent variable.

A simultaneous regression analysis was employed for this study because it most efficiently takes advantage of all the independent variables to predict depression in older adult women. In a simultaneous regression, all variables are entered simultaneously and can make a useful contribution to R^2 (Cohen & Cohen, 1975). Though there were three significant correlations, there was only one significant correlation between independent and dependent variables which was self-rating of health and depression (0.337, p <. 05). The other two correlations were between Extrinsic personality scale and Extrinsic social scale and RAB and the Intrinsic scale which were all independent variables.

Table 1 lists the means and standard deviations for the non-demographic quantitative variables in the study, including scale means for Extrinsic Personal, Extrinsic Social, Intrinsic,

CES-D total, composite Religious Attitudes and Behaviors score, and participants' rating of general health. The scale means for the intrinsic scale are typical of those reported in the literature, but may vary due to type of population surveyed (Gorsuch & McPherson, 1989; Radloff, 1977). For the I/E-R, the published means are based on a college population on the west coast reflecting the increased importance of extrinsic religiosity in older adults as reflected on the extrinsic scales (McFadden, 1995).

Table 1

Mean and Standard Deviation Scores of I/E-R scale and CES-D scale

	Pub Mean	Pub *SD*	Sample Mean	Sample *SD*	
Extrinsic Personal	25.6	5.7	10.95	3.26	82
Extrinsic Social	25.6	5.7	7.81	3.07	82
Intrinsic	37.2	5.8	31.90	5.36	82
CES-D Total	8.6		16.81	7.98	82
General Health Rating			1.90	.65	82

Note: Pub Mean = Published Mean, Pub *SD* = Published Standard Deviation. (Gorsuch & McPherson, 1989; Radloff, 1977).

The Cronbach's alpha calculated for the instruments in this study indicate the instruments meet minimal standards of reliability (Gorsuch & McPherson, 1989). The Extrinsic Social reliability is low (0.57), but for a scale containing only 3 items reflects sufficient reliability, and the reliability calculated for Extrinsic Personal is surprisingly high (0.77) for a three-item scale. The Intrinsic reliability was adequate (0.64) for an eight-item scale. The CES-D reliability is

high. Internal consistency for the CES-D was 0.761 (standardized Cronbach's alpha).

Table 2 lists the correlations between the quantitative variables in this study. There were three significant correlations, but only one significant correlation with the dependent variable, depression, with general health rating ($r = .33$, $n = 82$, $p < .05$). The other significant correlation was between two independent variables, extrinsic personal and extrinsic social ($r = .45$, $n = 82$, $p < .05$), which is not surprising considering both measure external motivators to engage in religious activity. The correlation between the I/E-R scale scores, especially between participants' scores on the Extrinsic Personal (ExtP) and Extrinsic Social (ExtS) scales, reflect the underlying construct of Extrinsic Religiosity. The third significant correlation was between Religious Attitudes and Behaviors (RAB) and intrinsic religiosity (Int). The correlation between participants' scores on the RAB and scores on the Int of the I/E-R are worthy of further study. The low negative correlation between Intrinsic scale scores (Int) and CES-D scores are in line with other research associating intrinsic religiosity and depression (Koenig et al., 1988; Koenig et al., 1998; Strawbridge et al., 1998).

Table 2

Variable Correlations of the Independent Variables and Dependent Variable

	Int	ExtP	ExtS	CES-D	GHR
ExtP	.10	--			
ExtS	-.24	.45*	--		
CES-D	-.20	-.17	-.05	--	
GHR	-.13	-.09	.01	.34*	--
RAB	*.41	.06	-.08	-.04	.14

Note: Int = Intrinsic, ExtP = Intrinsic Personal, ExtS = Extrinsic Social, CES-D = Center for Epidemiological Studies – Depression scale, GHR = General Health Rating, RAB = Religious Attitudes and Beliefs.
*$p < .05$.

The model summary, Table 3, lists the results showing that 11% of variance in depression results from self-rating of health compared to 7% of variance from religious attitudes and behaviors. The adjusted R-squared is important for small sample sizes and represents the change in variance that is accounted for when variables are added or removed from a model. It is an indication of how stable the prediction is and what it would be like in a larger population.

Table 3

Model Summary for Dependent Variable, CES-D Total

Model	*R*	R^2	*Adjusted* R^2	Sig.
Self-rating health	.337	.113	.102	.002
RAB	.268	.072	.007	.002

Note: 1a = Self-rating of health, 1b = Religious Attitudes and Behaviors

Statistical Power

A post-hoc power calculation was conducted for $n = 82$, observed $R^2 = 0.11$, 6 predictors, and an alpha level of 0.05 and it was determined that the observed power was 0.61. Cohen (1988) has suggested a de facto minimum statistical power is 0.80, and this research fell below that value. Finding results with the low level of power in this study lends support to the strength of the associations found in the simultaneous regression.

Summary

The purpose of this study was to determine whether participants' intrinsic and extrinsic components of religiosity, level of depression, anxiety and panic attacks, general health, and a group of behaviors classified as Religious Attitudes and Behaviors (RAB), which considered importance of religion, religious participation, regularity of religious observance, and religious organization/social support could predict levels of depression of older adult single women.

Simultaneous regression was utilized to determine if any of the independent variables were predictive of depression in older women. Though there were three significant correlations in this study, only self-rating of general health was a predictor of depression. Intrinsic and extrinsic components of religiosity as well as religious attitudes did not significantly contribute to the variance of depression, though there were significant correlations between the extrinsic personal scale and extrinsic social scale and between RAB and the intrinsic scale.

CHAPTER 5

DISCUSSION

The purpose of this study was to determine whether a variable or combination of variables, specifically, religious activity and general health, could predict depression. The present study looked at participants' intrinsic and extrinsic components of religiosity, level of depression, anxiety and panic attacks, general health, and a group of behaviors classified as Religious Attitudes and Behaviors (RAB), which considered importance of religion, religious participation, regularity of religious observance, and religious organization/social support could predict levels of depression of older adult single women.

Women 65 years of age and older were asked to complete the I/E-R, the CES-D, and a demographic questionnaire. The results of this research indicated that, participants' self-perception of health was the most important predictor of depression for the variables studied. Given the low statistical power of this study, this finding should be considered important. Research with a larger sample may be able to detect associations between spirituality and depression among elderly women, such as those in this study, but given the low association found here between those variables, this may not be worth the effort.

Results of this study indicate that spirituality as measured by the I/E-R and religious activities and behavior variables do not predict levels of depression. The only statistically significant predictor was self-perceived rating of general health. This study combines self-

perception of health with religious behaviors and beliefs, providing an examination of their relative relationship to depression in the elderly. In this sample, religion was not a strong predictor of depression. Consequently, it can be inferred that, separate from self-perception of health, religion is important, and when self-perception of health is added, the contribution of religion is non-significant.

Discussion of Findings

Some researchers have found that religious and spiritual beliefs and actions are negatively correlated with depression in the elderly (Ellison, 1993; Nelson, 1990; Pressman et al., 1990; Strawbridge et al., 1998). In the present study, the correlations between measures of religion and depression were small (-.2, -.17, and -.05 as noted in Table 7) when compared to the correlation of .34 that was found between participants' general health rating and depression. The primary implication from this finding is that while religion is not significantly associated with depression among the elderly, general health is positively correlated with depression among the elderly. Looking back at the inconsistent research results on religiosity and depression (Ellison, 1994; Siegal & Kugkendall, 1990; Strawbridge et al.) it was difficult to pinpoint why some studies found a positive or negative relationship between depression and religious involvement.

Ellison (1994) hypothesized that certain stressors, especially those involving family and work relationships, could increase likelihood of depression due to the emphasis on harmony which is often stressed by many religious groups. The increased stress could be a result of feeling guilty or ashamed of being in conflict with a co-worker or family member. Ellison also found that religious involvement could help buffer effects of medical illness and physical unattractiveness in African Americans but did not help decrease depression for other stressors. Siegal and Kuykendall (1990) found that religious involvement decreased depression for men when the

stressor was the death of a close family member. Strawbridge et al. (1998) found in a study of 2,357 people aged 50 and older, there was no association between non-organized religion and depression, but a negative relationship between organizational religiosity and depression when physical health was taken into account.

While components of religiosity were not significant in the present study, there were small negative relationships between each of intrinsic religiosity, extrinsic personal religiosity, and extrinsic social religiosity with depression. This was different from other studies looking at depression and religiosity, as other studies controlled for physical health status unlike the present study. Idler (1987) found that increased levels of public religious involvement was associated with decreased functional disability and decreased depression in older adult women. For men, Idler found an association between private religious activity, minimal public religiousness, and decreased levels of depression. Musick et al. (1998) found religious activity to be a strong predictor of depression in elderly adults with cancer, with religious activity related to lower levels of depressive symptomology. While Idler found that women benefitted more from the social aspects of religion, it appeared that men benefitted more from private religious activity. Overall, Idler and Musick et al. found that various aspects of religion were associated with decreased depression.

Limitations

It is worthwhile to note aspects of this study which would prevent generalization to other settings and groups. First, all data obtained for this study was through self-report. Even though data was collected anonymously, some participants may have felt the need to respond in socially appropriate ways by denying symptoms they may have been experiencing resulting in under-reported depressive symptoms. Evidence indicating under-reported depression is the CES-D

sample mean (8.6) being higher than the published mean (16.8). Radloff (1977) indicated the mean score for the CES-D in the general population was between 8.6 and the mean score for psychiatric patients was 24.42, therefore the present sample may have been experiencing depressive symptoms, though not a clinically significant depression. Participants may have been experiencing depressive symptoms, though unwilling to acknowledge the more commonly known symptoms of depression. Participants could have still endorsed other symptoms not generally known by the lay population as indicative of depression, resulting in an elevated depression score. Second, because of the nature of the data selection in the community, participants volunteering for this study would be higher functioning physically than a medically ill population.

Third, only completed packets where all surveys were completely filled out were included in this study. While some participants may have chosen to be untruthful in their answers, others chose not to answer, which could have eliminated some of the more depressed individuals. Simmons, Huddleston-Casas, and Berry (2007) discussed the impact of negative stigma associated with mental health. There are instances where people avoid seeking treatment for any type of mental illness, including depression, because of the embarrassment and discomfort of being labeled as depressed. Simmons et al. suggested strategies, such as public health campaigns to normalize the experience of depression and educate others about the causes and importance of discussing depressive symptoms with their physicians. While public health campaigns may not necessarily affect if a person would be more likely to participate honestly to a research survey, perhaps older adults would be more likely to not only accurately identify depressive symptoms, but also acknowledge depressive symptoms to their physician in order to receive proper treatment. In regards to older adult women, some good places to promote

depression awareness could be through the primary care physician and the church, as 52% of people age 65 and over attend religious services at least once a week (Princeton Religion Research, 1994).

McAvay, Bruce, Raue, and Brown (2004) conducted a study looking at self reported depression by patients and informants, who were usually a relative who helped care for the patient. This study discussed one possibility of under-identified depression as deficits in cognitive functioning indicative of early dementia or pre-dementia. The present study showed a higher mean score for depression than the published study, but not compared to a psychiatric populationA person exhibiting symptoms of early dementia would be disoriented to their surroundings, and would more than likely not have the self-awareness or insight to identify depression in them. This study also focused on the importance of including caregivers of an older adult to detect for clinically significant late-life depression which would otherwise be missed if only relying on patient report.

In the current study, there was a higher level of resistance to participate than initially expected as evidenced by individuals not completing all of the assessment materials or refusing to participate. Possible explanations for this low compliance is that participants did not perceive that religion was a worthy topic for psychological study or that participants did not approve of a study connecting religion and depression. McAvay et al. (2004) found a 40% refusal rate among their sampled patients, which included 355 elderly medical homecare patients. Of these patients, those most likely to refuse were female, unmarried, and living alone without children. These three of the criteria were required to be considered a valid packet to be included in this dissertation study and therefore may have played a role in the higher level of resistance encountered during the data collection phase. It would be understandable that a single woman

living alone may be cautious about giving a stranger private information about themselves.

A secondary source of resistance may have been that participants' expectations to participate in their regular activities interfered with their willingness to complete the assessment materials. A tertiary source of resistance may have been the space used. Participants may have been used to, and expecting, certain types of activities in the space used, and the mismatch between space and assessment activities may have contributed to participants' unwillingness to participate in this study.

The method used for collecting data could also have been a limitation. Volunteers were asked to complete data during time reserved for other regularly scheduled activity such as an exercise group, monthly meeting, or during a break from listening to a speaker. Some potential volunteers were not prepared to complete a form and were unable to complete forms because they did not have their reading glasses with them.

Implications for Counseling Practice

Results of this study can be interpreted as illustrating the importance of mental health professionals' focus on health and body issues with single older adult women because of the relationship between health and depression. Aranda (2008) found there is a 37% increased risk of depression among those who have poor physical role functioning. Idler and Kasl (1995) wrote that there is a greater risk of physical decline and functional ability for older adults with poorer self-ratings of health in comparison with their peers of equal health status but higher rating of self perceived health.

Depression has also been found to complicate and delay the recovery period from medical and physical illnesses and found to be a risk for poor self-rated health over time (Han, 2002). This finding concurs with the hopelessness theory of depression (Abramson, Metalsky, &

Alloy, 1989). Beck (1967) described hopelessness as a major characteristic of depression. He described a triad of negative thoughts about the self, world, and future as an integral part of depression. Beck suggested that depression could be a reaction to a negative event, and a schema that involves negative thoughts may be a cause. In the presence of life stressors, a person may become hopeless.

It is important to clarify that religion remains important for its own reason, and any implications are not meant to discount the importance of religion. People engage in religious activities for many reasons, whether it be for the religious experience itself or for socialization purposes. Older adults appear to be find importance and reason to engage in religious activities. McFadden (1995) indicated that older persons show the highest level of religious participation of any age group, with women being more religious then men. Seventy six percent rate religion as very important. McFadden also indicated that 80% of all persons over age 65 have at least one chronic health problem, yet 70% still rate health as good to excellent. Perhaps the religious activity, whether through prayer, faith, or increased socialization with others has helped them to cope with changes in their physical health and living circumstances, which would result in a more positive outlook and improved functioning (Strawbridge et al., 1998).

Many studies have demonstrated how religious involvement buffers the impact of stressful life events and physical health complaints on psychological well-being. Boey (2003) found a difference in depression rates by religious affiliation. Specifically, among older adult women from Hong Kong, Catholics and Buddhists reported less depression than Protestants. Most of the participants in this dissertation study were Protestant. Perhaps there would have been a significant relationship between depression and religious involvement if this study looked specifically at responses by religious affiliation.

Propst et al. (1992) found evidence that including religion in treatment for depression may be more effective for religious individuals than standard cognitive therapies and behavior methods, even if the therapist is not religious. As O'Connor and Vallerand (1989) concluded, any encouragement to participate in religious activity should be voluntary and self-determined rather than coerced to avoid possible negative effects on the client. Levin and Taylor (1997) conducted a study on the epidemiology of religion to study the impact of religious involvement on morbidity and health. As part of his write up, he listed common misinterpretations of religion. One of these misinterpretations was that "religion is the most important factor in health (p. 855)." Levin and Taylor expand on this by saying "In no way can it be stated that being religious or practicing religion is the most important means of promoting health or preventing morbidity. Not only is evidence lacking, but this proposition is implausible on its face" (p. 855). Rather, Levin and Taylor appears to use religion as a pathway to mediate behavior to improve health status, therefore improving quality of life, and hopefully improve how one copes with stressful events in life. By being able to adapt to life stressors more effectively by being active and having a good quality of life, one can hope to prevent chances of becoming depressed.

Implications for Future Research

Future research should look more specifically at religious denomination and specific stressors to determine if there is a significant relationship between religious involvement and depression. Future studies should use methods of data collection that would not involve using a designated time period and space which is typically used for an expected activity. Many older adults are already facing issues related to retirement, not being a contributing member to society and possibly feeling they are not an important part of society. To recruit future older adults to participate in research, it is important to not communicate a lack of respect for their structure and

usage of time by possibly using a system which is more time flexible and more convenient of their time. If funding is available, mailing surveys while providing postage for the surveys return to the researcher should be considered. Incentives to increase volunteer participation and completion of surveys should also be considered. Another possibility is advertising the need for volunteers by flyers or posters with a designated time and space specifically used for the purpose of data collection.

Conclusion

In conclusion, this dissertation study did not find that religious involvement was associated with depression. This study found that the only significant predictor of depression was participants' self-perception of health. Therefore, if a woman rated her health as good, she was more likely to be less depressed than a woman who rated perception of health as poor. This study does not discount the importance of religion, but instead recognizes that without good health, an individual's independence and ability to care for themselves is compromised. This study also stresses the importance of good health, or the perception of one's health as good to be able to participate in any type of activity.

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APPENDIX A: INFORMED CONSENT STATEMENT

You are being asked to take part in a study conducted by a graduate student at Indiana State University regarding the importance of religion in your lives. Your participation in this study is voluntary and you may withdraw at any time. If you agree to participate, you will be asked to complete three questionnaires, which will take approximately 10-15 minutes. You will be asked to respond to each question based on your beliefs. There are no right or wrong answers. Information gathered from the questionnaires will be used only for the purpose of this study. Your participation in this study is important and appreciated.

If you have any questions regarding your participation in this study, please contact Jackie Nuval at (317)750-4099. This project is under the supervision of Dr. William Barratt. He is willing to answer your questions and can be contacted at (812)237-2880.

Thank you for your time.

APPENDIX B: CES-D

Using the scale below, indicate the number which best describes how often you felt or behaved this way – DURING THE PAST WEEK.

0 = Rarely or none of the time (less than 1 day)

1 = Some or a little of the time (1-2 days)

2 = Occasionally or moderate amount of time (3-4 days)

3 = Most or all of the time (5-7 days)

DURING THE PAST WEEK:

___1. I was bothered by things that usually don't bother me.

___2. I did not feel like eating; my appetite was poor.

___3. I felt that I could not shake off the blues even with help from my family or friends

___4. I felt that I was just as good as other people.

___5. I had trouble keeping my mind on what I was doing.

___6. I felt depressed.

___7. I felt that everything I did was an effort.

___8. I felt hopeful about the future.

___9. I thought my life had been a failure.

___10. I felt tearful.

___11. My sleep was restless.

___12. I was happy.

___13. I talked less than usual.

___14. I felt lonely.

___15. People were unfriendly.

___16. I enjoyed life.

___17. I had crying spells.

___18. I felt sad.

___19. I felt that people disliked me.

___20. I could not get “going.”

APPENDIX C: DEMOGRAPHIC QUESTIONNAIRE

1. Age: _____

2. Gender:

_____ Male

_____ Female

3a. Marital status

_____ Never Married

_____ Now Married

_____ Separated, but not divorced

_____ Divorced

_____ Widowed

_____ Divorce and now married

_____ Widowed and now married

3b. If widowed, for how long? _____

4a. Who lives with you?

_____No one

_____Spouse

_____Friend

_____Daughter/Son

_____Mother

_____Father

_____Relative

_____Others

4b. If you answered No one, how long have you lived alone? _____

5. Are you currently taking any medication for mood (depression, anxiety)?

_____Yes _____No

6. Have you ever been diagnosed with depression, anxiety, or panic attacks?

_____Yes _____No

7.What is your religious affiliation? If you do not have a religious affiliation, please write none.

_____

8.Do you consider religion to be important in your life?

_____Yes _____No

9. Did you participate in a bar mitzvah / bas mitzvah, a confirmation, first communion, or participate in a similar religious ceremony for children or teens?

_____Yes _____No

10.Was it important to you to be married to someone in your faith or religious group?

_____Yes _____No

11. Did you bring up your children in your faith or religion?

_____Yes _____No

12. Were your children baptized, confirmed, or did they participate in any similar religious ceremony for children or teens?

_____Yes _____No

13. Were your grandchildren baptized, confirmed, or did they participate in any similar religious ceremony for children or teens?

_____Yes _____No

14. How often do you attend religious services?

_____I try to go daily

_____At least 1-2 times per week

_____A couple times a month

_____Major holidays

_____I don't attend religious services

15. Please check the word which most accurately completes this sentence.

_____Of my friends attend the same religious organization as I do.

_____All

_____Most

_____About half

_____Some

_____None

16. As a child, did you attend religious services?

_____Yes _____No

17. Was religion an important part of your young adult life?

_____Yes _____No

If you answered No to question 17 and currently consider religion to be important in your life, when did religion become important to you?

_____

_____

19. What prompted you to bring religion into your life?

_____

_____

20. How do you rate your general health?

_____Excellent

_____Good

_____Fair

_____Poor

21. Have you had two or more hospital admissions in the past year?

_____Yes _____No

22. Do you work full time?

_____Yes _____No