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Religiosity, Social Connectedness and Depression in Older Adults: An Exploratory Study

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Religiosity, Social Connectedness and Depression in Older Adults:

An Exploratory Study

by

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Abstract

This study examined the dimensions of religiosity (i.e., intrinsic, extrinsic, and religious identification) and social connectedness to see how each uniquely contributed to the variability of depression (i.e. a main predictor of suicidality) in older adults, 65 and above. Participants and measures came from the Midlife in the United States (MIDUS) 3, national data set. MIDUS 3 participants were selected based on a random digit dial sampling method of those living in the United States. Methodology used to answer research questions included Pearson correlation, multiple regression, between-subjects Univariate Analysis of Variance (ANOVA), and independent T-test. Data was analyzed using SPSS. Results indicated extrinsic religiosity is significantly more effective than intrinsic religiosity in fostering social connectedness, increased social connectedness is significantly correlated to lower depression symptoms, and there were differences found in effectiveness between genders and age groups in relation to dimensions of religiosity and social connectedness.

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Chapter 1: Introduction

According to the Federal Interagency Forum on Age Related Statistic's website (agingstats.gov), globally there is a decrease in mortality and fertility, therefore leading to an overall increase of an aging population. In 2013, 11.7% of the world's population was 60 years of age or older. In 2050, 21.1% of the world's population is expected to be 60 years of age or older. Suicide is the 10th leading cause of death in the United States. Suicide rates are predicted to increase as the baby boomer cohort and following cohorts enter late life (Fiske & O'Riley, 2016; Van Orden & Conwell, 2016). In 2011, there were 39,518 completed suicides in the United States, and of those 6,321 were completed by older adults ages 65 and older. By 2030, all baby boomers will be 65 years or older. Many will be approaching or transitioning into retirement, which will lead to a significant demographic shift in in the United States (Westefeld et al., 2015). The baby boomer cohort has a unique suicide risk likely due to their experience growing up in the post-war period (Parkhurst, Conwell, & Orden, 2016; Phillips, 2014). The post-war period was a time of economic prosperity, as well as a time of fast improving health coinciding with greater life expectancies. This may have left the baby boomer cohort with poor coping skills due to the wealth of life, resulting in suicide in later life when facing difficulties that come with age. There could also be disadvantages being a part of a large birth cohort, such as, feeling forgotten and obsolete in later life leading to suicide risk for this cohort.

Older Adults Suicidality, Depression, and Isolation

Suicidal behavior in older adults is more lethal than any other age group (Fiske & O'Riley, 2016). In the United States, according to Fässberg et al. (2012), 75% of older adults complete on their first attempt. This is likely due to various reasons, such as, older adults tend to

use more lethal means (i.e., firearms), people in later life tend to be more physically fragile, they are less likely to report suicide ideation, and have less contact with mental health practitioners. By 2030, mental health and substance use conditions in older adults are predicted to increase by 80% (DiGilio, Gatz, & Smyer, 2016). Depression is the most significant predictor and largest overall risk factor of suicide in older adults (Tsai, Chen, Ku, Lee, & Lee, 2014). At the time of death, 71% to 97% of older adults 65 years and older who completed suicide had a mental disorder present, most comprising depression (Fässberg et al., 2012). Other risk factors for suicide in older adults include personality variables, cognitive loss, physical illness, lack of financial resources, career issues, bereavement, autonomy, and mobility losses (Draper, 2014; Van Orden & Conwell, 2016; Westefeld et al., 2015).

Additionally, older adults are more likely to live alone and are more vulnerable to social isolation, therefore, lowering the chance of being saved from suicide attempts or being interrupted in the planning and implementation process. According to Landeiro, Barrows, Musson, Gray, and Leal (2017), up to 50% of older adults, 60 years or older, are at risk of social isolation and approximately 33.33% will experience some degree of loneliness in later life. Reducing social isolation and loneliness in older adults is an important public health priority, because older adults are at a greater risk of isolation and loneliness due to the multiple life changes that happen in later life. Some examples include retirement, bereavement, and children or friends moving away. In addition, older adults are adjusting to the natural declination of physical and cognitive abilities in old age (Davies, Crowe, & Whitehead, 2016; Shankar, Rafnsson, & Steptoe, 2015).

Suicide attempts to death ratios are estimated 10-20:1 for the general population, 200:1 for adolescents, and just 1-4:1 for older adults (Van Orden & Conwell, 2016). Suicide risk is closely tied to age, but age pattern is specific to sex (Phillips, 2014). This may reflect the differing levels of stress and social isolation experienced by men and women at various stages of the life course. Again, at this advanced stage in the lifespan, older adults experience numerous and significant changes. Many of these changes involve grieving, which heightens the risk of suicide (Sachs-Ericsson, Rushing, Stanley, & Shfeeler, 2016; Westefeld et al., 2015). One of the many changes may be connected to the life review process in Erikson's eighth stage of identity development, integrity versus despair. Those who fall towards the despair (beliefs that they will never reach their life goals, feel that life was unjust, lack acceptance of themselves or events that occurred in their lifetime, etc.) continuum during the life review process are likely to be diagnosed with depressive symptoms (Goodcase & Love, 2017). Depression, as mentioned above, is the most significant predictor and largest overall risk factor of suicide in older adults.

Chapter 2: Theoretical Perspectives on Older Adults and Suicide

According to Joiner's Interpersonal Theory of Suicide, lethal suicide behavior requires both the desire to die and the capability to enact the lethal self-harm (Stanley, Hom, Rogers, Hagan, & Joiner, 2016). The desire to die consists of feelings of thwarted belongingness and perceived burdensomeness. The capability to enact the lethal self-harm is believed to increase the more exposure one has to pain, death, or habitual adverse experiences that lead to a lessened fear of death and/or an increased physical pain tolerance (Stanley et al., 2016). From the lens of this theory, older adults are at a higher risk of suicide because they have a higher likelihood of experiencing feelings of thwarted belongingness conceptualized by the psychologically painful state coming from an unmet need of positive social connectedness and of perceived burdensomeness conceptualized by an individual believing that they are a liability for others or that they are not making positive contributions to relationships. At a more extreme manifestation of perceived burdensomeness, this may also involve beliefs that others would be better off if they were gone (Stanley et al., 2016). This theory proposes that when individuals experience both thwarted belongingness and perceived burdensomeness, they will want to die by suicide. Feelings of thwarted belongingness and perceived burdensomeness are related to suicidal ideation, whereas the acquired capability to enact is related to suicidal behavior (Fiske & O'Riley, 2016; Parkhurst et al., 2016; Van Orden & Conwell, 2016). Several studies have provided empirical research for the Interpersonal Theory across the lifespan, including later life. For an example, one study showed that in a community based population of older adults, perceived burdensomeness described significant variance in suicidal ideation, even when

accounting for other important risk factors such as depression and hopelessness with no gender differences (Parkhurst et al., 2016).

Importance of Social Networks

Social isolation is a common characteristic of older adults at risk for suicide; therefore social support has been recognized as a functional cushion against stressful events over time (O'Riley et al., 2014; Van Orden & Conwell, 2016). Being involved and having a diverse network structure (i.e., having more contact on average with all different types of networks like friends, family, social, and organizational) was associated with having a greater overall wellbeing (Medvene et al., 2016). Also, having a stable and functioning social network is a protective factor against loneliness and social isolation for older adults. This is especially true for those living alone, because those who spend more time at home tend to be lonelier, therefore staying active and engaging in social interaction is important (Petersen, Austin, Kaye, Pavel, & Hayes, 2014; Zebhauser et al., 2015). Koning, Stathi, and Richards (2017), found that three or more community engagement activities decreased the chance of isolation by over 80%.

Social networks are forms of social supports, which is a major element in suicide risk for older adults. Enhancing older adult's social support is an effective strategy in decreasing symptomatology of suicide (Van Orden et al., 2013). Older adults are more susceptible to experiencing loss of contacts, or social supports, resulting from losing their inability to drive, deaths of friends and family, deterioration of health, adult children leaving the home, and retirement. This can lead to a loss of sense of belonging from the loss of interpersonal relationships due to the myriad of changes and transitions in later life. Depression and cognitive impairments pose greater social challenges in relation to social support leading to a greater risk

of suicide, because the general increase of social support might not benefit the individuals who struggle with mood and functioning. In fact, it could pose a greater risk for them to experience perceived burdensomeness. Furthermore, depressed suicidal older adults have been shown to struggle interpersonally, by engaging in hostile relationships that contribute to their perceived lack of social support. Loss of a partner in later life significantly increases the risk of suicide ideation especially if the individual was dependent upon their partner (Westefeld et al., 2015). A Danish population study disclosed that men 80 years of age and older who lost a spouse, during the past year, had a 15-fold increase of suicide risk compared to married middle age men (Fässberg et al., 2012). Also, later life suicide has been found to be related to conflicts with family members, loneliness, and disconnection from the community (Tsai et al., 2014).

Social Connectedness

In regards to Joiner's Interpersonal Theory of Suicide, an effective preventative suicide intervention must generate some degree of social connectedness so that experiences and feelings of thwarted belongingness is prevented. The need to belong is fulfilled by feeling both positively connected to and cared about by others. A practical way of filling the need to belong is by cultivating a situation or an environment where experiencing the feeling of belongingness can take place; as if one 'belongs to' caring relationships that involved frequent and proximal contact. An indicator that the need to belong is not fully met is feelings of loneliness. Promoting social connectedness among older adults is a common element of intervention that is associated with reduced suicide deaths among this population. According to the theory, even a small degree of belongingness can be life-saving (Van Orden et al., 2013). Furthermore, an even more effective intervention would be one that facilitates positive relationships where older adults do

not perceive themselves to be a burden. Even a minimal degree of making meaningful contributions to others can be life-saving (Van Orden et al., 2013). The effects of providing help to others in a social context cannot be overlooked. Many studies that have looked at social connectedness did through the lens of only receiving social support from others. When research supports that older adults who are able to actively provide for others by social support or volunteering report lower morbidity, higher levels of subjective and overall well-being (Lee, 2014). Therefore, there is an importance of social reciprocity as a means for increasing meaningful social connectedness among the older adult population.

Four Types of Suicide According to Durkheim

Structural functionalism theory's concepts and assumptions explain suicide in older adults when it comes to the changing structure of society (Stanley et al., 2016). According to Fässberg et al. (2012), Durkheim's Sociological Theory of Suicide includes two social factors, social integration and moral integration, which impact suicide rates at a societal level, if these factors become dysregulated or manifested at the extremes (i.e., too high or too low). Too much social integration leads to altruistic suicide because the individual is willing to sacrifice, on the behalf of society, believing that their death would be a contribution to society. Too little social integration leads to egoistic suicide. This is a lack of social integration or connectedness to social bonds, like family and friends, which leads the individual to believe that their death will go unnoticed. Too much moral integration leads to fatalistic suicide, because the individual is lacking autonomy. As a result of the excessive regulation or oppressive discipline, the individual commits suicide to escape the perceived or tangible imprisonments. Too little moral integration leads to anomic suicide, because an individual lacks a sense of security or structure. Therefore,

the individual finds suicide a better alternative than living in a constant state of chaos and disorder. Findings have suggested limited or lack of social connectedness and integration with society is associated with suicide ideation, non-fatal suicidal behavior, and completed suicide in later life (Fässberg et al., 2012; Stanley et al., 2016).

Research has shown a rise in egoistic suicide due to the rapidly changing work and family environment, therefore, weakening traditional or benchmark forms of social integration and regulation for baby boomer cohorts. Identity roles across the retirement process impacts older adults' sense of well-being. The loss of their role and role related activities can create psychological maladjustment, lower life satisfaction, increased stress, depression, and anxiety. Retirement could be perceived by the individual as a loss of identity and purpose resulting in feelings of hopelessness leading to a greater risk of suicide. The greatest challenge that comes from retirement is building a retirement/life structure to replace the loss of a work/life structure (Sekhri & Sekhri, 2017). Also, the high amount of loneliness and social isolation that older adults are vulnerable to and experience because of all of change happening contribute to the rise in egoistic suicide. The function of the family is of great importance when it comes to suicide in later life (Phillips, 2014; Sachs-Ericsson et al., 2016). Tsai et al. (2014) found older adults mentioned seeking help from family, friends, and neighbors when it came to suicidal ideation, but none mentioned seeking help from health care systems.

Gender Influences on Suicidality

There is a higher rate of suicide in older adult men compared to women. This could be in part due to women changing their typical function in the family by having greater economic opportunities, therefore working more and doing less domestic work around the house. Recently,

women have been more likely to be the breadwinner within marriages. This could pose as a differentiation of roles by changing the instrumental leadership position from the husband to the wife (Boss, Doherty, LaRossa, Schumm, & Steinmetz, 2009). This dynamic can have unfavorable effects on men's health outcomes by affecting their psychological well-being, stress levels, and having higher feelings of social isolation. Also, society's had a drop in overall marriage rates. This means that male partners lose the health benefits of marriage, which are empirically proven to be greater for men than for women (Boss et al., 2009). The structure of society has changed dramatically for men, and many have not adjusted to the new rules, therefore increasing men's risk for anomic suicide. The new structure of society has been positive for women on both physical and mental health outcomes, despite the poor outcomes on men (Boss et al., 2009). As new family and work structures become more normative for people, especially men, and as individuals begin to recalibrate their expectations cultivating solidarity, the patterns of suicide outcomes in older adult males may shift.

Social Supports as Means for Social Connection

O'Riley et al. (2014) used the Lubben Social Network Scale and found older adults who had lower social support reported more frequent suicide ideation than those with more social support. There are informal and formal forms of social support. Informal social support consists of more family, friend, neighbor, and connections with God or the Transcendent that are typically more intimate connections. Informal social support interactions play a great role in maintaining and promoting the well-being and health of older adults by increasing their feeling of security or belongingness in a social network (Bedi & Case, 2014). Formal social support consists of more religious, civic, volunteer, or organizational connections like groups, programs, or clubs that tend

to be less intimate and more rational. Many religious domains encourage formal involvement (i.e., fellowship with other people). Social support provides an avenue to establish connectedness focusing merely on the individual's interaction with particular environmental sources. Another way of saying it is, social supports are the doors that open for one to go through to reach and build social connections.

In general, researchers agree that social support measures should include both the quantity and quality of support (Rushing, Corsentino, Hames, Sachs-Ericsson, & Steffens, 2013). Quantity measures the number of individuals in the social support networks and frequency of contacts. Quality measures the individual's satisfaction and closeness in relationships. The quality of social relationships has been found to be more influential than the frequency, or quantity, of social activities (Rushing et al., 2013). With this being said, social connection, which is a main qualitative element of social support, is a noteworthy concept to look into within itself. Social connection is perceived as an individual's subjective awareness of interpersonal closeness with people and the social world. Social connectedness taps into an individual's ability to connect with the social world or their ability to build closeness and relatedness with others. Social connectedness has been positively associated with sense of belonging, life satisfaction, improved health status, personal meaning, and cognitive functioning, as well as, being negatively correlated with depression and suicidal ideation (Lee, 2014; Rushing et al., 2013; Wilmoth, Adams-Price, Turner, Blaney, & Downey, 2014).

Religious Domains and Religiosity

Interestingly, religious domains can function as both informal and formal social support types to nurture strong social connections. Another way of viewing religious domains can be as a

bridge between the two social support types by constantly entering both doors of social supports through the development of intimate social interactions and connections (Wilmoth et al., 2014). If fellowship with other people is encouraged in the religious domain and there is more formal involvement in various social activities, then members may get the advantages of social connections, as well as, receive social support that can help them to cope with mental and physical stress.

Religiosity was identified as a pertinent theme in three qualitative studies that examined social connections in older adults (Bedi & Case, 2014). Religiosity was identified as positively impacting and supporting older adults overall wellbeing by enhancing feelings of connectedness, meaning in life, and healthy behaviors (Bedi & Case, 2014; Lee & An, 2013; Shaw, Gullifer, & Wood, 2016). However, there were a few studies mentioned in Sun et al. (2012) that suggest some aspects of religiosity (i.e., negative religious coping or extrinsic religiosity) to have possible negative effects on mental health. Religiosity may be a preventative avenue for suicidal ideation, suicide risk, and depression by improving coping strategies, increasing activity engagement, buffering the effects of stressful life events on mental health, and enhancing social support and connection. According to Durkheim's theory, religion provides high levels of integration and regulation that dissuade suicidal behavior. Also, religion may provide moral prohibition against suicide for those with intrinsic religiosity, or high devotion to core religious beliefs, decreasing the risk of suicide. Therefore, tightly knit communities with shared religious values may protect one from suicide (Rushing et al., 2013; Snider & McPhedran, 2014).

Religiosity as a Multidimensional Construct

Religiosity, in this study, will be defined as a shared set of beliefs and practices that have been developed in community with people who have similar understandings of God or the Transcendent. Religiosity is a complex concept involving various dimensions and has been suggested that it cannot be captured by a single construct. Therefore, religiosity will be operationalized as a multidimensional concept that comprises extrinsic religiosity, intrinsic religiosity, and a general association to a religious identification (Sun et al., 2012).

Extrinsic religiosity is similar to formal social support types because it includes the individual's engagement in organizational religious activities (i.e., church attendance, large church events, small groups, or any activity that is religious or social in nature). Intrinsic religiosity is similar to informal social support types, because it includes more intimate and private connections. Intrinsic religiosity includes participation in prayer, meditation, or scripture reading and study of which are more private religious behaviors. Also, it includes an individual's perceived importance of religion capturing the ultimate significance of religion in one's decision making. Intrinsic religiosity is described as more of an end in itself and a dominant motive for individuals in their everyday life and behaviors. Extrinsic religiosity includes an individual's perceived importance of religion as a means to fulfill personal gains. It is sometimes described as religious self-centeredness, serving more as a mean to a more ultimate end. Essentially, life and everyday behaviors are not centered on religious beliefs. Extrinsic religious individual's engaging in decision making will have little religious influence or importance, if any, when engaging in the decision making processes (Rushing et al., 2013; Sun et al., 2012). Intrinsic and extrinsic religious motivations may be important contributory factors to examine when

considering mechanisms by which greater religious attendance is associated with less suicidal

ideation found Rushing et al. (2013), which this study aims to address.

Chapter 3: Need for Research

There is a pressing public health need to find interventions that reduce depression and suicide risk in later life. Research reveals an increased risk of loneliness and social isolation in this population of older adults, but there is hardly any research on prevention and interventions strategies. The Centers for Disease Control and Prevention (CDC) have identified the promotion and strengthening of social connectedness, between and within the individual, family, community, and broader societal levels, as a key strategy for suicide prevention in 2013. The ability to build a connected relationship with God, or a Transcendent, facilitates the desire for relationships with others, achieved through the establishment of a growth-fostering relationship. Therefore, religiosity can provide a means of transportation by which social connectedness, between and within the individual, family, community, and broader societal levels, can be strengthened. This approach is especially well suited for older adults given the growing evidence and prevalence of social disconnectedness and its association with suicide-related morbidity and mortality, as well as, a wide range of various other negative health indicators in late life (Van Orden et al., 2013).

Older adults who attend church services have regularly been found to be associated with reduced suicide risk and less depression symptoms (Lee, 2014). Rushing et al. (2013) provided evidence that church attendance provides social support opportunities, which in part, accounts for the relationship they found between religiosity and lower risk for suicide. Overall, research suggests that religious involvement in general decreases the risk for depression, the most severe risk factor for suicide, as well as, leads to a faster remission of depressive symptoms (Sun et al., 2012). Bedi and Case (2014) suggest that religiosity and subjective well-being in older adults are

associated and that religion may serve as a social function across cultures. Lastly, spiritual practices, congregational support, religious coping, and religious involvement contribute to meaning and purpose in life are widely recognized as predictors of well-being in later life (Lee, 2014; Lee & An, 2013; Shaw et al., 2016; Snider & McPhedran, 2014).

In 2010, Hartford Institute estimates there are roughly 350,000 religious congregations in the United States. Compare the number of religious congregations to the 5,564 hospitals or 209,000 practicing primary care physicians in the United States in 2015 (Byers, Arean, & Yaffe, 2012). There is a drastically larger prevalence of religious congregations; therefore religiosity and religious domains may serve as an effective vehicle for those who are reluctant to seek formal mental health services on their own outside of their families. Clergy and spiritual leaders in the community can serve as primary referrals, as well as gatekeepers to community mental health services. This is especially important because older adults have a low use of mental health services overall. In one study of 348 participants 55 years or older, approximately 70% with prevalent mood and anxiety disorders did not use services (Byers et al., 2012). The low use of mental health services among older adults may be due to the fact that there is an overall lack of adequate mental health services for older adults. In addition, Medicare covers 80% of a physical health problem, but only 50% of a mental health problem (Byers et al., 2012). This is a barrier to treatment for many people. Researchers estimate that up to 63% of older adults with a mental disorder do not receive the services they need, which intensifies the significance of how religiosity and religious domains can be an effective avenue for intervention in preventing suicide in older adults (Byers et al., 2012).

Mental health is as important as physical health in older adults. Good mental health contributes greatly to a positive overall well-being. Untreated mental health disorders in older adults can lead to, not only suicide risk, but to diminished functioning, substance abuse, poor quality of life, and increased mortality in general (Blazer, 2003). Research shows mental illness can slow healing from physical illnesses (Blazer, 2003). In the past, psychologists used to consider old age as an unhappy stage of life due to the factors of social isolation, ill health conditions, deprived emotional life, loneliness, grief, etc. More recently old age has been considered a positive stage of life where older adults can gain a greater level of subjective well-being and life satisfaction (Bedi & Case, 2014). Mental health problems are not a normal part of aging. Older adults can continue to pursue health, thrive, grow, and enjoy life.

Chapter 4: Purpose of Study

The rationale for focusing on social connectedness is that it is an effective intervention, according to Joiner's Interpersonal Theory of Suicide, by satisfying the need to belong. In addition, egoistic suicide is rising due to the lack of social integration, or connectedness, to social bonds like family and friends, which leads the individual to believe that their death will go unnoticed. In older adults suicide risk is difficult to detect, as well, because they are less likely to report suicidal thoughts to others or get help for their mental health problems. This increases the concern, especially since older adults are more likely to die on their first attempt.

Various articles have displayed that religiosity may offer significant contributions in the establishment of social connections. Religiosity affects the physical and mental well-being of older adults, including satisfaction with the relationships they have with their family, friends, community, and their chosen God or Transcendent. This might be because religiosity provides a domain over the older adult that they can belong to and preside, because older adults tend to have a sense of control through their religion potentially bringing meaning to their lives. The meaning and hope they get from religiosity through enhancing the relationship with their God, or Transcendent, and finding comfort in relationships that are developed within the religious community may help them when adjusting to the various changes that occur as they grow older, as well as, satisfying the need to belong (Shaw et al., 2016).

A review of the literature indicated the need to examine the various dimensions of religiosity systematically in relation to depression to provide effective interventions and provide early strategies in the prevention of suicidality in older adults. Also, studies on religiosity and well-being rarely control for social connections providing the rationale for the focus on social

connections. Responding to these gaps in literature, this study attempts to answer the following questions:

1. Is religiosity effective in fostering social connectedness?

2. Is there a difference in effectiveness between the dimensions of religiosity (i.e., intrinsic and extrinsic) on reducing depression in older adults?

3. Are the various dimensions of religiosity and social connectedness different between genders and age groups of older adults in their effectiveness of reducing depression?

Understanding the possible associations between religiosity, social connectedness, mental health, and well-being is important not just in the context of suicidality in older adults, but also within a broader context that recognizes mental illness as a significant risk factor for a wide range of negative outcomes that were listed above with the most extreme being suicide. Affiliation with religiosity may be a protective factor against suicide, as several studies have found higher rates of suicide among those without any affiliations to religiosity (Snider & McPhedran, 2014).

Research Hypotheses

1. Extrinsic religiosity is more effective than intrinsic religiosity in fostering social connectedness.

2. Overall, increased religiosity lowers symptoms of depression in older adults by increasing social connectedness.

3. There will be a difference in effectiveness between genders and age groups in the relation to the various dimensions of religiosity and levels of social connectedness.

Chapter 5: Method

Participants

Participants, age 65 and above, were selected from the national longitudinal Midlife Development in the United States (MIDUS) Project. The survey is a nationally representative telephone-and-mail survey initially carried out in 1996 under the supervision of John D. and Catherine T. MacArther Foundation Network on Successful Midlife Development (Kessler, Mickelson, & Williams, 1999; Wang, Berglund, & Kessler, 2000). According to Kessler, Mickelson, and Williams (1999), participants for the MIDUS project were recruited from a random digit dial sampling method of those living in the United States. The survey was done in two phases. The first phase included the telephone interview using a computer-assisted telephone interview (CATI), which was completed in an average of thirty minutes. Participants received $25 and a thank you letter within a week of completing the CATI. Then, the second phase included the self-administered mail questionnaire that averaged two hours to complete. Inside the self-administered questionnaire (SAQ) was $10 as a pre-incentive to complete the SAQ and a reply envelope for participants to easily place their completed SAQ's in the mail. The participants were sent a reminder postcard two weeks after the SAQ packet was mailed (Kessler et al., 1999). Given MIDUS 1 success, they have been supported by the National Institute on Aging for follow up of MIDUS respondents.

Data for this study came from a subsample of participants age 65 and above (N = 1496) from the third wave dataset of MIDUS respondents. According to the Inter-University Consortium for Political and Social Research's (ICPSR) website, collection for MIDUS 3 was done in 2013-2014 and essentially repeated baseline measurements from the first wave of

collection including the participant's demographics (i.e., gender, age, education, marital status, income and household arrangement) and the extensive self-administered questionnaire and phone interviews. ICPSR's website stated that the MIDUS 3 response rate of those living longitudinal participants who completed the telephone interview was 7%. See Table 1 (in Appendix), for major demographic characteristics (i.e., number of participants of each gender, age of participants, the number of participants with missing data, etc.) of the subsample for this exploratory study of older adults ages 65 and above.

Participants who completed the follow-up MIDUS 3 surveys, both telephone and mail questionnaire, were selected on the basis of multiple selection criteria (i.e., participants 65 years old and above and those who completed MIDUS 3 telephone and mail questionnaires), as the aim of this study was to explore how dimensions of religiosity (i.e., intrinsic and extrinsic) and social connectedness uniquely contributed to the variability of depression (i.e., a main predictor of suicidality) in older adults, 65 and above. Computerized analysis of the data was conducted using the Statistical Package for the Social Sciences (SPSS).

Measures

Depression. Diagnoses of Major Depression for MIDUS was based on the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders, Revised Third Edition* (DSM-III-R). The MIDUS survey used the World Health Organization's Composite International Diagnostic Interview Short Form (WHO CIDI-SF) that psychometric analyses have proven good test-retest reliability and clinical validity of the CIDI Major Depression diagnosis (Kessler et al., 1999; Wang et al., 2000). This study used the continuous variable, [C1PDEPRE], based on the respondent's responses to both the depressed affect and anhedonia items in the

telephone interview. Depressed affect consisted of 7-items (i.e., "lose interest in most things" and "feel down on yourself, no good, or worthless") that followed this statement, "during two weeks in the past 12 months, when you felt sad, blue, or depressed, did you…" (Ryff et al., 2015). Response categories were coded on a "yes" or "no" answer to the questions and scaled by taking the total number of "yes" responses to the items (Ryff et al., 2015). Anhedonia consisted of 6-items (i.e., "feel more tired out or low on energy than usual" or "think a lot about death") that followed the same statement as depressed affect. Response categories were coded on a "yes" or "no" answer to the items and scaled by taking the total number of "yes" responses to the items (Ryff, et. al., 2015). Higher scores on the depression measures indicate more depression symptoms. Scores of the depression measure were summed.

Religiosity. Religiosity was measured by selected scales in the MIDUS self-administered questionnaire. This study took the religious identification scale to get a general measure of respondent's identification to religiosity. According to Ryff et al. (2015), Religious Identification is a 7-item (i.e., "How religious are you?" or "How important is it for you to celebrate or practice on religious holidays with your family, friends, or members of your religious community?") scale on a four point Likert scale ranging from 1 (very) to 4 (not at all). The scores of the Religious Identification measure were summed. This scale's psychometrics based on the MIDUS sample of 2,676 respondents had a Cronbach alpha of .914 (Ryff et al., 2015).

Intrinsic religiosity was measured using the 3-items (i.e., "pray in private", "meditate or chant", and "read the Bible or other religious literature") on the MIDUS self-administered questionnaire following the statement, "how often do you…" on the private religious practices scale. A Likert scale ranging from 1 (once a day or more) to 6 (never) was used to answer the

items (Ryff et al., 2015). The scores of the private practice intrinsic religiosity measure were summed. This scale's psychometrics based on the MIDUS sample of 2,671 respondents had a Cronbach alpha of .695 (Ryff et al., 2015). Also, the Religious/Spiritual Coping-A scale was used to measure intrinsic religiosity. The Religious/Spiritual Coping-A scale consisted of 2-items (i.e., "When you have problems or difficulties in your family, work, or personal life, how often do you seek comfort through religious or spiritual means such as praying, meditating, attending a religious or spiritual service, or talking to a religious or spiritual leader?" and "When you have decisions to make in your daily life, how often do you ask yourself what your religious or spiritual beliefs suggest you should do?") on a four point Likert scale ranging from 1 (often) to 4 (never). The scores of the religious/spiritual coping intrinsic religiosity measure were summed. This scale's psychometrics based on the MIDUS sample of 2,672 respondents had a Cronbach alpha of .875 (Ryff et al., 2015).

Extrinsic religiosity was measured using 2-items (i.e., "How often do you attend religious or spiritual services?" and "How often do you attend religious or spiritual activities?") on the MIDUS self-administered questionnaire on a five point Likert scale ranging from 1(more than once a week) to 5 (never). The scores of the extrinsic religiosity measure were averaged. The constructed extrinsic religiosity measure produced an alpha of .856 based on a sample of 1,496 respondents.

Social connectedness. Social connectedness was measured using a subscale, social integration, of the MIDUS social well-being scale on the self-administered questionnaire (Ryff et al., 2015). The social integration subscale consisted of 3-items (i.e., "I don't feel I belong to anything I'd call a community", "I feel close to other people in my community", and "My

community is a source of comfort") on a 7-point Likert scale ranging from 1 (strongly agree) to 7 (strongly disagree). The items, "I feel close to other people in my community" and "my community is a source of comfort" were reverse scored so that high scores reflected higher standing of social integration. The scores of the social connectedness measure were summed. The social integration subscale's psychometrics based on the MIDUS sample of 2,663 respondents had an Cronbach alpha of .778 (Ryff et al., 2015).

Chapter 6: Results

Descriptive statistics using frequencies, means, standard deviations, and percentages were calculated for the selected demographics (i.e., age, sex, race, total household income, education, marital status, and presence of chronic illness). Cognitive ability was accounted for by the demonstration of the participant's ability to complete the MIDUS survey (see Table 1, in Appendix, for descriptive statistics of variables and demographics).

Pearson Correlation was used to test the first research question (Is religiously effective in fostering social connectedness and preventing depression?). See Table 2 (in Appendix) for the correlations between the dimensions of religiosity, social connectedness, and depression, as well as the participant's demographic data. Essentially, the data revealed significant positive correlations between social connectedness and intrinsic and identification religiosity measures (i.e., less religious identification correlated to more social connection, less religious private practices correlated to more social connection, less religious/spiritual coping correlated to more social connectedness). Social connectedness and extrinsic religiosity were significantly correlated (i.e., more attendance to services/activities correlated to more social connectedness). Additionally, the data showed a significant correlation between social connectedness and depression symptoms (i.e., less depression correlated to more social connectedness). Religiosity was not significantly correlated with depression on any religious dimensions.

Multiple regression analysis was used to test the second research question (Is there a difference in effectiveness between the dimensions of religiosity on depression?) by exploring how each religious independent variable (religious identification, intrinsic religiosity, and extrinsic religiosity) uniquely contributed to the variability of the value of the dependent variable

(i.e., depression) and controlling for demographics (i.e., age, sex, race, total household income, education, marital status, and presence of chronic illness). The data was entered simultaneously. Results revealed an adjusted R^2 of .068. The results demonstrate that the dimensions of religiosity (i.e., extrinsic and intrinsic) explain only 6.8% of the variance of depression (see Table 3, in Appendix).

A second regression analysis was run to look at the relationship between religiosity and social connectedness, controlling for demographics (i.e., age, sex, race, total household income, education, marital status, and presence of chronic illness). Results revealed an adjusted R^2 of .189. The results demonstrate that the dimensions of religiosity (i.e., religious identification, extrinsic, and intrinsic) explain only 18.9% of the variance of social connectedness. Results indicated that religious identification was significantly related to social connectedness, $\beta = .130$, $p < .05$. Furthermore, extrinsic religiosity was significantly related to social connectedness, $\beta = -.267$, $p < .05$ and intrinsic religiosity was not significantly related, $\beta = -.009$, $p > .05$ for the intrinsic measure of private religious practices and $\beta = -.023$, $p > .05$ for the intrinsic measure of religious/spiritual coping. The standardized beta coefficient compares the strength of the effects for each intrinsic religiosity measure and the extrinsic religiosity measure to social connectedness. The strength of the effect of extrinsic religiosity on social connectedness is minimal. As in the correlations the less religious identification related to more social connectedness, but more extrinsic religiosity correlated to more social connectedness (see Table 3, in Appendix).

Testing if religiosity works through social connectedness to influence depression did not make sense to do, because religiosity is not related to depression, therefore the analysis was omitted from the study.

A post-hoc Tukey test was used with the following, Between-subjects Univariate Analysis of Variance (ANOVA) to examine age differences and T-test to analyze gender differences to answer the third research question (Are the various dimensions of religiosity and social connectedness different between genders and age groups of older adults in their effectiveness?) to predict religiosity, social connectedness, and depression. This study used young-old to identify participants ages 65-74, old-old to identify participants ages 75-84, and oldest-old to identify participants ages 85 and above (Whitbourne, & Whitbourne, 2016). Level of significance was determined at the alpha level of .05. The ANOVA results (see Tables 4 & 5 inj Appendix) showed significant differences between the young-old (ages 65-74) and old-old (ages 75-84) age groups in three variables of interest including extrinsic religiosity ($p < .001$), religious identification ($p < .001$), and intrinsic religiosity on both measures including religious/spiritual private practices ($p < .001$) and religious/spiritual coping ($p < .015$). Results revealed young-old participants were significantly less extrinsically religious than old-old participants, young-old participants identified significantly more with religion than old-old participants, and young-old participants were significantly more intrinsically religious than old-old participants.

The independent T-test of gender differences showed differences between genders on all variables of interest (see Table 6 in Appendix). The results showed significant differences ($\alpha = 0.05$) in depression, religious identification, and religious/spiritual coping between the genders with women having significantly higher scores than men. That is, women displayed significantly

more depressive symptoms ($\bar{x}$ = .53) than men ($\bar{x}$ = .31), p < .001. Men were noticeably more

likely to identify with their religion ($\bar{x}$ = 19.2) compared to women ($\bar{x}$ = 21.2), p < .001. Lastly,

men coped with religiosity considerably more ($\bar{x}$ = 4.9) than women ($\bar{x}$ = 6.0), p < .001. Thus,

rejecting the null hypothesis of the third research question.

Discussion

As the older adult population continues to increase dramatically, it is essential for

professionals to use creative means in reaching this population. Especially, since this population

has less contact than any other population with mental health practitioners. In addition, the older

adult population has a 75% completion rate of suicide on their first attempt with depression

being the most significant predictor and largest overall risk factor (Fässberg et al., 2012; Tsai et

al., 2014). This study sought to look at the effects of religiosity and social connectedness on

depression.

The results of the study support the literature on importance of social supports and

feelings of social connectedness in older adult health and overall well-being with higher social

connectedness scores highly associated with lower depression symptoms. Interestingly, intrinsic

religiosity and religious identification had significant correlations with social connectedness. The

less intrinsic religiosity and religious identification the more socially connected participants felt.

This follows the logical premise of the participants spending less time engaging in intrinsic

religiosity, which are activities done alone or in private, are more likely to be social and engaging

in activities with others. Consequently, feeling more socially connected. Furthermore, extrinsic

religiosity appeared to have a significant correlation with social connectedness. As hypothesized,

the more extrinsic religiosity (i.e., the more religious services and activities participants attended) the more socially connected they felt.

Extrinsic religiosity's significant association with social connectedness found in this study further supports the literature. Many studies have suggested religiosity to be positively associated with well-being, life satisfaction, and mental health in the older adult population (Ardelt, 2003; Nelson-Becker, 2005; Roh, 2010). The majority of this study's demographic of participants were white, however several studies report that higher religious engagement (i.e., extrinsic religiosity) predict greater life satisfaction among rural American older adults (Yoon & Lee, 2007), older adults with disabilities (Moberg, 2008), older African Americans (Krause, 2004), and elderly Asian immigrants (Lee, 2007; Roh, 2010). Therefore, it can be that increasing extrinsic religiosity serves a multitude of benefits for an individual across various cultures and demographics.

Unfortunately, the study found depression and religiosity to not be significantly correlated on all religious dimensions. Therefore, the null hypothesis was accepted for the second research question, suggesting no significant relationship between the dimensions of religiosity and depression. The insignificant findings of this study support the inconclusive literature on the relationship between religiosity and depression. For instance, Walker and Bishop (2005) found suicidal ideation to be negatively associated with intrinsic religiosity, but not associated with extrinsic religiosity. Lester (2012) found religiosity to be positively associated with depression and suicidal ideation. Whereas, Lim and Putnam (2010) found religious people report less distress, especially when they undergo highly stressful life experiences, than those who are not religious. Velde, Bracht, and Buffel (2017) found higher frequency of religious service

attendance (i.e., extrinsic religiosity) is associated with lower levels of depression, whereas higher frequency of prayer (i.e. intrinsic religiosity) is associated with higher levels of depression. The association between depression and religiosity is not always found. In addition, the literature looking at the relationship between religiosity and depression often oppose each other suggesting results may depend on the specific measure of religiosity used (Lester, 2012). Therefore, the measures of religiosity used in this study may have lacked specificity and/or sensitivity as a potential explanation for religiosity and depression not being significantly correlated on all religious dimensions or maybe religiosity is not related to depression.

Differences between gender and age groups were found in relation to the dimensions of religiosity and levels of social connectedness. Young-old and old-old displayed the most difference between the three age groups in multiple variables of interest including religious identification, extrinsic religiosity, and intrinsic religiosity. The young-old identified with religiosity more than the old-old. Age differences may exist due to the many life transitions and age related stressors that occur in later life, which may have influenced participant's orientation and/or relationship with religiosity resulting in the significant differences between age groups.

The young-old attend significantly less religious activities and services than the old-old age group. This may be because the young-old are more likely to be able bodied and more involved in other extracurricular activities with friends and family. Further, of the 1.5 million nursing home residents in the National Nursing Home Survey (2004), 45.2% of residents were aged 85 years and older. Therefore, it is likely that the oldest-old age group is more likely to be living in a nursing home where the religious activities and services are not as readily available to them despite efforts by nursing home staff and clergy of various religions (Jones, Dwyer,

Bercovitz, & Strahan, 2009; Powers & Watson, 2011). According the Center for Disease and Control Prevention (CDC), in 2016 the average life expectancy in the United States is 78.5 years. Therefore, it is possible that the old-old age group is experiencing multiple personal life changes with physical and mental abilities declining, as well as, loss of friends and spouse, which may be motivating them to attend religious activities and services to seek comfort in their time of need from both their religion and others compared to the other two age groups. Lastly, the young-old age group participated in private religious practices and religious coping significantly more than the old-old age group. The increase in intrinsic religiosity among the young-old may reflect their decrease in extrinsic religiosity and vice versa with the old-old age group. With that said, religiosity seems to be important and beneficial to older adults of all age groups, however their orientation to religiosity may depend on their current life circumstances.

Significant differences between genders were found including women being more depressed than men, men identified with religion more than women, and men were more likely to cope with religiosity compared to women. Older adult women appear to be more depressed than older adult men. This may be because women have a longer life expectancy than men and are more likely to experience their remaining life without a partner, leading to more depression symptoms (Antonucci et al., 2002). It is possible men were more likely to minimize their depression symptoms due to social expectations and/or stigma of males expressing emotions in the United States. In addition, older adult men may accept less support than they need and therefore symptoms of depression may go undetected (Grootheest, Beekman, Groenou, & Deeg, 1999). Older adult women may have more depressive symptoms than men, but older adult men

are more likely to complete suicide when they attempt given their chosen means are more lethal (Fiske & O'Riley, 2016).

It is possible that older adult men identify with their religion more than women, because of the altered structure of society with women's roles changing through new economic opportunities and leadership roles. It could be that men have not adjusted to their new roles in society, therefore men may be more apt to turn to their religious identification and religious domain's where their roles are likely to have remained constant. In addition, older adult men may cope with religion more than older adult women because the religious domain they identify with may be where they get most of their social support, self-esteem, and feelings of being grounded amongst the many changes of society. Whereas, women are more likely to be social beings, therefore readily having other sources of community they identify with that provide them with social support, self-esteem, and feelings of belonging.

Limitations and Future Research

All the participants were all from the United States and limitations to this study include a lack of generalizability, as the sample population was 89.2% white and only 10.2% people of color, proposing an issue of external validity. Future research should repeat studies with populations with people of color, various cultures, and countries to enhance generalizability and external validity. Additionally, a previous study has shown that voluntary participants come with biases including being more likely to be educated, more intelligent, less authoritarian, appear to be better adjusted, seek more stimulation, and have a higher need for social approval compared to non-volunteer participants (Heppner, Wampold, Owen, Thompson, & Wang, 2016).

Using secondary data comes with limitations, such as the researchers in this study potentially being unaware of study-specific distinctions or faults in the data collection process that may have been important to the interpretation of the variables of interest in the MIDUS 3 dataset (Cheng & Philips, 2014). However, MIDUS 3 had succinct documentation of important validity information, which mitigates this problem. Also, national datasets often are very general and the measures used from the MIDUS national data set may lack specificity and sensitivity to the particular variables of interest used for this study. Also, operationalization of religiosity constructs may vary in meaning based on culture or what generational cohort a participant belongs to, which may have influenced how a respondent answered particular questions related to religiosity. Therefore using instruments with high reliability, specificity, and sensitivity to the variables of interest keeping in mind the participants culture and generational cohort may enrich findings.

Additional limitations of this study include not having a measure for suicidality. Future research should include a suicidality measure for a more accurate picture of the relationship between religiosity and social connectedness on suicidality. The most meaningful limitation of this study was a sample size issue with depression. A floor effect was found, out of the 1,496 total sample population of older adults who completed the depression measure only 106 showed any indication of depression symptoms. Therefore, it is probable that there were not enough participants with depression to detect a relationship with religiosity. Future research should look at the relationship between religiosity and only older adults with existing depression symptoms to avoid a floor effect.

Lastly, a missing component of the study is not identifying which specific religious or spiritual organizations and/or group participants associated with, which could have provided further information for external validity (Heppner et al., 2016). Future research should include what religions or philosophical frames of thought participants identify with to look at the spread of how many participants identify with each identified religious group or practice.

Implications for Professionals

Implications for professionals are that social connections are effective additions to mental health treatment and if the client identifies that religiosity is important to them it would be beneficial to encourage participation in religious activities and services. Collaboration between professionals and religious domains could be beneficial for some older adults, especially men, as the religious community provides opportunities for social connection and structure as they adjust to personal life changes and that of society. At least, if a client brings up in conversation, or inquires about religiosity it would be important for professionals to be knowledgeable about religions and local religious domains to refer to older adults, as they may serve as an effective vehicle for those who are reluctant to seek formal mental health treatment or could be a beneficial addition to formal mental health treatment.

In conclusion, extrinsic religiosity was found to be more effective than intrinsic religiosity in fostering social connectedness, increased social connectedness is significantly correlated to lower depression symptoms, and there were differences found in effectiveness between genders and age groups in relation to dimensions of religiosity and social connectedness. A relationship between religiosity and depression was not found likely due to a floor effect.

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Appendix

Table 1

Religiosity Variables, Social Connection, Depression, and Demographic Variables: Descriptive Statistics

[a]Religious Identification: lower score (max score 28) = higher identification. [b]Intrinsic

Variables	Sample Size	Mean (SD) / Count (%)
Religious Identification	1125	20.15 (5.63)
Intrinsic Religiosity (Private Practices)	1125	10.20 (2.14)
Intrinsic Religiosity (Coping)	1125	5.50 (2.14)
Extrinsic Religiosity	1125	4.22 (1.41)
Social Connection	1293	15.17 (3.96)
Depression	1496	.43 (1.45)
Total Household Income	1125	$69, 070 (65031.95)
Number of Chronic Conditions	1125	3.68 (3.23)
Sex	1496	675 Men (45.1%) 821 Women (54.9%) 0 Missing (0.0%)
Age	1496	865 Young Old (57.8%) 505 Old Old (33.8%) 129 Oldest Old (8.4%) 0 Missing (0.0%)
Race	1496	1334 White People (89.2%) 151 People of Color (10.1%) 11 Missing (0.7%)
Education	1487	5 No School/Some Grade School (0.3%) 22 8th Grade/Jr. High (1.5%) 92 Some High School, No Diploma/GED (6.1%) 12 GED (0.8%) 396 High School Graduate (26.5%) 248 1-2 Years of College, No Degree (16.6%) 42 3+ Years of College, No Degree (2.8%) 129 Graduated: 2-year, Vocational, or Associates Degree (8.6%) 252 Graduated: 4-5 year College or Bachelor's Degree (16.8%) 42 Some Graduate School (2.8%) 168 Masters Degree (11.2%) 79 Doctorate or Other Professional Degree (5.3%) 9 Missing (0.6%)
Married or Cohabitating	1496	958 Married or Cohabitating (64%) 538 Not Married or Cohabitating (36%) 0 Missing (0.0%)

Religiosity (Private Practices): lower score (max score 18) = higher intrinsic religiosity.
[i]Intrinsic Religiosity (Religious Coping): lower score (max score 8) = higher intrinsic religiosity.
[d]Extrinsic Religiosity (Attend Religious Services and Activities):1 = once a day or more, 2 = a few times a week, 3 = once a week, 4 = 1-3 times per month, 5 = less than once per month, 6 = never. [e]Social Connection: higher score (max score 21) = higher social connectedness
[f]Depression: ranging from 0 to 7, 0 = respondent was diagnosed as negative for both depressed affect and anhedonia, 1-7 = respondent was diagnosed as positive for either depressed affect and anhedonia, or both with higher scores reflecting higher depression symptoms. [g]Sex: 1 = male, 2 = female. [h]Age: raw numerical value. [i]Race: 1 = white, 2 person of color [j]Education: 1 = no school/some grade school, 2 = eighth grade/junior high school, 3 = some high school (no degree), 4 = GED, 5 =graduated from high school, 6 = 1-2 years of college (no degree yet), 7 = 3 or more years of college (no degree yet), 8 = grad from 2 year college, vocational, or associate's degree, 9 = grad from a 4-5 year college, or bachelors degree, 10 = some graduate school, 11 = masters degree, 12 = doctorate. [k]Married or Cohabitating: 1 = yes, 2 = no. [l]Total Household Income: raw numerical value [m]Number of Chronic Conditions (12 months): raw numerical value.

Table 2

Religiosity Variables, Social Connection, Depression, and Demographic Variables: Correlations (N = 1,496)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Religious Identification	1											
2. Intrinsic Religiosity (Private Religious Practices)	.670**	1										
3. Intrinsic Religiosity (Religious Coping)	.679**	.741**	1									
4. Extrinsic Religiosity (Attend Services / Activities)	-.722**	-.671**	-.614**	1								
5. Social Connection	.284**	.218**	.217**	-.359**	1							
6. Depression	-.27	.003	.015	.046	-.149**	1						
7. Sex	.171*	.213**	.239**	-.123**	.060*	.078**	1					
8. Age	.146**	.127**	.057*	-.121**	.048	-.047	.029	1				
9. Married or Cohabitating	.018	.139**	.101**	-.029	-.107**	.096**	.293**	.191**	1			
10. Education	-.118**	-.041	-.041	-.030	.146**	-.056*	-.156**	-.107**	-.071**	1		
11. Total Household Income	-.082**	-.178**	-.135**	.052	.065*	-.089**	-.251**	-.244**	-.305**	.336**	1	
12. Number of Chronic Illness	.067*	.062*	.056*	-.014	-.144**	.210**	.124**	.056*	.108**	-.123**	-.162**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

  $*p < .05.$ $**p < .01.$ $***p < .001.$

Table 3

Multiple Regression Analysis for Religiosity on Social Connectedness

Predictor Variable	B	SE (B)	β	t	Sig. (*p*)
Religious Identification	.091	.033	.130	2.81	.005*
Extrinsic Religiosity	-.749	.121	-.267	-6.19	.000*
Intrinsic Religiosity Private Practices	-.008	.040	-.009	-.204	.839
Intrinsic Religiosity Coping	-.042	.083	-.023	-.508	.611

Note: Dependent Variables

Social Connectedness R^2 = .189, *p < .05

Regression controlled for covariates (i.e. age, sex, race, education, total household income, marital status, and number of chronic illnesses).

Table 4

Difference in Effects between Three Age Groups (Young-Old, Old-Old, and Oldest-Old) in Each Variable of Interest

Variable	F	Sig.	Partial Eta Squared
Depression	1.34	.262	.002
Social Connectedness	2.1	.124	.003
Religious Identification	15.9	.000*	.024
Extrinsic Religiosity	9.02	.000*	.014
Intrinsic Religiosity	11.24	.000*	.017
Private Practices			
Intrinsic Religiosity Coping	3.42	.033*	.005

*. Significant at the .05 level

Table 5

Age Group Means (SD)

	Young-Old (65-74)	Old-Old (75-84)	Oldest-Old (85+)
Depression	.48(.05)	.37(.07)	.33(.13)
Social Connectedness	15.0(.14)	15.5(.19)	15.1(.39)
Religious Identification	19.6(.20)*	21.5(.27)*	20.4(.55)
Extrinsic Religiosity	4.3(.05)*	3.9(.07)*	4.1(.14)
Intrinsic Religiosity Private Practices	9.9(.17)*	11.2(.22)*	10.4(.45)
Intrinsic Religiosity Coping	5.4(.08)*	5.8(.10)*	5.3(.21)

*. Significant at the.05 level

Table 6

Independent Samples Test of Gender Differences

Variable	Group Mean	Std. Deviation	95% Confidence Interval	
			Lower	Upper
Depression	<u>.43</u>	<u>1.45</u>	-.38	-.08
Male (N) = 675	.31*	1.19		
Female (N) = 821	.53*	1.63		
Social Connectedness	<u>15.2</u>	<u>3.95</u>	-.91	-.04
Male (N) = 583	14.9	3.92		
Female (N) = 710	15.4	3.98		
Religious Identification	<u>20.30</u>	<u>5.58</u>	-2.5	-1.3
Male (N) = 590	19.25*	5.99		
Female (N) = 710	21.18*	5.08		
Extrinsic Religiosity	<u>4.17</u>	<u>1.42</u>	.20	.51
Male (N) = 589	4.36	1.39		
Female (N) = 708	4.01	1.44		
Intrinsic Religiosity (Private Practices)	<u>10.3</u>	<u>4.59</u>	-2.45	-1.47
Male (N) = 590	9.26	4.56		
Female (N) = 705	11.2	4.42		
Intrinsic Religiosity (Coping)	<u>5.54</u>	<u>2.12</u>	-1.2	-.79
Male (N) = 590	4.98*	2.18		
Female (N) = 707	6.00*	1.96		

*. $p < .001$ is less than chosen significance level $\alpha = 0.05$, reject the null hypothesis