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## Spirituality, Religiosity, and Gerotranscendence

Rachael C. . Girard

*St. Catherine University*

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Spirituality, Religiosity, and Gerotranscendence

by

Rachael C. Girard, B.A.

MSW Clinical Research Paper

Presented to the Faculty of the  
School of Social Work  
St. Catherine University and the University of St. Thomas  
St. Paul, Minnesota  
in Partial fulfillment of the Requirements for the Degree of

Master of Social Work

Committee Members  
Sarah Ferguson, Ph.D., MSW (Chair)  
Mari Ann Graham, Ph.D., MSW  
Leola Furman, Ph.D., MSW

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

### **Abstract**

Gerotranscendence is a new theory of human development that extends to old age. This developmental process is characterized by a shift in metaperspective from a realistic view of the world to a more transcendent or cosmic perspective. The purpose of this study is to explore the relationship between age, gender, spirituality, and religiosity on gerotranscendence. Qualitative surveys were distributed to 174 residents of an independent living unit in the Midwest. The survey was used to measure respondents' age, gender, spirituality, religiosity, and gerotranscendence. The finding did not support the hypothesis that age correlated with level of gerotranscendence. Demographic characteristics of the sample could have skewed the statistics. The relationship between gender and gerotranscendence could not be analyzed due to the lack of responses from males. Both spirituality and religiosity had a significant, positive correlate to gerotranscendence, with spirituality showing a slightly stronger correlation. These results indicate that although both variables are important contributing factors to one's sense of gerotranscendence, spirituality seems to be the broader concept that incorporates characteristics of religiosity. Implications for developing spirituality and religiosity in the elderly such as staff education, spiritual/religious diversity training, and including spirituality and religiosity as part of a holistic treatment plan, are discussed.

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### Spirituality, Religiosity, and Gerotranscendence

In 2010, 13 percent (40 million) of the total United States population were people 65 and older. This figure is mainly due to the baby boomers turning 65, and is projected to dramatically increase to 20 percent (72 million) by 2030. Moreover, the population of people 85 years and over is projected to grow from 5.5 million in 2010 to 19 million by 2050 (AgingStats.gov, 2012). This increasing number of older adults coupled with a prolonged life expectancy has prompted the question: How does one age well?

The process of aging is closely associated with grief and loss stemming from decreased cognitive ability, decreased physical function, loss of roles and responsibilities, and death of close friends and family members (Gondo, Nakagawa, & Masui, 2013; Hale, 1982). Not only is depression a common psychological disorder for individuals over 65 years old, but it has also been found to be a universal emotional problem for institutionalized elders (Wang, Lin, Hsieh, 2011; Hale, 1982). According to the American Association of Suicidology (2009), elderly adults have a 50 percent higher rate of suicide than all other age groups, with the highest rates among individuals 80 years and over. To put elderly suicidality in perspective, in 2009, elderly individuals made up 12.9 percent of the United States population, but accounted for approximately 15.9 percent of all completed suicides.

Parallel to depression is life dissatisfaction (Wang, Lin, & Hsieh, 2011). Decreasing the prevalence of life dissatisfaction has been shown to be related to a number of benefits in the elderly population. As a general statement, life satisfaction is synonymous with successful aging because it incorporates social engagement, mental well-being, and physical health (Hsu, 2010).

To date, there are many different models of successful aging. These different models define the concept of successful aging in a variety of ways: gradually disengaging from social life, increasing focus on inner self, remaining socially active; maintaining mental and physical function, avoiding disease and disability, and continuing active involvement in life (Gondo, Nakagawa, & Masui, 2013). However, the increase of longevity will necessitate a reevaluation of the concept of successful aging. Recent studies have indicated that the oldest old (people over 85) and centenarians (people over 100 years old) reported high on health, happiness, and psychological well-being irrespective of functional limitations (Gondo, Nakagawa, & Masui, 2013). These findings suggest that the concept of successful aging for the oldest old and centenarian cohorts is related less to physical well-being and more to individuals' psychological state (Gondo, Nakagawa, & Masui, 2013).

One theory that defines successful aging in terms of psychological well-being, instead of physiological functioning, is the theory of gerotranscendence. This theory is defined as "a shift in meta-perspective, from a materialistic and rational vision to a more cosmic and transcendent one" (Tornstam, 1989, p. 60). Looking through the lens of gerotranscendence, symptoms of depression and factors of life dissatisfaction, such as social withdrawal, role changes, and increased interest with the past are reframed as characteristics of successful aging (Wang, Lin, & Hsieh, 2011).

Research has also postulated that spirituality is an important proponent of successful aging (Hodge, Bonifa, & Chou, 2010; Dalby, 2006; as cited in Bush, et al., 2012, p. 192; Park, Roh, & Yeo, 2011) Spiritual beliefs have been found to play a vital role in helping older adults traverse life challenges. Spirituality in older adults is also



associated with health and wellness and an increased coping ability (Hodge, Bonifa, & Chou, 2010). Moreover, studies have indicated a positive relationship between spirituality and gerotranscendence, especially in relation to the cosmic dimension (Braam, Bramsen, van Tilburg, van der Ploeg, & Deeg, 2006; Melia, 2001; Bruyneel, Marcoen, & Soenens, 2005).

With an increasing number of people turning 65 and living past 100, understanding the impact spirituality has on one's development is essential to providing quality care for this population. While some studies have focused on the role spiritual and religious development has on late-in-life maturation, little research has examined these variables in a spiritually-centered environment with a mixed population of Sisters and lay people. This article attempts to fill these gaps and provide further implications for clinical practice with older adults by answering the question: To what extent is spirituality and religiosity associated with an individual's level of gerotranscendence?

### **Literature Review**

#### **Theories Leading to the Development of Gerotranscendence**

Tornstam's theory of gerotranscendence is classified as a new theoretical development in the field of psychogerontology (Schroots, 1996). Before gerotranscendence became a well-known and influential paradigm, disengagement and activity theory were the dominant models (Bruyneel, Marcoen, & Soenens, 2005; Schroots, 1996). Disengagement theory, developed by Cumming and Henry (1961), was based on the assumption that as people age, they withdraw from previous roles or activities. This withdrawal was seen as both psychological and social. Psychological disengagement referred to a natural decrease in participation and interest in society and

people, and social disengagement referred to a natural decrease in participating in social roles and activities. Coupled with psychological and social disengagement is society's tendency to reject and move away from the aging individual (Schroots, 1996; Bruyneel, Marcoen, & Soenens, 2005). This dual withdrawal was thought to be unavoidable, functional, and related to factors of life satisfaction and inner peace. Therefore, disengagement theory argued that stimulating older adults with activities and social interactions would go against the natural development towards disengagement and result in a decrease in life satisfaction (Bruyneel, Marcoen, & Soenens, 2005).

However, this general theory did not take into account the elderly who had not lost interest in life, nor those who had not withdrawn from social interaction. Seeing this theory as one-sided, Havighurst (1961) developed activity theory to fill in the gaps. Activity theory is based on the assumption that through participation in social activities, elders are able to maintain life satisfaction (Wang, Lin, Hsieh, 2011; Melia, 2001; Schroots, 1996; Bruyneel, Marcoen, & Soenens, 2005). Social activity acts as a role support necessary for maintaining and reaffirming a positive view of self and a high level of life satisfaction. The more intimate and frequent the social interactions are, the stronger and more specific the role supports will be (Bruyneel, Marcoen, & Soenens, 2005). Furthermore, if functional decline (cognitive and physical impairments) due to the natural process of aging limits participation in late-in-life activities, the elderly person must substitute new roles for the ones lost. Consequently, individuals who are not able to maintain social activity or find alternative activities for those they are no longer able to perform, have low life satisfaction and a low self-concept (Wang, Lin, & Hsieh, 2011; Melia, 2001; Schroots, 1996; Bruyneel, Marcoen, & Soenens, 2005).

Neither disengagement nor activity theory, however, provide conclusive evidence to adequately account for successful aging (Melia, 2001). Limitations of both theories include lack of consideration for important variables that affect well-being (i.e. the quality of relationships and level of social integration) (Melia, 2001). In 1989, Lars Tornstam revised Cumming and Henry's disengagement theory and developed his own theory on aging called gerotranscendence.

### **Defining Gerotranscendence**

The theory of gerotranscendence differs from disengagement and activity theory because of its definition of reality. As previously mentioned gerotranscendence is a shift from a "materialistic and rational vision to a more cosmic and transcendent one, normally followed by an increase in life satisfaction" (Tornstam, 1989, p. 60). Thus, this theory shifts from the rational perspective of disengagement and activity theory, to a more cosmic one (Melia, 2001). For instance, gerotranscendence assumes a redefinition of reality whereas disengagement and activity theory are constrained to turning inwards or outwards. Furthermore, whereas gerotranscendence simultaneously emphasizes the importance of social activity and solitary peace, disengagement and activity theory only look at the presence or absence of withdrawal (Tornstam, 2005; Schroots, 1996).

Gerotranscendence is regarded as the final stage of late-life development, characterized by a natural move towards wisdom and maturation through the process of aging (Lewin & Thomas, 2000). The theoretical concept of gerotranscendence has three levels of age-related ontological change: the cosmic level, the level of self, and the level of social and individual relationships. These levels are summarized below.

**The cosmic level.** The cosmic level is defined by five characteristics. The first is a change in perception of time and space as one's past and present begin to blur together. For example, older adults may experience the presence of relatives who have previously passed. The second change is a connection to earlier generations as manifested by an increasing attachment and a new interest in genealogy. Furthermore, older adults may describe a change from viewing themselves as a link on a chain to seeing only the chain. Thirdly, there is a disappearing fear of death and a new understanding of what life and death mean. In this component, older adults may see the immortality of the genetic chain. The fourth change is in regards to the mystery of life. Older adults will often accept the unknown, mysterious dimension of life and find a new dimension of understanding. Lastly, sources and subjects of happiness change. In Tornstam's words, one's happiness changes from "grand events to subtle experiences, the joy of experiencing the macro cosmos in one's own micro cosmos" (1997, p. 143). Moreover, nature becomes more important as older adults view themselves as an integrated part of the universes (Tornstam, 1997a).

**The coherence dimension.** The coherence dimension, also known as the level of self, has five defining characteristics. The first is self-confrontation. This characteristic is marked by the discovery of aspects of the self (both good and bad) that were previously hidden and a redefinition of personal traits ensues. Secondly, a decrease in self-centeredness occurs. For instance, older adults will no longer view themselves to be the center of the universe. This trait is especially seen among men. Next, is a rediscovery of childhood and the child within. This characteristic is defined by a return to and a transfiguration of childhood. For many older adults, childhood becomes more alive as

they grow older. Fourthly, there is a move toward self-transcendence. This shift is often times seen as a change from egoism to altruism, or as a late-in-life development of self-confidence. For instance, there is a continuation of care of the body without an obsession over it. Lastly, ego integrity is developed. This trait is manifested by the realization that the pieces of life's jigsaw puzzle form a wholeness. There is also an increased need of solitude in achieving and maintaining this perspective (Tornstam, 1997a).

**The solitude dimension.** The solitude dimension, also known as the level of social and individual relationships, is characterized by five traits. The first trait is the importance of social contacts during different phases of life. For instance, older adults appear to become less interested in superficial relationships, more selective of relations, and have an increasing need for solitude. This need for positive solitude is not synonymous with "passive withdrawal," but rather a "change in the importance of social relationships. [Older adults] shed the company and activities that lack content; they become more selective, preferring literature or music or a few friends. Not because of lack of possibility, but of choice" (as cited in Cozort, 2008, p. 27). Secondly, there is a greater understanding of the differences between self and role. This understanding is accompanied by an urge to abandon roles and a new comfort stemming from understanding the necessity of roles in life. Next is the trait of emancipated innocence. This is a maturity-enhancing innocence that is defined by the ability to break away from (transcend) nonsensical social norms. Fourthly, there is a tendency to shift toward deemphasizing the importance of material assets and a new understanding of the "petrifying gravity of wealth and the freedom of asceticism" (Tornstam, 1997a, p. 143). Lastly, there is a shift in everyday wisdom. The boundaries between right and wrong,

wise and unwise, become blurred. Thus, older adults transcend the right/wrong duality. The consequence of this transcendence is refraining from giving advice or helping others make decisions (Tornstam, 1997a).

### **Gerotranscendence and Age**

One of Tornstam's (1989) assumptions of gerotranscendence is that it develops naturally through the process of aging. This theory offers a new paradigm in which people can understand the developmental shift into old age, and the situational shift in older adults' every day activities (Wadensten, 2005). In contrast to previous theories, gerotranscendence implies that human development does not end in middle-age, but is a process that continues into old age, resulting in a perspective that is qualitatively different from earlier life developmental stages (Tornstam, 1996; Wadensten & Carlsson, 2002). Many studies have focused on understanding the relationship between gerotranscendence and age. Although more research needs to be conducted examining gerotranscendence and more diverse age cohorts, the reviewed literature suggests a significant, positive relationship between gerotranscendence and age. That is, gerotranscendence increases as people get older.

Tornstam (1997b) conducted a cross-sectional study that looked at 2,002 men and women from Sweden aged 20-85 years old. Findings showed that dimensions of gerotranscendence (cosmic transcendence, coherence, and need for solitude) increase with age. All dimensions reach their maximum development later in life, but cosmic transcendence and coherence maintained continuous development beginning during the first half of adult life, whereas the need for solitude developed quickly during the first half of adult life, and gradually during the second half of life. Moreover, data analysis

showed that cosmic transcendence was less prevalent in women who were old-old (75-84 years old) compared to their younger counterparts. Furthermore, cosmic transcendence was more prevalent in old-old men compared to younger men. In terms of the need for solitude, old-old women reported a higher need in comparison to old-old men. For both genders, coherence was stable in the old-old age bracket (Gondo, Nakagawa, & Masui, 2013). When discussing the correlation between age and gerotranscendence, Tornstam (1997b) writes:

Even if some aspects of dimensions of gerotranscendence are referred to as general in the sense that they show statistically significant correlation with age, some circumstances do modify these correlations. Gender, crises, and life circumstances have been found to be such modifies. (p. 31)

It is also important to note that the scale used to measure the developmental process of gerotranscendence could have played a factor in the age and gender differences in the above mentioned studies. In Tornstam's 1994 study, the 50 participants were 52-97 years old. However, the number of participants who were the oldest old (over 85) was much lower than the younger age cohort. Therefore, this study's generalizability is limited in terms of understanding the development of gerotranscendence amongst the oldest old (Tornstam, 1994).

In order to better understand the mindset of the elderly, Gondo, Nakagawa, and Masui (2013) focused on men and women who were in their 70's and 80's. The study's purpose was to examine age-related development of gerotranscendence and psychological health. Results of this research showed that despite a lower functional status, people in the oldest-old age cohort group reported a higher psychological well-

being. These findings suggest that “gerotranscendence might facilitate better psychological well-being in the older adults and that this effect might be enhanced in very old age” (Gondo, Nakagawa, & Masui, 2013, p. 127).

Similar results were found by Wadensten (2005) who investigated the aging process of six Swedish woman aged 68-80 years old. The findings of this qualitative study found that all participants reported experiencing the aging process in a way that was in line with the theory of gerotranscendence. This study also gave implications for introducing older people to the theory of gerotranscendence and using aspects of this theory as a clinical intervention because it “gave [the participants] a more positive view of aging which also allowed them to be as they were” (Wadensten, 2005, p. 381).

### **Gerotranscendence and Life Satisfaction**

Tornstam’s (1989) theory of gerotranscendence assumes that the transcendent shift is accompanied by an increase in life satisfaction. Tornstam himself found mixed results in regards to the strength of relationship between these two factors. Both his 1996 qualitative studies, and his 1994 retrospective quantitative study found a significant positive correlation between life satisfaction and gerotranscendence (Tornstam, 2003). However, Tornstam’s 1995 cross-sectional study found no correlation between these two factors. In 2001, Tornstam conducted a qualitative study of 2,800 Swedish men and women aged 65+, to give further empirically valid evidence to the relationship between life satisfaction and gerotranscendence. Results of the 2001 study showed a positive correlation between satisfaction with present life and cosmic transcendence, particularly in older subjects, concluding that “the combination of cosmic transcendence



and satisfaction with present life would seem to be a fruit especially reserved for old age” (Tornstam, 2003, p. 18).

Although, Tornstam found mixed results in his research, most studies lean towards support of Tornstam’s original assumption. Lewin and Thomas (2000) used the life narrative approach in combination with thematic semi-structured interviews with two differing cultural and religious groups. These groups were religious and secular Turks who lived in Turkey aged 66-83 years old, and religious and secular Iranians who lived in Sweden aged 43-75 years. Both Turkish and Iranian studies showed evidence that participants who reported gerotranscendence also reported life satisfaction. Moreover, participants who did not report life satisfaction also did not display evidence of gerotranscendence.

Research on the impact gerotranscendence has as a clinical intervention was conducted by Wang, Lin, and Hsieh (2001). This study looked at the relationship between gerotranscendence, life satisfaction and depression in 83 male and female elders aged 65-95. In this pre-posttest study, the participants were randomly assigned into either an eight-week gerotranscendence support group or a control group. The results of this study show that the subjects who participated in the intervention group significantly increased their scores on life satisfaction ( $p = 0.000$ ) and their depression was reduced, but not significantly ( $p = 0.06$ ). In contrast to Wang, Lin, and Hsieh (2001), Wang (2011) found a significant association between depression and gerotranscendence in a study of 195 institutionalized elders aged 65-98 years old from southern Taiwan. These findings suggest that although depression does not significantly contribute to an elder’s development towards gerotranscendence, individuals who experience severe depression

have a lower level of gerotranscendence. Further findings of this study support Tornstam's original assumption that a greater level of gerotranscendence is positively related to life satisfaction. However the strongest correlated factor for gerotranscendence was found to be Meaning of Life. This finding, along with similar results by Mackinlay (2001) and Braam, et al. (2006) suggest that spirituality helps the elderly to transcend material limitations and achieve universal transcendence.

### **Critique of Gerotranscendence**

Although the theory of gerotranscendence is promising, empirical research has remained inconsistent on the variables that contribute to the natural progression of transcendence. One reason for this inconsistency is the abstract nature of the paradigm. Tornstam's theory strays from the Western scientific model and leans heavily on Eastern mystical traditions. Moreover, Tornstam defines gerotranscendence in descriptive language (i.e. metaphors, parallels, etc.), which results in difficulty for others to replicate his work, and subjects data analysis to personal bias and values (Ebel, 2000).

Another critique is in relation to the generalizability of this study. Most of the studies examining gerotranscendence were conducted in Sweden. Not only does this country differ in terms of cultural values and norms, the Nordic States (Sweden, Finland, Norway, and Denmark) report greater life satisfaction compared to other states (Propp, 2009). Comparing Sweden to the rest of the world, the 2005 Quality of Life index ranks Sweden fifth out of 111 countries in overall quality of life (The Economist, 2005). In addition, the Nordic States have the most generous social welfare systems. Although research examining the correlation between life satisfaction and social welfare system has received mixed results (Propp, 2009; Cheung & Leung; Pittau, Zelli, & Gelman, 2010),

the high rating of life satisfaction in Sweden may impact the generalizability of gerotranscendence.

Another criticism of gerotranscendence is in regards to the strength of relationship between transcendence and age. Although studies have found a positive relationship between gerotranscendence and age, recent research has suggested that old age is not the strongest variable. When it comes to the development of certain dimensions of gerotranscendence, spirituality and religiosity in the elderly population has been found to be more important than age (Bruyneel, Marcoen, & Soenens, 2005). Research by Ahmadi (2000) suggests the reasoning for the increased importance of spirituality/religiosity is that the development of spiritual thinking acts as a nurturing agent for some qualities of gerotranscendence, such as transcendent wisdom, changes in importance and meaning of relationships, self-transcendence, and self-confrontation.

### **Spirituality and Religiosity**

Spirituality and religion overlap to some extent in their definition. Spirituality involves “the search for meaning, purpose, and morally fulfilling relation with self, other people, the encompassing universe, and ultimate reality, however a person understands it” (Furman, Benson, & Canda, 2008, p. 2). Spirituality has been suggested to refer to an individual’s “personal and subjective experiences” (Dalby, 2006, p. 5). According to Hill and Pargament (2003):

Spirituality can be understood as a search for the sacred, a process through which people seek to discover, hold on to, and, when necessary, transform whatever they hold sacred in their lives (as cited in Dalby, 2006, p. 5).

Elements of “the sacred” can incorporate many different aspects of life: perception of God and the divine, true reality, and the transcendent (Dalby, 2006). Another tenant to spirituality, “meaning making”, is connected to the concept of the sacred. Meaning making is suggested to be in relation to the life-long search for the sacred (Dalby, 2006).

On the other hand, religiosity refers to “an organized structured set of beliefs and practices shared by a community related to spirituality” (Furman, Benson, & Canda, 2008, p. 2). That is, religiosity is a relationship to a set tradition, whereas spirituality is a relationship to transcendence. Religiosity, unlike spirituality, has been found to be more quantifiable in terms of a person’s behaviors and practices. For instance, number of times spent in prayer and the number of church attendances each week (Dalby, 2006).

### **Spirituality, Religiosity and Age**

Research on the relationship between the impact spiritual and religious development has on age has received mixed results. A retrospective study conducted by Baker and Nussbaum (1997) found no correlation between religious practice or spiritual dimension and age in 60 American residents in a retirement community aged 68-100 (as cited in Dalby, 2006). Wink and Dillon (2002) tracked 230 participants from childhood through adulthood and found a significant increase in spirituality from late-middle adulthood to older adulthood. In support of this finding, Adams (2004) surveyed 327 outpatients in Maryland aged 65-94 and found a perceived shift in participation from active pursuits to social intellectual and spiritual pursuits during the aging process.

According to Tornstam (1996) a main characteristic of cosmic transcendence is that the fear of death diminishes as a person ages. In 2005, researchers Wink and Scott conducted a longitudinal study of 155 people born in Berkeley California from 1928-

1929 in an effort to examine the relationship between religiosity and fear of death and dying in late adulthood. The participants were studied in childhood and adolescence, interviewed in early adulthood (30s), middle adulthood (40s), late-middle adulthood (50s or early 60s), and late adulthood (late 60s or mid-70s). Results showed no linear relationship between fear of death and dying and religiosity. In other words, highly religious people did not report less fear of death and vice versa. This study also found that the age cohort was the main predictor of fear of dying. Since participants who were in their mid-70's likely had experienced more life-crises (illness and bereavement) than their younger peers (late 60s), it is suggested that these life events helped the older aged cohort to develop a different view of the death and dying process.

### **Spirituality and Life Satisfaction**

Research suggests that spirituality is an important predictor of successful aging, and well-being in older adults (Bush, et al., 2012; Cowlshaw, Neile, Teshuva, Browning, & Kendig, 2013). A longitudinal study by Cowlshaw et al. (2013) suggested that spirituality positively influences older adults' perception of life experiences, thus impacting the overall sense of meaningfulness in life events. Results by Tate and Forcheimer (2002) support this finding. This study found that spirituality was associated with life satisfaction and quality of life in a sample of rehabilitation and cancer patients. Chlan, Zebracki, and Vogel (2011) also studied life satisfaction in people with health issues. This study looked at 298 adults who were diagnosed with a spinal cord injury before the age of 18 and examined the role of religion and spiritual coping on the participants' overall life satisfaction. Findings showed that spiritual coping was the greatest predictor in promoting life satisfaction, and importance of religion was not

shown to be statistically significant in promoting life satisfaction. These results lead the researchers to suggest that spirituality should be used as a clinical intervention for healthcare professionals.

### **Religiosity and Life Satisfaction**

Religion is often perceived as a key to happiness in old age. Thus, it is not hard to assume that religiosity provides people with a greater level of life satisfaction (as cited in Steinitz, 1980, p. 60). Research has found that religiousness is an important predictor of successful aging in older adults in terms of life satisfaction (as cited in Bush, et al., 2012, p. 192; Park, Roh, & Yeo, 2011). Older adults who reported religious involvement were found to have higher self-worth, higher self-esteem, and lower anxiety, depression, and blood pressure than their non-religiously involved counterparts (Bush, et al., 2012; as cited in Dalby, 2006, p. 4; Park, Roh & Yeo, 2012).

Empirical research has supported the idea that religiosity is positively related to overall happiness, adjustment, and life satisfaction (Braam, et al., 2006; Bush, et al., 2012; Dalby, 2006). Park, Roh, and Yeo (2012) interviewed 207 Korean immigrants aged 65 years or older to investigate the relationship between religiosity, life satisfaction and social support. Findings showed a positive relationship between religiosity and life satisfaction. Further data analysis implicated that social support, in part, explained this relationship. These results suggest that social support and religious engagement could play a significant role in the enhancement of quality of life and life satisfaction for elder Korean immigrants.

Steinitz (1980) surveyed 1,493 people aged 65 years and older for the purpose of understanding whether belief in life after death, church activity, confidence in organized

religion, and strength of religious affiliation were associated with well-being and Weltanschauung (a philosophy of human life and the universe). Data analysis proved contrary to earlier findings. Religious older people did not report greater feelings of well-being or Weltanschauung in comparison to their less religious counterparts. Furthermore, the frequency of church attendance was shown to be the only variable associated with well-being.

This finding is also supported in research by Braam, et al. (2006). This study found that church attendance had a greater relevance to the framework of meaning in life than religious affiliation. However, Steinitz (1980) determined that church attendance more accurately measured physical health than religious identification among the participants. Lastly, the measure of belief in life after death was found to have the strongest association with well-being and Weltanschauung, and was determined to be a more accurate indicator of religiosity than church attendance because it is not directly impacted by environmental and physical health factors.

### **Spirituality, Religiosity and Gerotranscendence**

Similar to the theory of gerotranscendence assumption that there is a natural progression towards transcendence as individuals' age, research has shown that there is also a move toward spirituality during end-of-life (Dalby, 2006). The relationship between spirituality and gerotranscendence has been found to be the most notable among the Cosmic Transcendence dimension. Spirituality relates to the cosmic dimension in terms of an individual's sense of connectedness to the nature, the universe, other living being, and generations (Braam, et al., 2006). According to Dalby (2006), a critical review of literature revealed several common spiritual themes: concern for younger

generations, self-transcendence, relationship with a transcendent being or power, change in relationships with others, integrity, and human concern (Dalby, 2006).

Quantitative research by Bruyneel, Marcoen, and Soenes (2005) aimed to gain greater insight into the relationship between gerotranscendence, age, and religious and spiritual perspective on life. A survey was given to 467 men and women in Belgium aged 17-91 years old to measure demographics, gerotranscendence, level of spirituality, moral judgment, religious beliefs, and death attitudes. The relative scales used were the Post-Critical Belief Scale for measuring attitudes towards religion; the Spiritual Orientation Inventory to measure spiritual orientation; and the Dutch version of the Gerotranscendence Scale to assess participant's current state of gerotranscendence. Analysis of the Gerotranscendence scale generated three subscales that did not accurately reflect the three dimensions of gerotranscendence as proposed by Tornstam: Active Involvement, Anxiety and Uncertainty, and Transcendent Connection. The most closely related subscale to Tornstam's theory was the Transcendent Connection. This subscale referred to "a feeling of receptive connectedness with the universe, life, one's self and characteristics of the other gender in oneself, unknown people, and previous generation" (p. 11). Findings showed that age was only weakly related to the Transcendent Connection. However, this subscale was positively related to spiritual views, practices, moral consistence, moral thinking, relativistic orientation to religious beliefs, and negatively related to death factors. Regression analysis indicated that the variables of spiritual beliefs and spiritual practices were the two most important predictors of Transcendent Connection. Moreover, *symbolically* interpreted religious beliefs were found to be positively correlated with Transcendent Connection, whereas *literally*



interpreted religious beliefs negatively correlated with Transcendent Connection. These results suggest that development toward gerotranscendence depends more on one's development of morality, spirituality, religiosity, and perception of death than the natural processes of aging.

Qualitative research by Melia (2001) examined the relationship between faith and gerotranscendence in 39 Catholic women who were members of a religious order and over 70 years old. Findings showed that although the participants supported the gerotranscendence in terms of "positive disengagement" they did not show evidence of developing a new transcendent perspective. This contradictory result is suggested to be due to the characteristics of the study's participants: "Whereas gerotranscendence is typified by a deeper, more universal and accepting view of all that exists in the past, present, and future, individuals who devote their lives to their faith may have experienced the social matrix or incident impact factors that are necessary to move toward transcendence" (Degges-White, 2005, p.43).

Quantitative research conducted by Braam, et al., (2006) also found contradictory research in exploring the relationship between religiosity and gerotranscendence. These researchers administered a questionnaire measuring religiousness by the Framework of Meaning in Life scale, and Cosmic Transcendence to 928 Dutch older adults. Results of this study found that participants who are *less* likely to participate in religious activities have a stronger relationship between Cosmic Transcendence and a sense of meaning in life.

### **Limitations to Spirituality and Religiosity Studies**

Much of the reviewed literature used qualitative designs. Although beneficial in exploring the nature of a phenomenon, it may subject the research to greater bias from the researcher. Furthermore, the definitions of religiosity and spirituality are still up for debate (Chlan, Zebracki, & Vogel, 2011), which limits the generalizability of studies and makes it more difficult to accurately compare data across studies. Along with the differences in the definition of concepts, there is lack of consistency in the types of instruments used to assess aspects of spirituality and religiosity, which brings further limitations to generalizability and comparability of research.

### **Summary**

As the older population grows exponentially, the psychology of the aging process has been struggling to catch up (Schroots, 1996). With the number of people utilizing paid long-term care services estimated to double from 13 million Americans in 2000 to 27 million Americans in 2050 (U.S. Department of Health and Human Services and U.S. Department of Labor, 2003), it is more important than ever to understand the factors of “successful aging.”

Although research related to understanding the gerotranscendence, spirituality and religiosity development and aging over the past 20 years has looked at a diverse range of subjects, there is little consistency across studies making it difficult to draw conclusions (Bush, et al., 2012). One reason for this inconsistency is the different definitions of spirituality and religiosity and different measures for assessing spirituality and religiosity (Bush, et al., 2012; Dalby, 2006). Moreover, while some research has provided implications for using gerotranscendence as a clinical intervention to promote healthy

aging in institutionalized elders (Wang, 2011; Wang, Lin & Hsieh, 2010; Wadensten, 2005; Wadensten & Carlsson, 2000; Wadensten & Carlsson, 2002; Degges-White, 2005), more research should be focused on the affect that these factors of spirituality and factors of religiosity have on gerotranscendence. The following study is aimed at quantifying the extent to which self-reported spirituality and religiosity is associated with an individual's level of gerotranscendence. This study will explore the relationship between age, gender, spirituality, religiosity, and gerotranscendence.

## **Methodology**

### **Research Design**

The purpose of this study is to explore the extent to which age, gender, spirituality and religiosity are associated with an individual's level of gerotranscendence. This quantitative study was based on a cross-sectional survey of elderly Sisters and lay people who reside in an independent living facility. A quantitative design was used for two reasons: (1) previous research has been more qualitative in nature, thus there is a need for more precision with respect to this topic (Monette, Sullivan, & DeJong, 2010), and (2) based on the timeframe of this study, a cross-sectional survey (a snapshot of a phenomenon) was more feasible than a longitudinal research (gathering data over a period of months or years) (Monette, Sullivan, & DeJong, 2010).

Based on previous research outlined in the literature review, the author of this study has developed five research questions:

Q1 What is the relationship between age and gerotranscendence?

Q2. What is the relationship between gender and gerotranscendence?

Q3 What is the relationship between spirituality and gerotranscendence?

Q4 What is the relationship between religiosity and gerotranscendence?

Q5 Is spirituality or religiosity predictive of gerotranscendence?

The hypotheses of this study are:

H1 There is a positive correlation between age and gerotranscendence.

H2. Females have a higher level of gerotranscendence than males.

H3 There is a positive relationship between spirituality and gerotranscendence.

H4 There is a relationship between religiosity and gerotranscendence.

H5 Spirituality is more predictive of gerotranscendence than religiosity.

### **Sample**

Convenience sampling was used to obtain participants for this study. The participants were residents who live in the independent living unit of a spiritually-centered facility in the Midwest. This facility is a joint ministry of a Christian company and a local convent. The shared mission of this facility is to provide quality care through a faith-based setting. The participants were a relevant population to use in this study because they are a mix of Sisters and lay people.

### **Protection of Human Subjects**

This study will pose minimal risks to participants. However, asking questions regarding the participants' feelings regarding spirituality, religiosity, and factors of gerotranscendence might trigger reactions that can be uncomfortable for participants. In order to protect the participants of this risk, a variety of protective measures were established. Prior to data collection for this study, the researcher obtained approval from the research committee and the St. Catherine University Institutional Review Board to ensure protection of human subjects. Participants received an informed consent form that

stated the purpose of the study, why they were chosen, any risks and benefits of the study, and informed them that they were participating voluntarily, and thus were able to withdraw from participation in the study at any time and exempt of any consequences. To ensure confidentiality, all surveys were anonymous. No identifiable information was connected to the data. Data was stored in a locked file cabinet in a home office and stored electronically on a password protected document and computer. Only the researcher and advisor had access to records during the study. The researcher will destroy all original documents and any identifying information that could be traced to the study's participants by June 1, 2015.

### **Recruitment**

Recruitment of the participants was three-fold. (1) An informational flier was posted on each elevator in the facility, on the announcement bulletin boards in the facility, and put in the facility's information book. (2) An announcement was made during Mass by the spiritual director a week before the first survey was administered. (3) The Spiritual Director inserted a short excerpt about the research in the facility's bulletin during the week the survey was distributed. See Appendix B for the Spiritual Director's speech and bulletin excerpt, and Appendix D for a copy of the informational flier.

### **Administration of Survey**

The researcher distributed a packet containing an outline of the procedural process, the consent form, the survey, and a self-addressed envelope to each individual residing in the independent living unit. Participants were given a week to complete the survey and return the survey to the front desk. The front desk worker was informed to collect all sealed envelopes and place them in a larger manila folder that was kept in a

locked file cabinet. The researcher collected all envelopes at the end of each the day and transferred them to the researcher's home locked file cabinet. See Appendix C for the consent form, Appendix E for the outline of the procedural process, and Appendix A for the survey questions.

### **Data Collection**

**Instrument.** The research instrument for this study consisted of a survey to obtain (1) demographic information (2) participants' religious involvement and intrinsic religiosity, (3) participants' spirituality, and (4) participants' level of gerotranscendence. All of the items on the survey were derived from previously conducted studies, and all of the above mentioned scales were designed to be self-administered.

Two demographic questions were included in this survey: age and gender. This item was relevant to the research question in terms of understanding the relationship between the variable of age and level of gerotranscendence and understanding the sample population.

Religiosity refers to "an organized structured set of beliefs and practices shared by a community related to spirituality" (Furman, Benson, & Canda, 2008, p. 2). Religious involvement incorporates the following: organizational activities (public participation in religious groups and attending church services); non-organizational activities (prayer, listening to religious music, watching religious TV); intrinsic religiosity (personal commitment to religion), and subjective religiosity (attending religious activities for reasons other than personal commitment) (Koenig & Bussing, 2010). The scale used to measure participants' religiosity is called the Duke University Index of Religiosity (DUREL) and was developed by Koenig, Meador, and Parkerson in 1995 (Koenig &

Bussing, 2010). This five-item, multiple response scale uses three subscales to measure religiosity. These subscales include organized religious activities (ORA), non-organized religious activity (NORA), and intrinsic religiosity (IR) (see Appendix A for the survey questions). Over 100 published studies have used the DUREL. This measure is currently available in 10 languages. Overall, the scale has been found to have a high convergent validity with other measures of religiosity ( $r$ 's = 0.71–0.86), a high test-retest reliability (intra-class correlation coefficient of 0.91), a high internal consistence (Cronbach's alpha's = 0.78–0.91), and the DUREL factor structure has been confirmed by three separate samples by teams independent from the creator's group (Koenig & Bussing, 2010).

Spirituality refers to “the search for meaning, purpose, and morally fulfilling relation with self, other people, the encompassing universe, and ultimate reality, however a person understands it” (Furman, Benson, & Canda, 2008, p. 2). The scale used to assess spirituality is the Spiritual Assessment Scale (SAS) created by O'Brien (2008) (permission obtained). This 21-item scale uses a five point Likert scale response (see Appendix A for the survey questions). This scale measures overall spiritual well-being and uses three subscales to assess religious practice (RP), spiritual contentment (SC), and personal faith (PF). Reliability and validity have been established for this scale. Reliability was established using Cornbrash's alpha coefficient. Reliability coefficients above 0.70 are considered significant. The statistics for the overall spiritual well-being Alpha coefficient was 0.96. The Alpha coefficient for the three subscales are as follows: RP was 0.89; SC was 0.76; and PF was 0.89. Furthermore, reliability of the 21-item scale was determined by the responses of 179 chronically ill persons who consented to

complete the scale measure for statistical analysis purposes (O'Brien, 2008).

Gerotranscendence is a “shift in metaperspective, from a materialistic and rational vision to a more cosmic and transcendent one, normally followed by an increase in life satisfaction” (Tornstam, 1989, p. 60). This theory has three levels of age-related ontological change: the cosmic level, the level of self, and the level of social and individual relationships. The scale used to measure the participants’ level of gerotranscendence is called the Gerotranscendence Scale – Revised (GS-R) and it was developed by Cozort (2008) (permission granted). This instrument measures overall gerotranscendence, and has three subscales that measure the Cosmic dimension, the Coherence dimension, and the Solitude dimension (see Appendix A for the survey questions). The reason for choosing this scale is twofold. Firstly, the original gerotranscendence scale (GS) (Tornstam, 1997) was developed for people living in Sweden and Denmark. The GS-R scale, on the other hand, was revised to measure gerotranscendence for older adults in the southern United States. Thus, this scale would be more applicable to the current study’s population.

Secondly, this scale was used based on the psychometric properties. Content validity was established by an expert panel review of the scale items. Test-retest reliability was found to have a moderate correlation ( $r = 0.53, p < .001$ ). Face validity was determined by asking if participants related to the content of the scale items and results showed that 88-100 percent did recognize themselves. To determine content validity, two expert panels evaluated the scale for content validity. One panel was made up of members who were familiar with gerontology and the Theory of Gerotranscendence and the other panel was made up of experts in gerontology but not in the Theory of



Gerotranscendence. The overall Content Validity Index score was 0.86, indicating good content validity. Lastly, the internal consistency reliability for the total scores was moderate ( $\alpha = 0.61$ ) (Cozort, 2008).

**Data management.** Saint Catherine University's Statistical Package for the Social Sciences (SPSS) computer software was utilized for this study's data entry. All variables were clearly identified and coded in the SPSS file. All files were saved on a personal jump drive that was kept with the rest of the data in a locked home file cabinet.

### **Data Analysis**

**The sample.** All variables had descriptive statistics run on them. The purpose of descriptive statistics is to describe the participants in this study and give a better framework for the data. The statistical tool that was used to determine the age range of the participants was a frequency distribution and a histogram. Gender was measured by frequency distribution and a bar chart. A measure of central tendency and dispersion and a histogram were the statistical tools used to measure the participants overall spirituality, religiosity, and gerotranscendence. The spiritual subscales of PF, RP, and SC; the religiosity subscales of ORA, NORA, and IR; and the gerotranscendence subscales of Cosmic dimension, Coherence dimension, and Solitude dimension were measured by a measure of central tendency and dispersion and a histogram.

**Research question one.** The first research question for this study is: What is the relationship between age and gerotranscendence? The hypothesis is that there is a positive correlation between age and gerotranscendence. The Pearson Correlation (r-value) was used to measure the strength and direction of the relationship between age and overall gerotranscendence. The p-value (Sig. 2-tailed) was used to determine if there is a

statistically significant correlation between age and gerotranscendence. A positive correlation is shown by a positive r-score that is greater than 0.3. Statistical significance is indicated by a p-value less than 0.05 (Kuechler, Garrett, Toft, & Ferguson, 2012). The Pearson Correlation and the p-value was also used to measure the relationship between age and the three gerotranscendence subscales of Cosmic dimension, Coherence dimension, and Solitude dimension.

**Research question two.** The second research question for this study is: What is the relationship between gender and gerotranscendence? The hypothesis is that females have a higher level of gerotranscendence than males. A T-test was used to measure this statistic. The p-value (Sig. 2-tailed) was used to determine if there was a statistical significance between gender and gerotranscendence. A p-value that is less than 0.05 is considered statistically significant. The Levene's Test for Equality of Variances was used to determine if gender and gerotranscendence have approximately equal variance on the dependent variable (Kuechler, Garrett, Toft, & Ferguson, 2012).

**Research question three.** The third research question for this study is: What is the relationship between overall spirituality and overall gerotranscendence? The hypothesis is that there is a positive relationship between overall spirituality and overall gerotranscendence. The Pearson Correlation (r-value) was used to measure the strength and direction of the relationship between spirituality and gerotranscendence. The p-value (Sig. 2-tailed) was used to determine if there is a statistical significant correlation between spirituality and gerotranscendence. Statistical significance is indicated by a p-value less than 0.05 (Kuechler, Garrett, Toft, & Ferguson, 2012).

The Pearson Correlation and p-value was also used to measure the relationship between the following variables: overall spirituality; the three spirituality subscales of PF, RP, and SC; overall gerotranscendence; and three gerotranscendence subscales of Cosmic dimension, Coherence dimension, and Solitude dimension.

**Research question four.** The fourth research question for this study is: What is the relationship between religiosity and overall gerotranscendence? The hypothesis is that there is a relationship between religiosity and overall gerotranscendence. The Pearson Correlation (r-value) was used to measure the strength and direction of the relationship between religiosity and overall gerotranscendence. The p-value (Sig. 2-tailed) was used to determine if there is a statistically significant correlation between religiosity and overall gerotranscendence. Statistical significance is indicated by a p-value less than 0.05 (Kuechler, Garrett, Toft, & Ferguson, 2012).

The Pearson Correlation and p-value was also used to measure the relationship between the following variables: overall religiosity; the three religiosity subscales of ORA, NORA, and IR; overall gerotranscendence; and the three gerotranscendence subscales of Cosmic dimension, Coherence dimension, and Solitude dimension.

**Research question five.** The fifth research question of this study is: Is spirituality or religiosity predictive of gerotranscendence? The hypothesis is that spirituality is more predictive of gerotranscendence than religiosity. A regression analysis was used to examine the relationship between each item on the GS-R scale and overall spirituality and religiosity.

### **Strengths and Limitations**

The design and methods used for this research has both strengths and limitations. Strengths of this study include the use of previous scales that have been tested for validity and reliability, thus reliable data that can be compared and contrasted to previous studies. Given that this is a quantitative study, results will provide data that is precise and quantifiable. Moreover, because the instrument used is a survey, the results are independent of the researcher. Lastly, this research design has high internal validity because the design minimizes systematic error and bias (Monette, Sullivan, & DeJong, 2010).

One design limitation is the length of the survey. Based on the complexity of the research questions and necessity to use three different scales, the survey consists of 53 questions which may impact the results. According to Rathod and la Bruna (2005), as the length of an interview increases, the data quality decreases (as cited in Cape, 2010, p. 1).

Secondly, the sample itself is subject to limitations. Since the participants were chosen via convenience sampling, the sample is not representative of the entire population. Because of this, the study will have a low generalizability and a low external validity.

Thirdly, this study's cross-sectional design subjects the research to weaknesses. As a snapshot methodology, the participant's developmental change will not be observed. Moreover, this group change could potentially reflect factors such as time of day, hunger, season, sleepiness, etc., rather than the variables under study. Longitudinal research would have been the ideal design for this study. However, based on the timeframe of this research project, a cross-sectional design was more feasible.

### **Findings**

The purpose of this study was to identify how age, gender, spirituality and religiosity may affect an individual's gerotranscendence. This study attempted to gain insight into whether or not age was correlated with gerotranscendence. This study also examined if there was a relationship between spirituality and gerotranscendence, and religiosity and gerotranscendence. In addition to this, this study examined if one's sense of spirituality or religiosity was shown to be predictive of gerotranscendence.

### **Missing Data**

The researcher distributed 174 surveys to residents living in an independent living unit in a Midwest city. A total of 99 surveys were completed and returned, bringing the overall response rate to approximately 57 percent (56.896 percent). The respondents completed most of the items on the surveys. However, the data was cleaned to omit responses from respondents who did not answer two or more items of a subscale. Patterns of missing data suggest that two respondents missed a page of the GS-R portion of the survey, and one respondent missed a page listing both SAS and GS-R questions. The subscale with the most missing data was GT\_Total\_Sum. This variable measured the responses of the GS-R survey questions. As noted above, two respondents seemed to miss a page of the survey with GS-R items. Of further significance, many respondents wrote comments next to many items with missing data on this subscale. The pattern of these comments suggests the need to revise some survey questions. Implications of this missing data are discussed in greater detail in the "discussion" section of this paper.

### **Demographic Characteristics**

Out of the 99 participants, 89 (89.9 percent) identified as female; 8 (8.1 percent) identified as male, and 2 (2 percent) elected not to disclose their gender identity (See Table 1, and Figure 1). These findings show that the large majority of the respondents were female. Respondents' age ranged from 65 to 97 years old. The average age of respondents was approximately 83 years old (See Table 2, and Figure 2).

### **Spirituality, Religiosity, and Gerotranscendence Characteristics**

A measure of central tendency and dispersion, and a histogram were used to measure the respondents overall spirituality, religiosity, and gerotranscendence. These statistics were also used to measure the spirituality subscales of personal faith (PF), religious practice (RP), and spiritual contentment (SC); the gerotranscendence subscales of Cosmic dimension, Coherence dimension, and Solitude dimension; and the religiosity subscales of organized religious activity (ORA), non-organized religious activity (NORA), and intrinsic religiosity (IR). The results follow.

**Spirituality.** The respondent's overall spiritual well-being was measured using the standardized instrument called the Spiritual Assessment Scale (SAS) created by O'Brien (2008). This instrument is organized into three subscales of personal faith (PF), religious practice (RP), and spiritual contentment (SP). The overall score range of the SAS is 21 to 105, with higher scores indicating a stronger sense of spiritual well-being. The overall SAS mean was 95.1 out of a possible total score of 105. Mean total scale and subscale scores suggested the sample population had a strong, positive sense of spiritual well-being. The SAS subscales of PF, RP, and SC reflected a similar pattern. The PF subscale mean was 32.4 with a possible total subscale score of 35, the RP subscale mean

was 32.1 with a possible total subscale score of 35, and the SC subscale mean was 30.6 with a possible total subscale score of 35 (See Table 3, Figure 3, Figure 4, Figure 5, and Figure 6).

**Religiosity.** The respondents' overall religiosity was measured on three dimensions (subscales) of organizational religious activity (ORA), non-organizational religious activity (NORA), and intrinsic religious activity (IR) using the standardized instrument called the Duke University Religion Index (DUREL) scale (Koenig & Bussing, 2010). The creators of the DUREL do not recommend summing the three subscales because it could interfere with outcomes in relation to respondents' health. However, given that this study is not measuring the relationship between religiosity and health outcomes, this study examined the summative score of all three subscales (overall religiosity), along with examining the subscales independently.

The range of the DUREL is 5 to 27, with higher scores indicating stronger religiosity. The overall DUREL mean was 24.8 out of a possible total score of 27. Mean total scale and subscale scores suggested the sample population had a strong sense of religiosity. The DUREL subscales reflected a similar pattern. The ORA subscale mean was 5.7 with a possible total subscale score of 6, the NORA subscale mean was 5.2 with a possible total subscale score of 6, and the IR subscale mean was 13.7 with a possible total subscale score of 15 (See Table 3, Figure 7, Figure 8, Figure 9, and Figure 10).

**Gerotranscendence.** The respondents' overall level of gerotranscendence was measured on three dimensions (subscales) of Cosmic, Coherence, and Solitude using the standardized instrument call the Gerotranscendence Scale – Revised (GS-R) scale (Cozort, 2008). The range of the GS-R is 0-100 with higher scores indicating a higher

level of gerotranscendence. Mean total scale and subscale scores suggested the sample population had a moderate level of gerotranscendence. The overall GR-S mean was 75.9 out of a possible total score of 100. The GR-S subscales reflected a similar pattern. The Cosmic subscale mean was 31.8 with a possible total subscale score of 40, the Coherence subscale mean was 18.3 with a possible subscale score of 24, and the Solitude subscale mean was 25.96 with a possible subscale score of 36 (See Table 3, Figure 11, Figure 12, Figure 13, and Figure 14).

Overall, these demographic characteristics show that respondents had a strong sense of spirituality and religiosity. In terms of spirituality, respondents scored the highest for the PF subscale, suggesting that a personal relationship with God is important to the sample population. In terms of religiosity, respondents scored the highest on ORA, suggesting that participating and attending religious events and activities is important to the sample population. Lastly, the respondents showed a moderate level of gerotranscendence, the highest subscale being the Cosmic dimension. This suggests that respondents have reached a moderate understanding of existential, metaphysical changes.

### **Research Question One**

The first research question was: What is the relationship between age and gerotranscendence? It was hypothesized that there is a positive correlations between age and gerotranscendence. It was also hypothesized that age would be positively correlated with the three gerotranscendence subscales (Cosmic, Coherence, and Solitude). Correlation between age and overall gerotranscendence (Table 5;  $r = -.039$ ,  $p = .729$ ) indicated a weak negative relationship that was not statistically significant. Similar results were found measuring the relationship between age and the Cosmic subscale. The



calculated correlation (Table 7;  $r = -.053$ ,  $p = .662$ ) indicated a weak negative relationship that was not statistically significant.

The results from measuring the relationship between age and the Coherence subscale (Table 9;  $r = -.257$ ,  $p = .013$ ) also showed a weak negative relationship, but this relationship had a p-value greater than .05, signifying a statistically significant relationship. The only correlation that found a positive relationship was between age and the Solitude subscale. The calculated correlation (Table 11;  $r = .191$ ,  $p = .070$ ) indicated a weak positive relationship, but was not statistically significant.

In sum, the results of this study showed no connection between age and gerotranscendence, the Cosmic subscale, or the Solitude subscale. A weak negative correlation was found between age and Coherence subscale but the p-value was not significant. Overall results showed an overall weak negative relationship, which was not expected.

### **Research Question Two**

The second research question was: What is the relationship between gender and gerotranscendence? It was hypothesized that females have a higher level of gerotranscendence compared to males. Due to the limited amount of male respondents (8.1 percent male response), the relationship was unable to be tested (See Table 1, and Figure 1). This was not a surprising result as the population studied had a higher proportion of females to males. Future research should include a population with an equal or close to equal number of possible participants who identify as male or female in order to better assess the relationship between these two variables.

### Research Question Three

The third research question was: What is the relationship between spirituality and gerotranscendence? It was hypothesized that there is a positive correlation between overall scale and subscale scores of spirituality and gerotranscendence. The correlation between the PF subscale and the Cosmic subscale was  $r = .142$ ,  $p = .180$  (Table 27) and was  $r = .173$ ,  $p < .096$  between the PF subscale and the Coherence subscale (Table 29). Both correlations indicated a weak positive relationship but were not significant.

Weak positive relationships that were statistically significant at the .05 level were found between overall gerotranscendence and the PF subscale (Table 15;  $r = .269$ ,  $p = .013$ ), the RP subscale and the Solitude subscale (Table 37;  $r = .252$ ,  $p = .015$ ), and the SC subscale and the Cosmic subscale (Table 39;  $r = .211$ ,  $p < .045$ ). Weak positive relationships that were statistically significant at the .01 level were found between overall spirituality and the Cosmic subscale (Table 21;  $r = .276$ ,  $p = .009$ ), the PF subscale and the Solitude subscale (Table 31;  $r = .281$ ,  $p = .006$ ), and the RP subscale and the Coherence subscale (Table 35;  $r = .273$ ,  $p = .008$ ).

Lastly, moderate positive relationships that were significant at the 0.01 level were found between overall gerotranscendence and overall spirituality (Table 13;  $r = .445$ ,  $p < .001$ ), overall gerotranscendence and the RP subscale (Table 17;  $r = .424$ ,  $p < .001$ ), overall gerotranscendence and the SC subscale (Table 19;  $r = .408$ ,  $p < .001$ ), overall spirituality and the Coherence subscale (Table 23;  $r = .362$ ,  $p < .001$ ), overall spirituality and the Solitude subscale (Table 25;  $r = .362$ ,  $p < .001$ ), the RP subscale and the Cosmic subscale (Table 33;  $r = .367$ ,  $p < .001$ ), the SC subscale and the Coherence subscale

(Table 41;  $r = .442$ ,  $p < .001$ ), and the SC subscale and the Solitude subscale (Table 43;  $r = .331$ ,  $p = .001$ ).

In sum, the results of this study showed no connection between the PF subscale and the Cosmic subscale, and between the PF subscale and the Coherence subscale correlation. The remainder of the correlations showed significant positive connections, indicating an overall positive relationship between sense of spirituality and level of gerotranscendence.

#### **Research Question Four**

The fourth research question was: What is the relationship between religiosity and gerotranscendence? It was hypothesized that there is a positive correlation between overall scale and subscale scores of religiosity and gerotranscendence. A nonsignificant correlation was found between the Cosmic subscale and the ORA subscale (Table 67;  $r = .163$ ,  $p = .124$ ), the Coherence subscale and the ORA subscale (Table 73;  $r = .107$ ,  $p = .303$ ), overall gerotranscendence and the ORA subscale (Table 61;  $r = .080$ ,  $p = .469$ ), the Coherence subscale and the NORA subscale (Table 75;  $r = .162$ ,  $p = .121$ ), and the Solitude subscale and the NORA subscale (Table 81;  $r = .128$ ,  $p = .225$ ). All of these correlations were weak positive relationships. No relationship was also found between the Solitude subscale and the ORA subscale (Table 79;  $r = -.077$ ,  $p = .463$ ).

Weak positive relationships that were statistically significant at the .05 level were found between overall religiosity and the Coherence subscale (Table 49;  $r = .222$ ,  $p = .032$ ), overall religiosity and the Solitude subscale (Table 51;  $r = .226$ ,  $p = .029$ ), overall gerotranscendence and the NORA subscale (Table 63;  $r = .235$ ,  $p = .031$ ), the Cosmic subscale and the NORA subscale (Table 69;  $r = .241$ ,  $p = .022$ ), the Coherence subscale

and the IR subscale (Table 77;  $r = .206$ ,  $p = .047$ ), and the SC subscale and the ORA subscale (Table 101;  $r = .204$ ,  $p = .046$ ).

Weak positive relationships that were statistically significant at the 0.01 level were found between the Cosmic subscale and the IR subscale (Table 71;  $r = .272$ ,  $p = .010$ ), Solitude subscale and the IR subscale (Table 83;  $r = .300$ ,  $p = .003$ ), the PF subscale and the ORA subscale (Table 88;  $r = .261$ ,  $p = .010$ ), the PF subscale and the NORA subscale (Table 91;  $r = .272$ ,  $p = .007$ ), and the SC subscale and the NORA subscale (Table 103;  $r = .270$ ,  $p = .008$ ).

Lastly, moderate positive relationships that were statistically significant at 0.01 level were found between overall religiosity and overall gerotranscendence (Table 45;  $r = .363$ ,  $p = .001$ ), overall gerotranscendence and the IR subscale (Table 65;  $r = .385$ ,  $p < .001$ ), overall religiosity and the Cosmic subscale (Table 47;  $r = .313$ ,  $p = .003$ ), overall religiosity and overall spirituality (Table 53;  $r = .535$ ,  $p < .001$ ), overall religiosity and the PF subscale (Table 55;  $r = .395$ ,  $p < .001$ ), overall religiosity and the RP subscale (Table 57;  $r = .541$ ,  $p < .001$ ), overall religiosity and the SC subscale (Table 59;  $r = .432$ ,  $p < .001$ ), overall spirituality and the ORA subscale (Table 85a;  $r = .378$ ,  $p < .001$ ), overall spirituality and the NORA subscale (Table 85b;  $r = .356$ ,  $p < .001$ ), overall spirituality and the IR subscale (Table 87;  $r = .448$ ,  $p < .001$ ), the PF subscale and the IR subscale (Table 93;  $r = .343$ ,  $p = .001$ ), the RP subscale and the ORA subscale (Table 95;  $r = .536$ ,  $p < .001$ ), the RP subscale and the NORA subscale (Table 97;  $r = .378$ ,  $p < .001$ ), the RP subscale and the IR subscale (Table 99;  $r = .390$ ,  $p < .001$ ), and the SC subscale and the IR subscale (Table 105;  $r = .402$ ,  $p < .001$ ).

In sum, the results of this study showed no connection between the Cosmic subscale and the ORA subscale, the Coherence subscale and the ORA subscale, the Coherence subscale and the NORA subscale, the Solitude subscale and the NORA subscale, and the Solitude subscale and the ORA subscale. The remainder of the correlations showed a significant positive connection, indicating an overall positive relationship between religiosity and gerotranscendence.

### **Research Question Five**

The fifth research question was: Is spirituality or religiosity predictive of gerotranscendence? It was hypothesized that spirituality is more predictive of gerotranscendence than religiosity.

**Overall relationship between independent and dependent variables.** The ANOVA (See Table 107) tests whether or not the overall regression model is a good fit for the data (Lund Research Ltd., 2013). The probability of the F statistic (11.232) for the overall regression relationship was  $<0.0001$ , which is less than or equal to the level of significance of 0.05. The results showed a connection between overall spirituality and overall religiosity and overall gerotranscendence.

The “R” column represents the value of R or the multiple correlation coefficient (See Table 107). The value of R is one way to measure the dependent variable’s quality of prediction (Lund Research Ltd., 2013). The Multiple R for the relationship between overall spirituality and overall religiosity and overall gerotranscendence was .468, which indicated a moderate level of prediction. See table 107.

### **Relationship of individual independent variables to dependent variable.**

According to Lund Research Ltd. (2013), “Unstandardized coefficients indicate how

much the dependent variable varies with an independent variable, when all other independent variables are held constant” (para. 8). For the independent variable of overall spirituality, the probability of the t statistic (2.8886) for the b coefficient was  $<.001$ , which was less than or equal to the level of significance of 0.05. These results indicated a positive connection between overall spirituality and overall gerotranscendence. The b coefficient associated with overall spirituality (.187) was positive, which indicated a directional relationship in which higher numeric values of overall spirituality were associated with higher numeric values of overall gerotranscendence. See Table 108.

For the independent variable of overall religiosity, the probability of the t-statistic (1.552) for the b coefficient was .125. These results indicated no connection between overall religiosity and overall gerotranscendence. The b coefficient associated with overall religiosity (.3.81) was positive, indicating a directional relationship in which higher numeric values of overall religiosity were associated with higher numeric values of overall gerotranscendence. See Table 108.

In sum, a standard multiple regression analysis was run to evaluate how well overall spirituality and overall religiosity scores predicted overall gerotranscendence. The linear combination of overall spirituality and overall religiosity was significantly related to overall gerotranscendence,  $F(2,80) = 11.232$ ,  $p < .001$ . The independent variable of overall spirituality added statistical significance to the prediction,  $p < .001$ . The variable of overall religiosity did not,  $p = 1.25$ . The multiple correlations coefficient was .468, indicating that 21.9 percent of the variance of overall gerotranscendence can be

accounted for by the linear combination of overall spirituality and overall religiosity. The regression equation for predicting overall gerotranscendence was:

$$\text{Predicted Overall Gerotranscendence} = .00187 \times \text{overall spirituality} + .00381 \times \text{overall religiosity} + 48.751$$

### **Summary of Findings**

Overall, the results supported the hypotheses. The only hypothesis that was not supported was research question one; findings did not show a correlation between age and level of gerotranscendence. Results regarding gender and level of gerotranscendence were unable to be calculated due to the skewedness of the sample. Both spirituality and religiosity were found to positively correlate with gerotranscendence. Regression analysis showed that spirituality predicted gerotranscendence, whereas religiosity showed no connection.

### **Discussion**

The findings of this study are discussed and compared to the findings reported in the literature. This discussion also includes limitations of the research and recommendations for future research. The findings from this quantitative study both support and contrast concepts and themes identified in the reviewed literature research studies in regards to age, spirituality, religiosity, and gerotranscendence. The following is an explanation of how the literature review relates to the findings that emerged from this study.

#### **Age and Gerotranscendence**

This study found no correlation between age and overall gerotranscendence. However, a statistically significant weak negative relationship was found between age

and the Coherence subscale. These results, coupled with the mixed results of past research, point to the uncertainty of the correlation between age and gerotranscendence. Although some researchers found positive correlations between these variables (Tornstam, 1997b; Gondo, Nakagawa, & Masui, 2013), other researchers found negative correlations (Bruyneet et al; Tornstam, 1994; Tornstam, 1997b), and, in support of the findings of the current study, Tornstam (1997b) found a zero correlation between age and gerotranscendence. Review of the current and past findings of research highlights three possible reasons for these results: lack of deviation in the respondents' age, lack of comprehensive understanding of the aging population, and the possibility that age is not the strongest predictive variable of gerotranscendence.

The first possible reason for the overall weak, nonsignificant relationships between age and gerotranscendence scale and subscales is the limited variation in respondents' age. The results show a low standard deviation in age, meaning that most respondents were within the same age bracket. Future research should explore a sample with a wider variety of ages to better assess the relationship between these two variables.

Secondly, accepted theories of human development are limited in terms of the developmental changes of individuals who have lived to old age. For instance, Piaget's theory of cognitive development focuses on the cognitive development of children, Freud's psychosexual stages of development only span into adulthood, and Erickson's stages of psychosocial development encapsulate ages 65 and older. It was not until 1997 that human development theories expanded into defining characteristics of old age. Erickson's partner, Joan Erickson, built upon Erickson's theory by adding another developmental stage of very old age (80+) labeled 'gerotranscendence' in promotion of



Tornstam's theoretical model (Fleming, 2004). However, even within the similar conceptual framework, there exists a characteristic difference. Verbraak (2000) sums up the difference in Erikson and Tornstam's definitions of gerotranscendence:

In contrast to Tornstam (1994) who sees gerotranscendence as a re-ordering of one's external relationship with one's place in both society and the universe, J. Erikson sees gerotranscendence as being an internal developmental change involving a final restructuring of one's personality. (p. 15)

This summary of accepted theories in human development show that research and comprehensive understanding about the developmental changes specific to the elderly population is in its infancy. Thus, scales, such as Tornstam's (1994) Gerotranscendence Scale, and Cozort's (2005) Gerotranscendence Scale-Revised are potentially flawed because developmental qualities and characteristics of individuals who live into their 80's, 90's, and beyond is in need of greater research. Moreover, the differences in defining the concept of gerotranscendence begs the question, are the current gerotranscendence scales truly measuring gerotranscendence?

Lastly, research examining the predictive factors of gerotranscendence has discussed the possibility that age is not the strongest variable, but rather how people respond to the challenges associated with aging alter the levels of gerotranscendence, such as coping with declining health, coping with losses, and reflecting on life lived (Dalby, 2006). Moreover, these responses can be impacted by culture, life experiences, personality traits, cognitive-psychological ability, gender, and personal values and beliefs (Dalby, 2006; Bruyneel, Marcoen, & Soenes, 2005; Tornastam, 1994). Even Tornstam (2011) found this to be true in his research on gerotranscendence and age. Reflecting

back on his past research, Tornstam (2011) estimated that only 20 percent of the population reaches a high level of gerotranscendence without difficulty. Although the correlation between age and gerotranscendence is evident in his research, the majority of population encounters barriers that slow down or block the process of transcendence. Tornstam (1997b) referenced these barriers in his earlier research examining the correlation of gerotranscendence and age:

Even if some aspects of dimensions of gerotranscendence are referred to as general in the sense that they show statistically significant correlation with age, some circumstances do modify these correlations. Gender, crisis, and life circumstances have been found to be such modifiers. (p. 31)

Recently, researchers have found that the development of transcendent views is not related to aging per se, but through spirituality and religiosity (Bruyneel, Marcoen, & Soenes, 2005; Lewin, 2001; Lewin & Thomas, 2000; Adams, 2004).

### **Spirituality and Gerotranscendence**

As hypothesized, the results of this study showed an overall significant positive correlation between spirituality and gerotranscendence. In fact, analysis of the correlations between all scale and subscale scores showed overall spirituality and overall gerotranscendence as the strongest correlation.

Interesting results were found when analyzing the personal faith (PF) subscale. In comparison to the others spirituality subscales, PF showed a mix of significant and insignificant correlations with the gerotranscendence scale and subscales. These results indicate that personal faith, or “a personal relationship with God on whose strength and sureness one can literally stake ones life” (as cited in O’Brien, 2008, p. 62), is the

weakest component of spirituality, and has the weakest relationship to gerotranscendence. Religious practice (RP) was the strongest correlated factor with gerotranscendence with spiritual contentment (SC) following closely behind. As spirituality is defined as a wholeness and a universal understanding, perhaps these results indicate that to reach a higher level of gerotranscendence, it takes more than faith alone; it takes the combination of continued dedication to ones beliefs and values, discovering one's own inner spiritual peace, and reflecting on one's personal, transcendent beliefs and values (Cozort, 2008).

Of further surprise is the weak correlation between spirituality and the Cosmic subscale. The results of this study found a significant weak positive relationship between the Cosmic subscale and overall spirituality. In comparison, the Coherence and SC subscales were equally correlated with gerotranscendence. These findings go against previous research. Most research has found the relationship between spirituality and gerotranscendence to be the most notable and consistent among the Cosmic dimension (Braam et al., 2006; Melia, 2001; Bruyneel, Marcoen, & Soenes, 2005). According to Braam et al. (2006), "The cosmic dimension of gerotranscendence is virtually identical to the abovementioned sense of universality, one of the three facets of spiritual transcendence" (p. 127).

One possible reason for this finding is the respondents' confusion in regards to many Cosmic dimension subscale questions. All unclear questions (assessed by a question mark, a comment, or leaving the answer blank) on the GS-R scale were measuring the Cosmic dimension. These questions include: "I feel a connection to earlier generations"; "Knowing that life on earth will continue after my death is more important than my individual life"; "Some things that happen in life cannot be explained by logic

and science and need to be accepted by faith”; “I have less fear of death”; “Sometimes I feel like I live in the past and present at the same time”; and “I feel the presence of people who are elsewhere.” The most notable confusion was the fear of death question: “I have less fear of death.” Previous studies have found a connection between a diminished fear of death and a high level of Cosmic Transcendence. Research by Raes and Marcoen (2001) found a significant association between respondent attitude of acceptance toward death and their version of Cosmic Transcendence (Braam et al., 2006). Continuing, in Tornstam (2003) qualitative study, 68 percent of the 1,215 respondents 74-100 years old agreed with the statement “Today I feel that the border between life and death is less striking compared to when I was 50 years of age.” This level of agreement was markedly higher than the other measured signs of Cosmic Transcendence (time and childhood = 52 percent agreement; connection to earlier generations = 61 percent agreement; and rejoicing = 28 percent agreement). In the present study, the fear of death question was surrounded by confusion. Not only did this question have a higher than average missing item score ( $n=3$ ), this item had the most written comments, such as, “less than what?” suggesting that this question was unclear. These results suggest that the Cosmic dimensions questions might be too abstract and should be revised in order to more accurately measure this dimension.

### **Religiosity and Gerotranscendence**

As hypothesized, the results of this study showed an overall significant positive correlation between religiosity and gerotranscendence. Worth noting is the variety of correlation values between the religiosity subscales and gerotranscendence. Results showed a nonsignificant relationship between the gerotranscendence and the organized

religious activities (ORA) subscale, a significant weak positive relationship between gerotranscendence and the non-organized religious activities (NORA) subscale, and a moderate positive relationship between gerotranscendence and the intrinsic religiosity (IR) subscale. Previous research exploring religiosity and gerotranscendence has found mixed results. Hoshino, Zarit, and Nkayama (2012) found a positive correlation between participation in religious activities and gerotranscendence, and Steinitz (1980) found that frequency of church attendance had the strongest associations with well-being. On the other hand, Braam et al. (2006), found a negative association between religious activities and Cosmic Transcendence, and Steinitz (1980) surmised that frequency of church attendance might be a better predictor of physical health than religious identification.

One possible reason for these findings is the degree of extrinsic religiosity within each subscale. Extrinsic religiosity is “a form of religiosity mainly “for show” where religiosity is used as a means to come to a more important end...rather than for religion’s sake alone” (Koenig & Bussing, 2010, p. 80). The ORA variable only identifies the frequency of attending church or religious meetings. This variable does not examine the underlying motivation behind the religious behavior. Thus, a greater amount of extrinsic religiosity is likely to exist. Continuing, the NORA variable demonstrates a lower level of extrinsic religiosity as it relates to private religious activities, instead of public religious activities. However, similarly to the ORA variable, the motivation behind the private religious activity is unidentified. For instance, one might read Scripture daily in order to strengthen a relationship with the Divine, or as a homework assignment for an organized bible study group. Lastly, the IR variable expressed the least amount of extrinsic religiosity as the terms are antonyms. IR emphasizes a personal relationship

with religion, and compares aspects of religiosity to one's life experiences and personal philosophy. According to Allport and Ross (1967), IR is defined as the following:

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 this sense that he lives his religion. (as cited in Koenig & Bussing, 2010, p. 80)

Gerotranscendence, being a developmental paradigm shift, needs to occur intrinsically, rather than extrinsically. Thus, it is easy to see why the current study's results found intrinsic religiosity to be the strongest correlated factor with gerotranscendence. Future research should focus on examining this relationship.

### **Spirituality, Religiosity, and Gerotranscendence**

As hypothesized, the results of this study indicated that overall spirituality predicted overall gerotranscendence, and overall religiosity showed no predictive effect on overall gerotranscendence. Previous research supports these findings (Melia, 2006; Tornstam, 1994; Bruyneel, Marcoen, & Soenes, 2005; Lewin, 2001). Even though the demographic question of religious orientation was not asked, based on the facility's joint partnership with a Catholic covenant, along with the location of the facility being in a highly Catholic area, the researcher has strong evidence to conclude that the predominance of the sample identify as Catholic. It is important to note the differences in Catholic religion compared to other denominations of Christianity, and the implications these differences could have on the results of the study. One main difference is that the

Catholic theology does not stress a personal relationship with God as strongly as other Christian faiths, such as, Evangelists or Southern Baptists. Although the DUREL scale was designed to measure the religiosity in Western religions, such as Christianity, these slight differences in Christian theology could impact the accuracy of the assessment of religiosity, consequentially impacting the connection of religiosity and overall gerotranscendence.

In terms of religiosity, the current study's respondents seem to closely resemble the elder Catholic religious sample in Melia's (2006) study. These highly religious respondents did not demonstrate the key characteristic of gerotranscendence; a shift to a new meta-perspective. Instead, these women identified a "deepening of the perspective that has been their source of meaning and sustenance over the years, a fulfillment of lifelong habits and routines...the continuation of faith beliefs and practices cultivated over years" (p. 60). Perhaps this continuation of a set, life-long religious routine is why even high levels of religiosity were not found to predict gerotranscendence. A routine, by definition, is a structured, regular, and fixed sequence of actions, there leaves little room to experience the metaphysical shift in perspective necessary to reach gerotranscendence.

Continuing, Bruyneel, Marcoen, and Soenes (2005) found the two most important predictors of the Transcendence Connection (comparable to Tornstam's theory of gerotranscendence) were spiritual beliefs and spiritual practices. Moreover, differences in respondents' interpretation of religion impacted the correlation of religion and gerotranscendence. A symbolic approach of religion was found to positively correlate with the Transcendent Connection, whereas a literal interpretation of religion was negatively correlated with the Transcendent Connection. Tornstam (1994) came to the

same conclusion and stated that, “depending on the definition of ‘religion’, the theory of gerotranscendence may or may be not regarded as a theory of religious development” (p. 203). This importance in perceived definitions of the terms religiosity and spirituality, as well as the overlap of the definitions, is well noted in the literature (Dalby, 2006; Mahon Graham, 2008, Tornstam, 1994; Bruyneel, Marcoen, & Soenes, 2005).

One interpretation found in the literature and supported by the results of this study is defining spirituality as broader than religiosity (Touhy, 2001). This definition is demonstrated in the spirituality scale used in this study. Of the three equal subscales in the SAS scale, two subscales measured the spirituality dimension, and the third measured the religiousness dimension (O’Brien, 2008). Therefore, the results of this study do not discount the importance of religiosity, but rather suggest that characteristics of religiosity are incorporated within the broader concept of spirituality. In line with Bruyneel, Marcoen, & Soenes (2005), both religiosity and spirituality might be “important prerequisites for or components of gerotranscendence” (p. 15). In other words, spirituality can be thought of as the umbrella that encapsulates religiosity. Although both spirituality and religiosity positively correlate with gerotranscendence, the overarching concept of spirituality is necessary to predict one’s sense of gerotranscendence.

### **Limitations and Recommendation for Future Research**

Limitation may be due to the small sample size. The sample population was also homogenous in terms of gender and age. The majority of the respondents were females over 80 years old. Few other demographic questions were asked, including social economic status, race, ethnicity, and level of education. These questions could have provided insight into different variables that contribute to gerotranscendence. The



question of “Are you a Sister?” was not asked. This question would have been relevant because approximately half of the residents are Sisters and the other half are lay people. This question could have provided insight into the effect a life-long commitment to a religious order had on gerotranscendence.

Cultural considerations were not explored in this study. Although there is limited research on cultural components of gerotranscendence, a study by Lewin (2001) found that cultures that were socialized in mystical-type ideas (spiritually-oriented), had significantly higher levels of gerotranscendence, compared to their non-spiritually-oriented counterparts, *regardless* of religiosity. As all of the survey respondents were residents of a spirituality-centered long-term living facility, results could have indicated a cultural trend, instead of an individual trend.

Another limitation of this study was the terminology used on the scales. Respondents denoted on the questionnaire that some terms (i.e. church and God) indicate a potential bias toward Christian religious practice beliefs. One respondent brought up a concern related to the term “religiosity.” She indicated that, for her, the definition of being excessively religious or overzealous was a pejorative term. In the future, researchers should be mindful of all religious belief, and consider other terminology that might describe an individual’s religious inclination more accurately. Furthermore, comments made by survey respondents suggest a need to revise certain survey questions on the GS-R scale. The most unclear item on the GS-R scale was the fear of death question. A significant portion of the respondents either left it blank or placed a question mark next to their answer. It is important to note that every unclear question was on the Cosmic dimension subscale. As research has found that the relationship between

spirituality and gerotranscendence to be the most consistent and significant among the Cosmic dimension (Braam et al., 2006; Melia, 2001; Bruyeel, Marcoen, & Soenes, 2005), it stands to reason that the uncertainty surrounding these Cosmic dimension questions could have impacted not only the measurement of respondents' Cosmic transcendence, but also the relationship between overall gerotranscendence and overall spirituality. Future research should explore different phrasings for these questions, as it possible that the current wordings of the questions are too abstract in nature.

Future research should also address the following: the relationship between cultural settings and gerotranscendence; the relationship between personality traits (introvert, ambivert, and extrovert) and gerotranscendence; identifying the differences between symbolically interpreted religion, literally interpreted religion, intrinsic religion, and extrinsic religion, and the impact these variables have on gerotranscendence; and exploring the relationship between religiosity to spirituality (i.e. Is spirituality broader than religiosity, and in what ways? Does religiosity predict spirituality?).

### **Implications for Social Work**

This study has several implications for the social work profession, and healthcare professionals as a whole. The first implication is the importance of fostering a sense of spirituality in the elderly. As spirituality was found to be the greatest predictor of gerotranscendence, it is important for residential facilities to cultivate the development of spirituality in their older residents. Facilities should be mindful of their overarching organizational approach when thinking about adopting spiritually-centered care. Sulmasy (2006) warned that an institutional approach to care could prevent the development of a spiritual atmosphere. In order to create a "safe environment" where patients feel

comfortable expressing their spirituality with other patients and staff members, facilities need to change the structure of their organization. For instance, more emphasis needs to be placed on staff members having the time to listen and engage in conversations with patients, and to be sensitive to patients' needs (Callahan, 2012). Moreover, as the research suggests that religiosity is a part of the broader concept of spirituality, an emphasis also needs to be placed on meeting the religious needs of older residents within the spiritually-centered facility. Health care professional should be mindful of cultural differences in one's expression of religiosity and spirituality. Professionals should work with older residents to identify unmet religious and/or spiritual needs, and the ways in which these unmet needs can be fulfilled. One way to increase healthcare professionals' sensitivity to residents' spiritual and religious needs is through facility-wide spiritual and religious diversity training. This training would educate staff on the importance of incorporating residents' spiritual and religious needs in their careplan; educate staff on cultural differences in religiosity and spirituality; and help the staff become more comfortable with, and sensitive to, issues of spirituality and religiosity. Lastly, the results of this study strongly suggest that a holistic treatment model needs to include religiosity and spirituality. Healthcare professionals should ask residents about their past and present religious and spiritual needs/preferences, if they would like visits from a religious/spiritual director, and what ways the facility can better meet their religious and spiritual needs.

Based on the frequency of respondents showing a moderate level of gerotranscendence, this study also identifies a need to educate staff members and older adult caregivers about the characteristics of gerotranscendence. This education is used to

teach staff members how to behave in a way that does not block or limit an individual's development toward gerotranscendence. Wadensten and Carlsson (2002) have developed gerotranscendence-centered guidelines for staff members. Examples of these guidelines include the following. Use language that is not body centered like "how do you feel today," instead, ask about a current dream and engage in a discussion about what that dream might mean. Accept and respect that older people could have a different perception of time. For instance, the boundaries between past and present could be blurred. Do not immediately regard this characteristic undesirable or pathological, but as a normal sign of gerotranscendence. Lastly, do not push older adults to participate in activities, but let the older person decide for him/herself if he/she would like to participate or be alone.

### **Conclusion**

In sum, the findings of this study suggest that there is no correlation between age and overall gerotranscendence. The results are in agreement with previous literature that loosely associates gerotranscendence with age (Bruyneel, Marcoen, & Sorens, 2005; Tornastam, 1994, Tornstam, 1997b). Results also indicate an overall significant positive correlation between spirituality and gerotranscendence, as well as, religiosity (particularly intrinsic religiosity) and gerotranscendence. Although both spirituality and religiosity showed a significant correlation to gerotranscendence, only spirituality was predictive of gerotranscendence. Religiosity did not have any connection. Thus, spirituality must be present in an individual in order to reach a high level of gerotranscendence. This study does not discount religiosity, but views it as a contributing part of the broader concept of spirituality. It is an individual's spiritual development that

helps them reach a higher level gerotranscendence by broadening their perspective and/or helping them transcend the fixed, routine structure of religiosity.

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## Appendix A

## Survey Questions

**1. How often do you attend church or other religious meetings?**

- a. Never
- b. Once a year or less
- c. A few times a year
- d. A few times a month
- e. Once a week
- f. More than once/week

**2. How often do you spend time in private religious activities, such as prayer, meditation or Bible study?**

- a. Rarely or never
- b. A few times a month
- c. Once a week
- d. Two or more times/week
- e. Daily
- f. More than once a day

The following section contains 3 statements about religious belief or experience. Please answer to the extent to which each statement is true or not true for you.

**3. In my life, I experience the presence of the Divine.**

- a. Definitely *not* true
- b. Tends *not* to be true
- c. Unsure
- d. Tends to be true
- e. Definitely true of me

**4. My religious beliefs are what really lie behind my whole approach to life.**  
 a. Definitely *not* true  
 b. Tends *not* to be true  
 c. Unsure  
 d. Tends to be true  
 e. Definitely true of me

**5. I try hard to carry my religion over into all other dealing in life.**  
 a. Definitely *not* true  
 b. Tends *not* to be true  
 c. Unsure  
 d. Tends to be true  
 e. Definitely true of me

Instructions: Please check the response category, which best identifies your personal belief about the item response categories: Strongly Agree, Agree, Uncertain, Disagree, and Strongly Disagree.

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
6. There is a Supreme Being, or God, who created humankind and who cares for all creatures					
7. I am at peace with God.					
8. I feel confident that God is watching over me.					



<p>9. I receive strength and comfort from my spiritual beliefs.</p>					
<p>10. I believe that God is interested in all the activities of my life.</p>					
<p>11. I trust that God will take care of the future.</p>					
<p>12. My spiritual beliefs support a positive image of myself and of others, as members of God's family.</p>					
<p>13. Belonging to a church or faith group is an important part of my life.</p>					
<p>14. I am strengthened by participation in religious worship services.</p>					
<p>15. I find satisfaction in religiously motivated activities other than</p>					

attending worship services, for example, volunteer work or being kind to others.					
16. I am supported by relationships with friends or family members who share my religious beliefs.					
17. I receive comfort and support from a spiritual companion, for example, a pastoral caregiver or friend.					
18. My relationship with God is strengthened by personal prayer.					
19. I am helping to communicate with God by reading or thinking about religious or spiritual things.					
20. I experience pain associated with my spiritual beliefs.					

21. I feel "far away" from God.					
22. I am afraid that God might not take care of my needs.					
23. I have done some things for which I fear God may not forgive me.					
24. I get angry at God for allowing "bad things" to happen to me, or to people I care about.					
25. I feel that I have lost God's love.					
26. I believe that there is no hope of obtaining God's love					

Instructions: Please check the response category, which best identifies your personal belief about the item response categories: Strongly Agree, Agree, Disagree, and Strongly Disagree.

	Strongly Agree	Agree	Disagree	Strongly Disagree
27. I feel a connection with earlier generations.				
28. Knowing that life on earth will continue after my death is more important than my individual life.				
29. I feel a part of the entire universe.				
30. I feel that I am a part of all God's creations.				
31. I have less fear of death.				
32. Some things that happen in life cannot be explained by logic and science and need to be accepted by faith.				
33. It seems unfair that I must die when life on earth just continues.				
34. Sometimes I feel like I live in the past and present at the same time.				

35. I can feel the presence of people who are elsewhere.				
36. Genealogy research seems interesting to me.				
37. The life I have lived has meaning.				
38. I like my life the way it is.				
39. I take life more seriously now than when I was younger.				
40. To be honest, I must say that I am the most important thing in the world.				
41. I find it easy to laugh at myself.				
42. The characteristics of my personality have both female and male components.				

43. I like meeting new people less now than when I was younger.				
44. At times I like to be by myself better than being with others.				
45. I need something going on all the time in order to feel good.				
46. I find it easy to give other people good advice.				
47. Quiet meditation is important for my well-being.				
48. I am quicker to criticize other people now than when I was younger.				
49. I am often afraid of asking questions and embarrassing myself in front of others.				
50. For me, having a desire for material possessions is among the most important things in my life right now.				

51. For me, being active is one of the most important things in life.				

### Demographic questions

52. How old are you?	I am _____ years old.	I would rather not disclose.
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53. What is your gender?	Male	Female	I would rather not disclose.
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## Appendix B

## Spiritual Director's Speech

**Spiritual Director's Speech – Announced a week before first survey session**

All independent living residents are invited to participate in a research study being conducted by St. Catherine University graduate student, Rachael Girard. This study is aimed at understanding the effect that spirituality and religiosity has on late-life development. Participants will be given an anonymous 53 question survey that will take approximately 25-30 minutes to complete. The survey will be distributed on \_\_\_\_\_. It will be placed on your purse shelf. If you choose to participate, please complete the survey and return it to the front desk by \_\_\_\_\_. Please seal the envelope. Thank you.

**Spiritual Director's Excerpt in Facility's Bulletin**

All independent living residents are invited to participate in a research study being conducted by St. Catherine University graduate student, Rachael Girard. This study is aimed at understanding the effect that spirituality and religiosity has on late-life development. Participants will be given an anonymous 53 question survey that will take approximately 25-30 minutes to complete. The survey will be distributed on \_\_\_\_\_. It will be placed on your purse shelf. If you choose To participate, please complete the survey and return it to the front desk by \_\_\_\_\_. Please seal the envelope. Thank you.



## Appendix C

## Consent Form

**Spirituality, Religiosity, and Gerotranscendence  
INFORMATION AND CONSENT FORM****Introduction:**

You are invited to participate in a research study investigating to what extent is spirituality and religiosity associated with an individual's level of gerotranscendence (late-life development). This study is being conducted by Rachael Girard, a graduate student at St. Catherine University under the supervision of Dr. Sarah Ferguson, a faculty member in the Department of Social Work. You were selected as a possible participant in this research because you are a layperson or Sister residing in a spiritually-centered care facility. Please read this form and ask any questions before you agree to be in the study.

**Background Information:**

The purpose of this study is to investigate to what extent self-reported spirituality and religiosity is associated with an individual's level of gerotranscendence.

Approximately 50 people are expected to participate in this research.

**Procedures:**

If you decide to participate, you will be asked to fill out a 53 question survey. The format of the questions are yes/no, multiple choice, or have a 3 to 5 item responses (i.e. strongly agree, agree, uncertain, disagree, strongly disagree). You will fill this survey out one time. This survey will take approximately 25-35 minutes to complete. After completion of the survey, please return to the front desk in the self-addressed envelope provided by \_\_\_\_\_.

**Risks and Benefits of being in the study:**

This study with pose minimal risks to participants. Asking questions regarding the participants' feelings regarding spirituality, religiosity, and factors of gerotranscendence may trigger reactions that can be uncomfortable for participants. In the event that the survey causes adverse reactions for the participants, the researcher will call the facility nursing staff, housing coordinator, or social worker to debrief the participant.

Potential benefits of this research include implications for clinical practice with older adults. This includes implementation of spiritually-centered or religiously-centered care

**Confidentiality:**

This survey will be anonymous. Therefore, no identifying information will be connected to the data. In any written reports or publications, no one will be identified or identifiable and only group data will be presented.

Data will be stored in a locked file cabinet at the facility and in a home office. Data will also be stored electronically on a password protected document and computer. Only the researcher and advisor will have access to records during the study. I will finish analyzing the data by May, 2014. I will then destroy all original reports.

**Voluntary nature of the study:**

Participation in this research study is voluntary. You may choose to complete the survey or throw the survey away. Your decision whether or not to participate will not affect your future relations with Carondelet Village or St. Catherine University in any way. If you decide to participate, you are free to stop at any time without affecting these relationships.

**Contacts and questions:**

If you have any questions, please feel free to contact me, Rachael Girard at 612-332-4422. You may ask questions now, or if you have any additional questions later, the faculty advisor, Dr. Sarah Ferguson, will be happy to answer them. If you have other questions or concerns regarding the study and would like to talk to someone other than the researcher, you may also contact Dr. John Schmitt, Chair of the St. Catherine University Institutional Review Board, at (651) 690-7739.

You may keep a copy of this form for your records.

**Statement of Consent:**

You are making a decision whether or not to participate. Your participation of the survey constitutes your consent to partake in this research study.

## Appendix D

Advertisement for research study

# Attention All Independent Living Residents!

Saint Catherine Graduate Student,  
Rachael Girard

is conducting a research study on the  
effect that spirituality and religiosity has  
on late-life development.

The session will take 25-30 minutes and  
consist of an anonymous 53 question  
survey. Surveys will be distributed to your  
purse shelf on\_\_\_\_\_.

If you choose to participate, please return  
completed survey to the front desk in the  
self-addressed envelop provided by  
\_\_\_\_\_

Contact Rachael Girard (x. 5066) with any questions.

Appendix E  
Procedural Steps

If you decide to participate in the study, please follow these 4 steps.

1. Read the consent form and call the number(s) listed if you have further questions.
2. Complete the survey.
3. Place the completed survey in the self-addressed envelope provided.
4. Return the self-addressed envelope to the Front Desk by

\_\_\_\_\_.

Thank you,

Rachael Girard

Appendix F

Tables and Figures

Table 1. *Gender*

**Q53 - Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	89	89.9	89.9	89.9
	2.00	8	8.1	8.1	98.0
	3.00	2	2.0	2.0	100.0
Total		99	100.0	100.0	

Figure 1. *Gender*

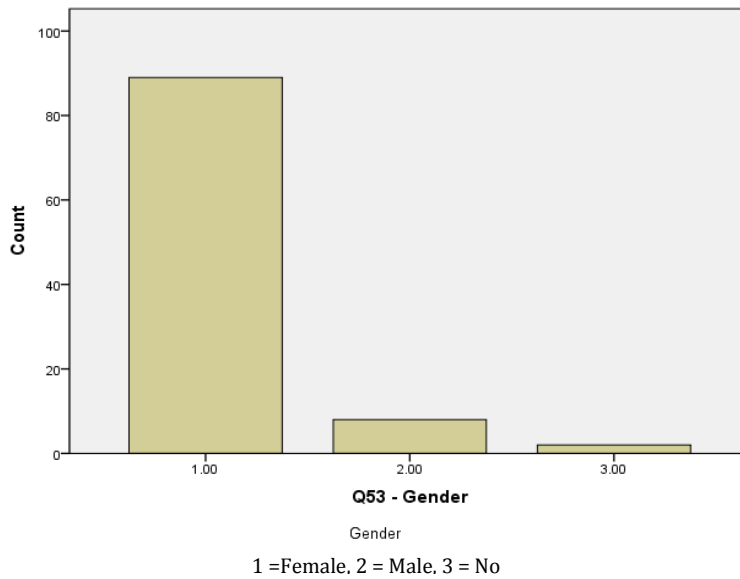


Table 2. *Descriptive Statistic of Age*

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Q52 - Age	96	65.00	97.00	83.1750	6.20280	-.464	.246
Valid N (listwise)	96						

Figure 2. Age

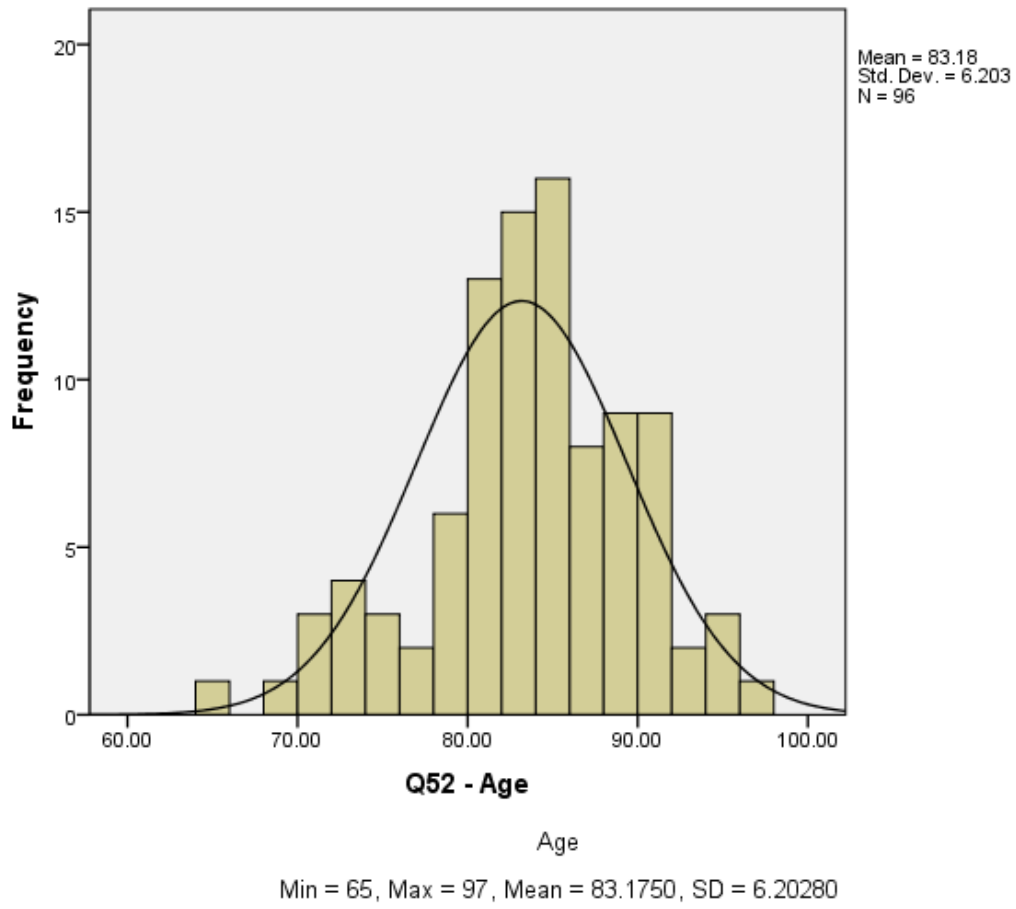


Table 3. Complete list of descriptive statistics Create a New graph showing Skewedness

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
GT_Total_Sum	86	62.50	86.46	75.9094	5.33154
GT_Cosmic_Sum	91	24.00	39.00	31.8376	3.56943
GT_Coherence_Sum	95	14.00	22.00	18.3074	1.69926
GT_Solitude_Sum	94	21.00	31.00	25.9628	2.33680
SAS_Total_Sum	96	65.00	105.00	95.1464	9.65155
SAS_PersonalFaith_Sum	98	7.00	35.00	32.3793	4.43734
SAS_ReligiousPractice_Sum	97	21.00	35.00	32.1082	3.21446
SAS_SpiritualContentment_Sum	98	18.00	35.00	30.5646	4.09772
Religion_Total_Sum	98	12.00	27.00	24.7526	2.52296
Religion_ORA_Sum	98	1.00	6.00	5.7041	.70651
Religion_NORA_Sum	97	1.00	6.00	5.2474	.95776
Religion_IR_Sum	98	5.00	15.00	13.7857	1.73056
Valid N (listwise)	81				

Figure 3. Overall Spirituality

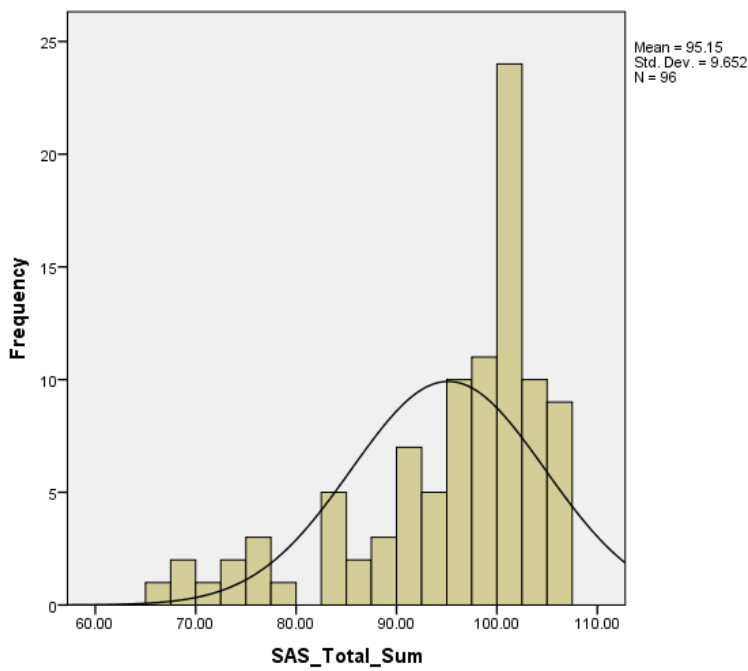


Figure 4. *Spirituality subscale: Personal Faith*

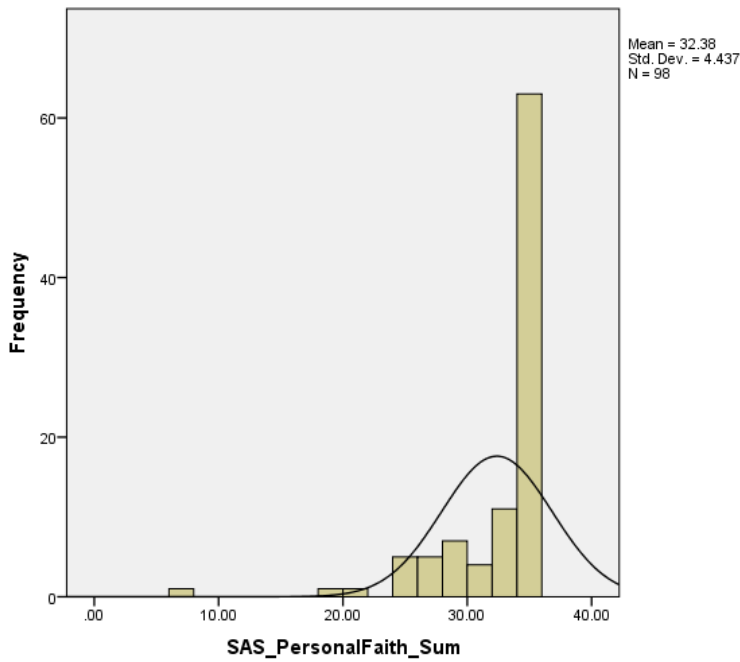


Figure 5. *Spirituality subscale: Religious Practice*

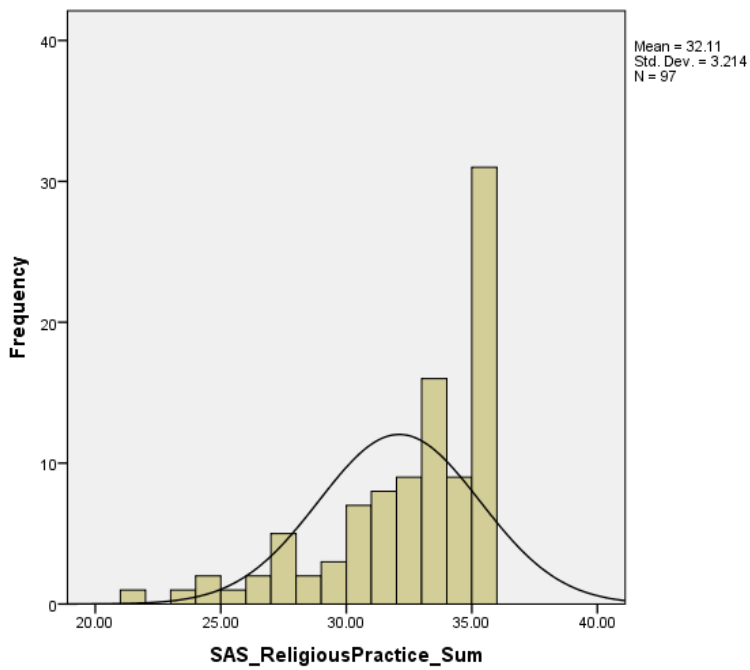




Figure 6. *Spirituality subscale: Spiritual Contentment*

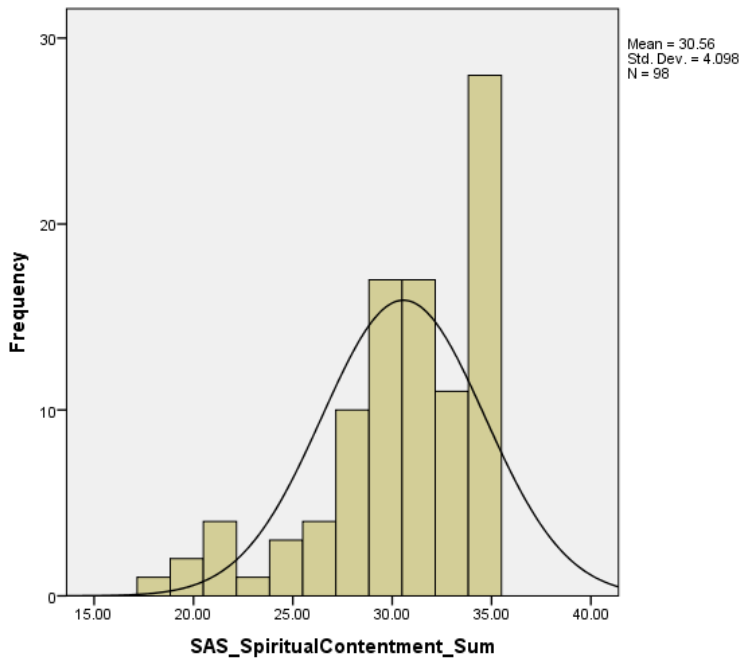


Figure 7. *Overall Religiosity*

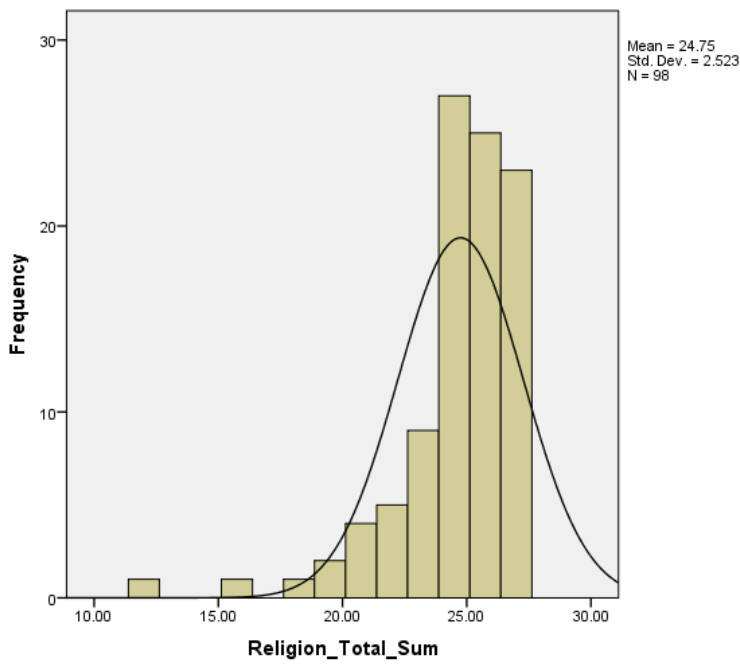


Figure 8. *Religiosity subscale: ORA*

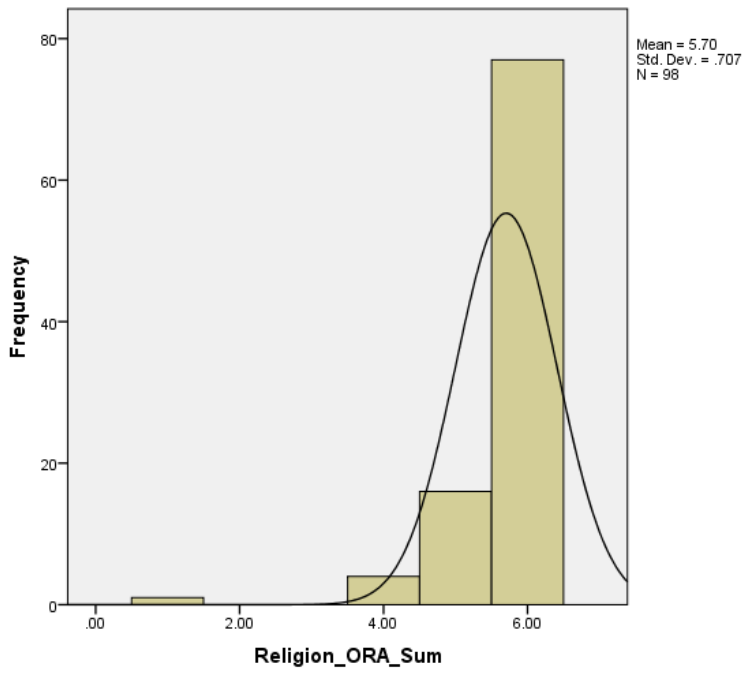


Figure 9. *Religiosity subscale: NORA*

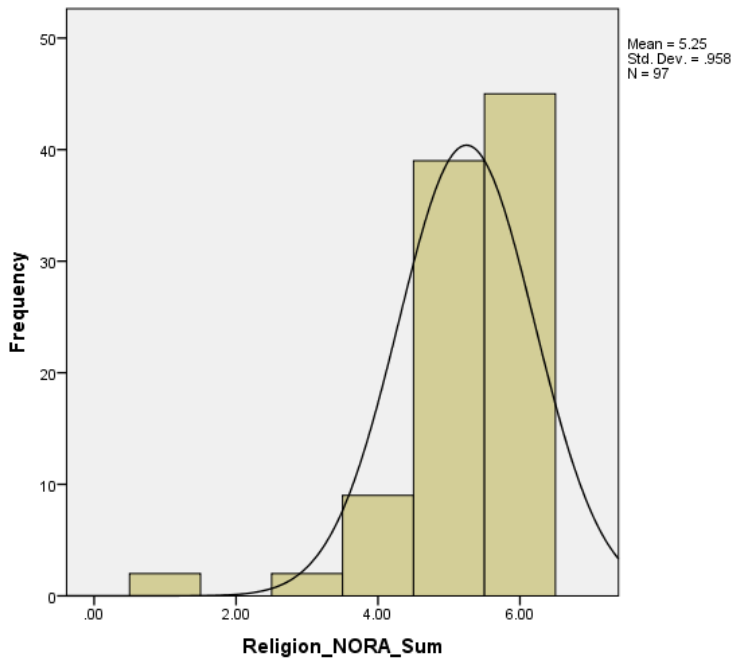


Figure 10. *Religiosity subscale: IR*

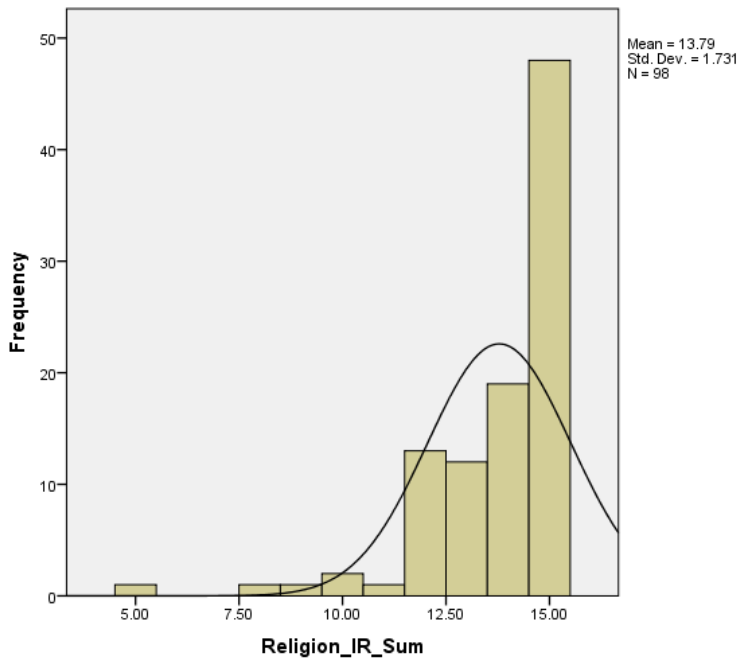


Figure 11. *Overall Gerotranscendence*

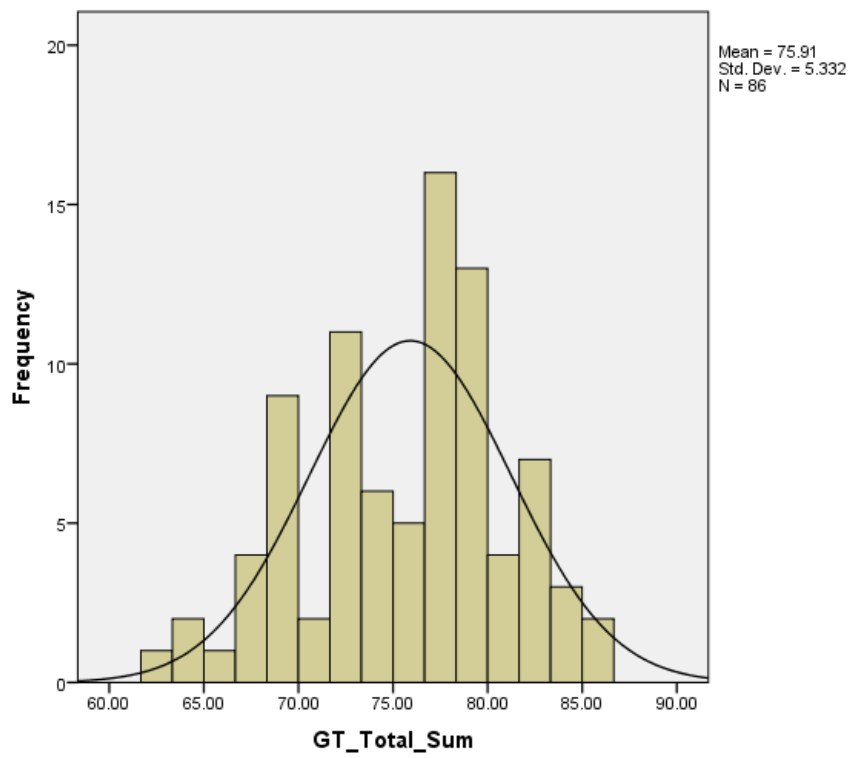


Figure 12. *Gerotranscendence subscale: Cosmic*

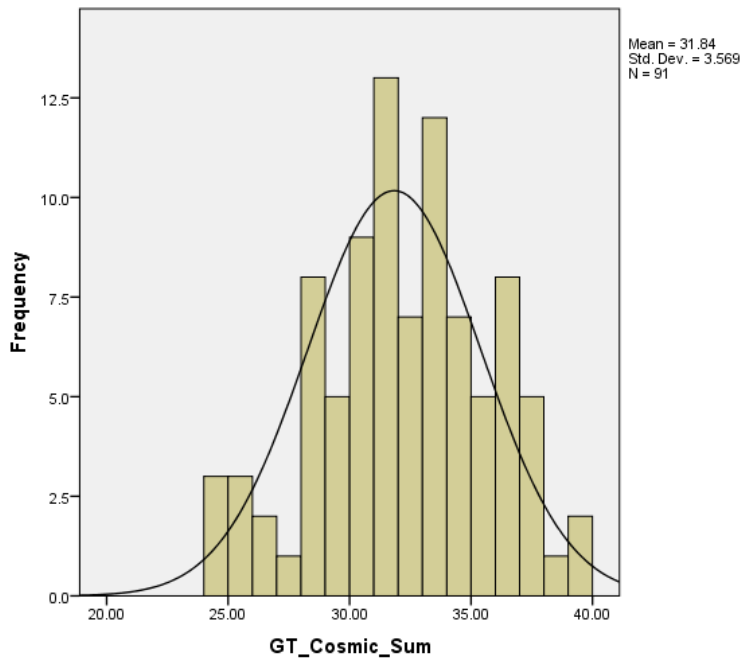


Figure 13. *Gerotranscendence subscale: Coherence*

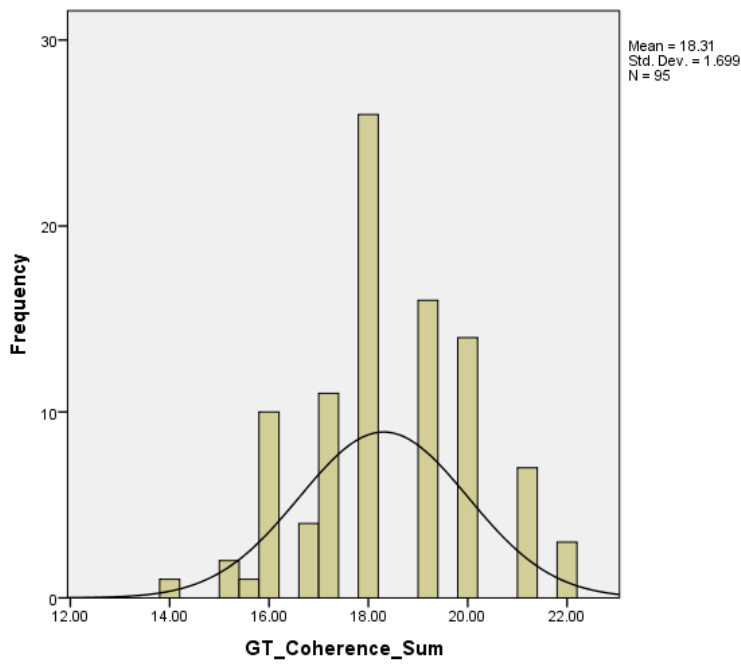


Figure 14. *Gerotranscendence subscale: Solitude*

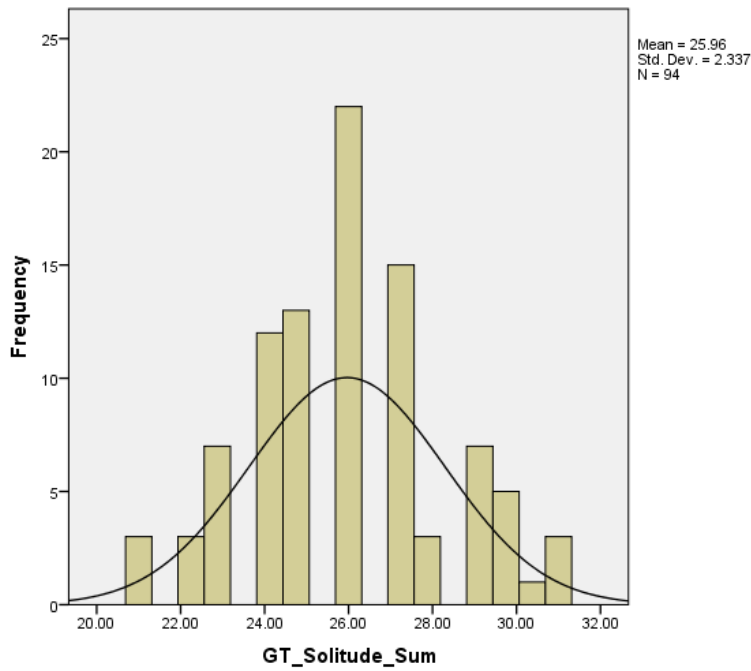


Table 4. *Descriptive Statistics for the Relationship Between Age and Overall Gerotranscendence*

Descriptive Statistics			
	Mean	Std. Deviation	N
Q52 - Age	83.1750	6.20280	96
GT Total Sum	75.9094	5.33154	86

Table 5. *Relationship Between Age and Overall Gerotranscendence*

Correlations			
		Q52 - Age	GT Total Sum
Q52 - Age	Pearson Correlation	1	-.039
	Sig. (2-tailed)		.729
	N	96	83
GT_Total_Sum	Pearson Correlation	-.039	1
	Sig. (2-tailed)	.729	
	N	83	86

Table 6. *Descriptive Statistics for the Relationship Between Age and Cosmic Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
Q52 - Age	83.1750	6.20280	96
GT_Cosmic_Sum	31.8376	3.56943	91

Table 7. *Relationship Between Age and Cosmic Subscale*

<b>Correlations</b>			
		Q52 - Age	GT_Cosmic_Sum
Q52 - Age	Pearson Correlation	1	-.053
	Sig. (2-tailed)		.622
	N	96	88
GT_Cosmic_Sum	Pearson Correlation	-.053	1
	Sig. (2-tailed)	.622	
	N	88	91

Table 8. *Descriptive Statistics for the Relationship Between Age and Coherence Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
Q52 - Age	83.1750	6.20280	96
GT_Coherence_Sum	18.3074	1.69926	95

Table 9. *Relationship Between Age and Coherence Subscale*

		Q52 - Age	GT_Coherence_ Sum
Q52 - Age	Pearson Correlation	1	-.257 <sup>*</sup>
	Sig. (2-tailed)		.013
	N	96	92
GT_Coherence_Sum	Pearson Correlation	-.257 <sup>*</sup>	1
	Sig. (2-tailed)	.013	
	N	92	95

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

Table 10. *Descriptive Statistics for the Relationship Between Age and Solitude Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
Q52 - Age	83.1750	6.20280	96
GT_Solitude_Sum	25.9628	2.33680	94

Table 11. *Relationship Between Age and Solitude Subscale*

		Q52 - Age	GT_Solitude_Su m
Q52 - Age	Pearson Correlation	1	.191
	Sig. (2-tailed)		.070
	N	96	91
GT_Solitude_Sum	Pearson Correlation	.191	1
	Sig. (2-tailed)	.070	
	N	91	94

Table 12. *Descriptive Statistics for Overall Gerotranscendence and Overall Spirituality*

Descriptive Statistics			
	Mean	Std. Deviation	N
GT_Total_Sum	75.9094	5.33154	86
SAS_Total_Sum	95.1464	9.65155	96

Table 13. *Relationship Between Overall Gerotranscendence and Overall Spirituality*

Correlations			
		GT_Total_Sum	SAS_Total_Sum
GT_Total_Sum	Pearson Correlation	1	.445**
	Sig. (2-tailed)		.000
	N	86	84
SAS_Total_Sum	Pearson Correlation	.445**	1
	Sig. (2-tailed)	.000	
	N	84	96

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

Table 14. *Descriptive Statistics for Overall Gerotranscendence and the Personal Faith**Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
GT_Total_Sum	75.9094	5.33154	86
SAS_PersonalFaith_Sum	32.3793	4.43734	98



Table 15. *Relationship Between Overall Gerotranscendence and the Personal Faith Subscale*

		GT_Total_Sum	SAS_PersonalFaith_Sum
GT_Total_Sum	Pearson Correlation	1	.269*
	Sig. (2-tailed)		.013
	N	86	85
SAS_PersonalFaith_Sum	Pearson Correlation	.269*	1
	Sig. (2-tailed)	.013	
	N	85	98

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

Table 16. *Descriptive Statistics for Overall Gerotranscendence and the Religious Practice Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
GT_Total_Sum	75.9094	5.33154	86
SAS_ReligiousPractice_Sum	32.1082	3.21446	97

Table 17. *Relationship Between Overall Gerotranscendence and the Religious Practice Subscale*

		GT_Total_Sum	SAS_ReligiousPractice_Sum
GT_Total_Sum	Pearson Correlation	1	.424**
	Sig. (2-tailed)		.000
	N	86	85
SAS_ReligiousPractice_Sum	Pearson Correlation	.424**	1
	Sig. (2-tailed)	.000	
	N	85	97

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

Table 18. *Descriptive Statistics for Overall Gerotranscendence and the Spiritual Contentment Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
GT_Total_Sum	75.9094	5.33154	86
SAS_SpiritualContentment_Sum	30.5646	4.09772	98

Table 19. *Relationship Between Overall Gerotranscendence and the Spiritual Contentment Subscale*

Correlations			
		GT_Total_Sum	SAS_SpiritualContentment_Sum
GT_Total_Sum	Pearson Correlation	1	.408**
	Sig. (2-tailed)		.000
	N	86	86
SAS_SpiritualContentment_Sum	Pearson Correlation	.408**	1
	Sig. (2-tailed)	.000	
	N	86	98

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

Table 20. *Descriptive Statistics for Overall Spirituality and the Cosmic Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_Total_Sum	95.1464	9.65155	96
GT_Cosmic_Sum	31.8376	3.56943	91

Table 21. *Relationship Between Overall Spirituality and the Cosmic Subscale*

<b>Correlations</b>			
		SAS_Total_Sum	GT_Cosmic_Sum
SAS_Total_Sum	Pearson Correlation	1	.276**
	Sig. (2-tailed)		.009
	N	96	89
GT_Cosmic_Sum	Pearson Correlation	.276**	1
	Sig. (2-tailed)	.009	
	N	89	91

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

Table 22. *Descriptive Statistics for Overall Spirituality and the Coherence Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_Total_Sum	95.1464	9.65155	96
GT_Coherence_Sum	18.3074	1.69926	95

Table 23. *Relationship Between Overall Spirituality and the Coherence Subscale*

<b>Correlations</b>			
		SAS_Total_Sum	GT_Coherence_Sum
SAS_Total_Sum	Pearson Correlation	1	.362**
	Sig. (2-tailed)		.000
	N	96	92
GT_Coherence_Sum	Pearson Correlation	.362**	1
	Sig. (2-tailed)	.000	
	N	92	95

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

Table 24. *Descriptive Statistics for Overall Spirituality and the Solitude Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_Total_Sum	95.1464	9.65155	96
GT_Solitude_Sum	25.9628	2.33680	94

Table 25. *Relationship Between Overall Spirituality and the Solitude Subscale*

Correlations			
		SAS_Total_Sum	GT_Solitude_Sum
SAS_Total_Sum	Pearson Correlation	1	.362**
	Sig. (2-tailed)		.000
	N	96	91
GT_Solitude_Sum	Pearson Correlation	.362**	1
	Sig. (2-tailed)	.000	
	N	91	94

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

Table 26. *Descriptive Statistics for the Personal Faith and the Cosmic Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_PersonalFaith_Sum	32.3793	4.43734	98
GT_Cosmic_Sum	31.8376	3.56943	91

Table 27. *Relationship Between Personal Faith and the Cosmic Subscale*

		<b>Correlations</b>	
		SAS_PersonalFaith_Sum	GT_Cosmic_Sum
SAS_PersonalFaith_Sum	Pearson Correlation	1	.142
	Sig. (2-tailed)		.180
	N	98	90
GT_Cosmic_Sum	Pearson Correlation	.142	1
	Sig. (2-tailed)	.180	
	N	90	91

Table 28. *Descriptive Statistics for Personal Faith and the Coherence Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_PersonalFaith_Sum	32.3793	4.43734	98
GT_Coherence_Sum	18.3074	1.69926	95

Table 29. *Relationship Between Personal Faith and the Coherence Subscale*

		<b>Correlations</b>	
		SAS_PersonalFaith_Sum	GT_Coherence_Sum
SAS_PersonalFaith_Sum	Pearson Correlation	1	.173
	Sig. (2-tailed)		.096
	N	98	94
GT_Coherence_Sum	Pearson Correlation	.173	1
	Sig. (2-tailed)	.096	
	N	94	95

Table 30. *Descriptive Statistics for Personal Faith and the Solitude Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_PersonalFaith_Sum	32.3793	4.43734	98
GT_Solitude_Sum	25.9628	2.33680	94

Table 31. *Relationship Between Personal Faith and the Solitude Subscale*

Correlations			
		SAS_PersonalFaith_Sum	GT_Solitude_Sum
SAS_PersonalFaith_Sum	Pearson Correlation	1	.281**
	Sig. (2-tailed)		.006
	N	98	93
GT_Solitude_Sum	Pearson Correlation	.281**	1
	Sig. (2-tailed)	.006	
	N	93	94

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

Table 32. *Descriptive Statistics for the Religious Practice Subscale and the Cosmic Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_ReligiousPractice_Sum	32.1082	3.21446	97
GT_Cosmic_Sum	31.8376	3.56943	91

Table 33. *Relationship Between the Religious Practice Subscale and the Cosmic Subscale*

		<b>Correlations</b>	
		SAS_ReligiousPr actice_Sum	GT_Cosmic_Sum
SAS_ReligiousPractice_Sum	Pearson Correlation	1	.367**
	Sig. (2-tailed)		.000
	N	97	90
GT_Cosmic_Sum	Pearson Correlation	.367**	1
	Sig. (2-tailed)	.000	
	N	90	91

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

Table 34. *Descriptive Statistics for the Religious Practice Subscale and the Coherence Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_ReligiousPractice_Sum	32.1082	3.21446	97
GT_Coherence_Sum	18.3074	1.69926	95

Table 35. *Relationship Between the Religious Practice Subscale and the Coherence Subscale*

		<b>Correlations</b>	
		SAS_ReligiousPr actice_Sum	GT_Coherence_ Sum
SAS_ReligiousPractice_Sum	Pearson Correlation	1	.273**
	Sig. (2-tailed)		.008
	N	97	93
GT_Coherence_Sum	Pearson Correlation	.273**	1
	Sig. (2-tailed)	.008	
	N	93	95

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

Table 36. *Descriptive Statistics for the Religious Practice Subscale and the Solitude Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_ReligiousPractice_Sum	32.1082	3.21446	97
GT_Solitude_Sum	25.9628	2.33680	94

Table 37. *Relationship Between the Religious Practice Subscale and the Solitude Subscale*

Correlations			
		SAS_ReligiousPr actice_Sum	GT_Solitude_Su m
SAS_ReligiousPractice_Sum	Pearson Correlation	1	.252 <sup>*</sup>
	Sig. (2-tailed)		.015
	N	97	92
GT_Solitude_Sum	Pearson Correlation	.252 <sup>*</sup>	1
	Sig. (2-tailed)	.015	
	N	92	94

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

Table 38. *Descriptive Statistics for the Spiritual Contentment Subscale and the Cosmic Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_SpiritualContentment_Su m	30.5646	4.09772	98
GT_Cosmic_Sum	31.8376	3.56943	91



Table 39. *Relationship Between the Spiritual Contentment Subscale and the Cosmic Subscale*

		<b>Correlations</b>	
		SAS_SpiritualContentment_Sum	GT_Cosmic_Sum
SAS_SpiritualContentment_Sum	Pearson Correlation	1	.211*
	Sig. (2-tailed)		.045
	N	98	91
GT_Cosmic_Sum	Pearson Correlation	.211*	1
	Sig. (2-tailed)	.045	
	N	91	91

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

Table 40. *Descriptive Statistics for the Spiritual Contentment Subscale and the Coherence Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_SpiritualContentment_Sum	30.5646	4.09772	98
GT_Coherence_Sum	18.3074	1.69926	95

Table 41. *Relationship Between the Spiritual Contentment Subscale and the Coherence Subscale*

		<b>Correlations</b>	
		SAS_SpiritualContentment_Sum	GT_Coherence_Sum
SAS_SpiritualContentment_Sum	Pearson Correlation	1	.442**
	Sig. (2-tailed)		.000
	N	98	94
GT_Coherence_Sum	Pearson Correlation	.442**	1
	Sig. (2-tailed)	.000	
	N	94	95

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

Table 42. *Descriptive Statistics for the Spiritual Contentment Subscale and the Solitude Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_SpiritualContentment_Sum	30.5646	4.09772	98
GT_Solitude_Sum	25.9628	2.33680	94

Table 43. *Relationship Between the Spiritual Contentment Subscale and the Solitude Subscale*

<b>Correlations</b>			SAS_SpiritualContentment_Sum	GT_Solitude_Sum
SAS_SpiritualContentment_Sum	Pearson Correlation		1	.331**
	Sig. (2-tailed)			.001
	N		98	93
GT_Solitude_Sum	Pearson Correlation		.331**	1
	Sig. (2-tailed)		.001	
	N		93	94

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

Table 44. *Descriptive Statistics for Religiosity and Gerotranscendence*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
Religion_Total_Sum	24.7526	2.52296	98
GT_Total_Sum	75.9094	5.33154	86

Table 45. *Relationship Between Religiosity and Gerotranscendence*

<b>Correlations</b>			Religion_Total_Sum	GT_Total_Sum
Religion_Total_Sum	Pearson Correlation		1	.363**
	Sig. (2-tailed)			.001
	N		98	85
GT_Total_Sum	Pearson Correlation		.363**	1
	Sig. (2-tailed)		.001	
	N		85	86

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

Table 46. *Descriptive Statistics for Religiosity and the Cosmic Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
Religion_Total_Sum	24.7526	2.52296	98
GT_Cosmic_Sum	31.8376	3.56943	91

Table 47. *Relationship Between Religiosity and Cosmic Subscale*

Correlations			
		Religion_Total_Sum	GT_Cosmic_Sum
Religion_Total_Sum	Pearson Correlation	1	.313**
	Sig. (2-tailed)		.003
	N	98	90
GT_Cosmic_Sum	Pearson Correlation	.313**	1
	Sig. (2-tailed)	.003	
	N	90	91

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

Table 48. *Descriptive Statistics for Religiosity and the Coherence Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
Religion_Total_Sum	24.7526	2.52296	98
GT_Coherence_Sum	18.3074	1.69926	95

Table 49. *Relationship Between Religiosity and the Coherence Subscale*

		<b>Correlations</b>	
		Religion_Total_S um	GT_Coherence_ Sum
Religion_Total_Sum	Pearson Correlation	1	.222 <sup>*</sup>
	Sig. (2-tailed)		.032
	N	98	94
GT_Coherence_Sum	Pearson Correlation	.222 <sup>*</sup>	1
	Sig. (2-tailed)	.032	
	N	94	95

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

Table 50. *Descriptive Statistics for Religiosity and the Solitude Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
Religion_Total_Sum	24.7526	2.52296	98
GT_Solitude_Sum	25.9628	2.33680	94

Table 51. *Relationship Between Religiosity and the Solitude Subscale*

		<b>Correlations</b>	
		Religion_Total_S um	GT_Solitude_Su m
Religion_Total_Sum	Pearson Correlation	1	.226 <sup>*</sup>
	Sig. (2-tailed)		.029
	N	98	93
GT_Solitude_Sum	Pearson Correlation	.226 <sup>*</sup>	1
	Sig. (2-tailed)	.029	
	N	93	94

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

Table 52. *Descriptive Statistics for Religiosity and Spirituality*

Descriptive Statistics			
	Mean	Std. Deviation	N
Religion_Total_Sum	24.7526	2.52296	98
SAS_Total_Sum	95.1464	9.65155	96

Table 53. *Relationship Between Religiosity and Spirituality*

Correlations			
		Religion_Total_Sum	SAS_Total_Sum
Religion_Total_Sum	Pearson Correlation	1	.535**
	Sig. (2-tailed)		.000
	N	98	95
SAS_Total_Sum	Pearson Correlation	.535**	1
	Sig. (2-tailed)	.000	
	N	95	96

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

Table 54. *Descriptive Statistics for Religiosity and the Personal Faith Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
Religion_Total_Sum	24.7526	2.52296	98
SAS_PersonalFaith_Sum	32.3793	4.43734	98

Table 55. *Relationship Between Religiosity and the Personal Faith Subscale*

		Religion_Total_Sum	SAS_PersonalFaith_Sum
Religion_Total_Sum	Pearson Correlation	1	.395**
	Sig. (2-tailed)		.000
	N	98	97
SAS_PersonalFaith_Sum	Pearson Correlation	.395**	1
	Sig. (2-tailed)	.000	
	N	97	98

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

Table 56. *Descriptive Statistics for Religiosity and the Religious Practice Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
Religion_Total_Sum	24.7526	2.52296	98
SAS_ReligiousPractice_Sum	32.1082	3.21446	97

Table 57. *Relationship Between Religiosity and the Religious Practice Subscale*

		Religion_Total_Sum	SAS_ReligiousPractice_Sum
Religion_Total_Sum	Pearson Correlation	1	.541**
	Sig. (2-tailed)		.000
	N	98	96
SAS_ReligiousPractice_Sum	Pearson Correlation	.541**	1
	Sig. (2-tailed)	.000	
	N	96	97

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

Table 58. *Descriptive Statistics for Religiosity and the Spiritual Contentment Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
Religion_Total_Sum	24.7526	2.52296	98
SAS_SpiritualContentment_Sum	30.5646	4.09772	98

Table 59. *Relationship Between Religiosity and the Spiritual Contentment Subscale*

Correlations			
		Religion_Total_Sum	SAS_SpiritualContentment_Sum
Religion_Total_Sum	Pearson Correlation	1	.432**
	Sig. (2-tailed)		.000
	N	98	97
SAS_SpiritualContentment_Sum	Pearson Correlation	.432**	1
	Sig. (2-tailed)	.000	
	N	97	98

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

Table 60. *Descriptive Statistics for Overall Gerotranscendence and the ORA Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
GT_Total_Sum	75.9094	5.33154	86
Religion_ORA_Sum	5.7041	.70651	98



Table 61. *Relationship Between Overall Gerotranscendence and the ORA Subscale*

		GT_Total_Sum	Religion_ORA_Sum
GT_Total_Sum	Pearson Correlation	1	.080
	Sig. (2-tailed)		.469
	N	86	85
Religion_ORA_Sum	Pearson Correlation	.080	1
	Sig. (2-tailed)	.469	
	N	85	98

Table 62. *Descriptive Statistics for Overall Gerotranscendence and the NORA Subscale*

	Mean	Std. Deviation	N
GT_Total_Sum	75.9094	5.33154	86
Religion_NORA_Sum	5.2474	.95776	97

Table 63. *Relationship Between Overall Gerotranscendence and the NORA Subscale*

		GT_Total_Sum	Religion_NORA_Sum
GT_Total_Sum	Pearson Correlation	1	.235*
	Sig. (2-tailed)		.031
	N	86	85
Religion_NORA_Sum	Pearson Correlation	.235*	1
	Sig. (2-tailed)	.031	
	N	85	97

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

Table 64. *Descriptive Statistics for Overall Gerotranscendence and the IR Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
GT_Total_Sum	75.9094	5.33154	86
Religion_IR_Sum	13.7857	1.73056	98

Table 65. *Relationship Between Overall Gerotranscendence and the IR Subscale*

<b>Correlations</b>			
		GT_Total_Sum	Religion_IR_Sum
GT_Total_Sum	Pearson Correlation	1	.385**
	Sig. (2-tailed)		.000
	N	86	85
Religion_IR_Sum	Pearson Correlation	.385**	1
	Sig. (2-tailed)	.000	
	N	85	98

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

Table 66. *Descriptive Statistics for the Cosmic Subscale and the ORA Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
GT_Cosmic_Sum	31.8376	3.56943	91
Religion_ORA_Sum	5.7041	.70651	98

Table 67. *Relationship Between the Cosmic Subscale and the ORA Subscale*

		<b>Correlations</b>	
		GT_Cosmic_Sum	Religion_ORA_Sum
GT_Cosmic_Sum	Pearson Correlation	1	.163
	Sig. (2-tailed)		.124
	N	91	90
Religion_ORA_Sum	Pearson Correlation	.163	1
	Sig. (2-tailed)	.124	
	N	90	98

Table 68. *Descriptive Statistics for the Cosmic Subscale and the NORA Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
GT_Cosmic_Sum	31.8376	3.56943	91
Religion_NORA_Sum	5.2474	.95776	97

Table 69. *Relationship Between the Cosmic Subscale and the NORA Subscale*

		<b>Correlations</b>	
		GT_Cosmic_Sum	Religion_NORA_Sum
GT_Cosmic_Sum	Pearson Correlation	1	.241 <sup>*</sup>
	Sig. (2-tailed)		.022
	N	91	90
Religion_NORA_Sum	Pearson Correlation	.241 <sup>*</sup>	1
	Sig. (2-tailed)	.022	
	N	90	97

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

Table 70. *Descriptive Statistics for the Cosmic Subscale and the IR Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
GT_Cosmic_Sum	31.8376	3.56943	91
Religion_IR_Sum	13.7857	1.73056	98

Table 71. *Relationship Between the Cosmic Subscale and the IR Subscale*

<b>Correlations</b>			
		GT_Cosmic_Sum	Religion_IR_Sum
GT_Cosmic_Sum	Pearson Correlation	1	.272**
	Sig. (2-tailed)		.010
	N	91	90
Religion_IR_Sum	Pearson Correlation	.272**	1
	Sig. (2-tailed)	.010	
	N	90	98

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

Table 72. *Descriptive Statistics for the Coherence Subscale and the ORA Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
GT_Coherence_Sum	18.3074	1.69926	95
Religion_ORA_Sum	5.7041	.70651	98

Table 73. *Relationship Between the Coherence Subscale and the ORA Subscale*

		<b>Correlations</b>	
		GT_Coherence_ Sum	Religion_ORA_S um
GT_Coherence_Sum	Pearson Correlation	1	.107
	Sig. (2-tailed)		.303
	N	95	94
Religion_ORA_Sum	Pearson Correlation	.107	1
	Sig. (2-tailed)	.303	
	N	94	98

Table 74. *Descriptive Statistics for the Coherence Subscale and the NORA Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
GT_Coherence_Sum	18.3074	1.69926	95
Religion_NORA_Sum	5.2474	.95776	97

Table 75. *Relationship Between the Coherence Subscale and the NORA Subscale*

		<b>Correlations</b>	
		GT_Coherence_ Sum	Religion_NORA_ Sum
GT_Coherence_Sum	Pearson Correlation	1	.162
	Sig. (2-tailed)		.121
	N	95	93
Religion_NORA_Sum	Pearson Correlation	.162	1
	Sig. (2-tailed)	.121	
	N	93	97

Table 76. *Descriptive Statistics the Coherence Subscale and the IR Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
GT_Coherence_Sum	18.3074	1.69926	95
Religion_IR_Sum	13.7857	1.73056	98

Table 77. *Relationship Between the Coherence Subscale and the IR Subscale*

Correlations			
		GT_Coherence_ Sum	Religion_IR_Sum
GT_Coherence_Sum	Pearson Correlation	1	.206*
	Sig. (2-tailed)		.047
	N	95	94
Religion_IR_Sum	Pearson Correlation	.206*	1
	Sig. (2-tailed)	.047	
	N	94	98

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

Table 78. *Descriptive Statistics of the Solitude Subscale and the ORA Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
GT_Solitude_Sum	25.9628	2.33680	94
Religion_ORA_Sum	5.7041	.70651	98

Table 79. *Relationship Between the Solitude Subscale and the ORA Subscale*

		<b>Correlations</b>	
		GT_Solitude_Su m	Religion_ORA_S um
GT_Solitude_Sum	Pearson Correlation	1	-.077
	Sig. (2-tailed)		.463
	N	94	93
Religion_ORA_Sum	Pearson Correlation	-.077	1
	Sig. (2-tailed)	.463	
	N	93	98

Table 80. *Descriptive Statistics of the Solitude Subscale and the NORA Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
GT_Solitude_Sum	25.9628	2.33680	94
Religion_NORA_Sum	5.2474	.95776	97

Table 81. *Relationship Between the Solitude Subscale and the NORA Subscale*

		<b>Correlations</b>	
		GT_Solitude_Su m	Religion_NORA_ Sum
GT_Solitude_Sum	Pearson Correlation	1	.128
	Sig. (2-tailed)		.225
	N	94	92
Religion_NORA_Sum	Pearson Correlation	.128	1
	Sig. (2-tailed)	.225	
	N	92	97

Table 82. *Descriptive Statistics of the Solitude Subscale and the IR Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
GT_Solitude_Sum	25.9628	2.33680	94
Religion_IR_Sum	13.7857	1.73056	98

Table 83. *Relationship Between the Solitude Subscale and the IR Subscale*

Correlations			
		GT_Solitude_Su m	Religion_IR_Sum
GT_Solitude_Sum	Pearson Correlation	1	.300**
	Sig. (2-tailed)		.003
	N	94	93
Religion_IR_Sum	Pearson Correlation	.300**	1
	Sig. (2-tailed)	.003	
	N	93	98

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

Table 84a. *Descriptive Statistics of the Spirituality and ORA Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_Total_Sum	95.1464	9.65155	96
Religion_ORA_Sum	5.7041	.70651	98



Table 85a. *Relationship Between the Spirituality and ORA Subscale*

		SAS_Total_Sum	Religion_ORA_Sum
SAS_Total_Sum	Pearson Correlation	1	.378**
	Sig. (2-tailed)		.000
	N	96	95
Religion_ORA_Sum	Pearson Correlation	.378**	1
	Sig. (2-tailed)	.000	
	N	95	98

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

Table 84b. *Descriptive Statistics of the Spirituality and NORA Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_Total_Sum	95.1464	9.65155	96
Religion_NORA_Sum	5.2474	.95776	97

Table 85b. *Relationship Between the Spirituality and NORA Subscale*

		SAS_Total_Sum	Religion_NORA_Sum
SAS_Total_Sum	Pearson Correlation	1	.356**
	Sig. (2-tailed)		.000
	N	96	94
Religion_NORA_Sum	Pearson Correlation	.356**	1
	Sig. (2-tailed)	.000	
	N	94	97

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

Table 86. *Descriptive Statistics of the Spirituality and IR Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_Total_Sum	95.1464	9.65155	96
Religion_IR_Sum	13.7857	1.73056	98

Table 87. *Relationship Between the Spirituality and IR Subscale*

<b>Correlations</b>			
		SAS_Total_Sum	Religion_IR_Sum
SAS_Total_Sum	Pearson Correlation	1	.448**
	Sig. (2-tailed)		.000
	N	96	95
Religion_IR_Sum	Pearson Correlation	.448**	1
	Sig. (2-tailed)	.000	
	N	95	98

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

Table 88. *Descriptive Statistics of the Personal Faith and ORA Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_PersonalFaith_Sum	32.3793	4.43734	98
Religion_ORA_Sum	5.7041	.70651	98

Table 89. *Relationship Between the Personal Faith and ORA Subscale*

		<b>Correlations</b>	
		SAS_PersonalFaith_Sum	Religion_ORA_Sum
SAS_PersonalFaith_Sum	Pearson Correlation	1	.261**
	Sig. (2-tailed)		.010
	N	98	97
Religion_ORA_Sum	Pearson Correlation	.261**	1
	Sig. (2-tailed)	.010	
	N	97	98

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

Table 90. *Descriptive Statistics of the Personal Faith and NORA Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_PersonalFaith_Sum	32.3793	4.43734	98
Religion_NORA_Sum	5.2474	.95776	97

Table 91. *Relationship Between the Personal Faith and NORA Subscale*

		<b>Correlations</b>	
		SAS_PersonalFaith_Sum	Religion_NORA_Sum
SAS_PersonalFaith_Sum	Pearson Correlation	1	.272**
	Sig. (2-tailed)		.007
	N	98	96
Religion_NORA_Sum	Pearson Correlation	.272**	1
	Sig. (2-tailed)	.007	
	N	96	97

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

Table 92. *Descriptive Statistics of the Personal Faith and IR Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_PersonalFaith_Sum	32.3793	4.43734	98
Religion_IR_Sum	13.7857	1.73056	98

Table 93. *Relationship Between the Personal Faith and IR Subscale*

Correlations			
		SAS_PersonalFaith_Sum	Religion_IR_Sum
SAS_PersonalFaith_Sum	Pearson Correlation	1	.343**
	Sig. (2-tailed)		.001
	N	98	97
Religion_IR_Sum	Pearson Correlation	.343**	1
	Sig. (2-tailed)	.001	
	N	97	98

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

Table 94. *Descriptive Statistics of the Religious Practice and ORA Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_ReligiousPractice_Sum	32.1082	3.21446	97
Religion_ORA_Sum	5.7041	.70651	98

Table 95. *Relationship Between the Religious Practice and ORA Subscale*

		<b>Correlations</b>	
		SAS_ReligiousPr actice_Sum	Religion_ORA_S um
SAS_ReligiousPractice_Sum	Pearson Correlation	1	.536**
	Sig. (2-tailed)		.000
	N	97	96
Religion_ORA_Sum	Pearson Correlation	.536**	1
	Sig. (2-tailed)	.000	
	N	96	98

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

Table 96. *Descriptive Statistics of the Religious Practice and NORA Subscale*

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
SAS_ReligiousPractice_Sum	32.1082	3.21446	97
Religion_NORA_Sum	5.2474	.95776	97

Table 97. *Relationship Between the Religious Practice and NORA Subscale*

		<b>Correlations</b>	
		SAS_ReligiousPr actice_Sum	Religion_NORA_ Sum
SAS_ReligiousPractice_Sum	Pearson Correlation	1	.378**
	Sig. (2-tailed)		.000
	N	97	95
Religion_NORA_Sum	Pearson Correlation	.378**	1
	Sig. (2-tailed)	.000	
	N	95	97

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

Table 98. *Descriptive Statistics of the Religious Practice and IR Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_ReligiousPractice_Sum	32.1082	3.21446	97
Religion_IR_Sum	13.7857	1.73056	98

Table 99. *Relationship Between the Religious Practice and IR Subscale*

Correlations			
		SAS_ReligiousPr actice_Sum	Religion_IR_Sum
SAS_ReligiousPractice_Sum	Pearson Correlation	1	.390**
	Sig. (2-tailed)		.000
	N	97	96
Religion_IR_Sum	Pearson Correlation	.390**	1
	Sig. (2-tailed)	.000	
	N	96	98

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

Table 100. *Descriptive Statistics of the Spiritual Contentment and ORA Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_SpiritualContentment_Su m	30.5646	4.09772	98
Religion_ORA_Sum	5.7041	.70651	98

Table 101. *Relationship Between the Spiritual Contentment and ORA Subscale*

		SAS_SpiritualContentment_Sum	Religion_ORA_Sum
SAS_SpiritualContentment_Sum	Pearson Correlation	1	.204*
	Sig. (2-tailed)		.046
	N	98	97
Religion_ORA_Sum	Pearson Correlation	.204*	1
	Sig. (2-tailed)	.046	
	N	97	98

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

Table 102. *Descriptive Statistics of the Spiritual Contentment and NORA Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_SpiritualContentment_Sum	30.5646	4.09772	98
Religion_NORA_Sum	5.2474	.95776	97

Table 103. *Relationship Between the Spiritual Contentment and NORA Subscale*

		SAS_SpiritualContentment_Sum	Religion_NORA_Sum
SAS_SpiritualContentment_Sum	Pearson Correlation	1	.270**
	Sig. (2-tailed)		.008
	N	98	96
Religion_NORA_Sum	Pearson Correlation	.270**	1
	Sig. (2-tailed)	.008	
	N	96	97

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

Table 104. *Descriptive Statistics of the Spiritual Contentment and IR Subscale*

Descriptive Statistics			
	Mean	Std. Deviation	N
SAS_SpiritualContentment_Sum	30.5646	4.09772	98
Religion_IR_Sum	13.7857	1.73056	98

Table 105. *Relationship Between the Spiritual Contentment and IR Subscale*

Correlations			
		SAS_SpiritualContentment_Sum	Religion_IR_Sum
SAS_SpiritualContentment_Sum	Pearson Correlation	1	.402**
	Sig. (2-tailed)		.000
	N	98	97
Religion_IR_Sum	Pearson Correlation	.402**	1
	Sig. (2-tailed)	.000	
	N	97	98

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

Table 106. *Regression Between Gerotranscendence, Spirituality, and Religiosity*

Variables Entered/Removed <sup>a</sup>			
Model	Variables Entered	Variables Removed	Method
1	Religion_Total_Sum, SAS_Total_Sum <sup>b</sup>	.	Enter

a. Dependent Variable: GT\_Total\_Sum

b. All requested variables entered.

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.468 <sup>a</sup>	.219	.200	4.82199

a. Predictors: (Constant), Religion\_Total\_Sum, SAS\_Total\_Sum



Table 107. ANOVA Regression Between Gerotranscendence, Spirituality, and Religiosity

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	522.317	2	261.159	11.232	.000 <sup>b</sup>
	Residual	1860.127	80	23.252		
	Total	2382.444	82			

a. Dependent Variable: GT\_Total\_Sum

b. Predictors: (Constant), Religion\_Total\_Sum, SAS\_Total\_Sum

Table 108. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	48.751	5.822		8.374	.000
	SAS_Total_Sum	.187	.065	.341	2.886	.005
	Religion_Total_Sum	.381	.246	.184	1.552	.125

a. Dependent Variable: GT\_Total\_Sum