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Religiosity and Successful Aging

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Religiosity and Successful Aging: The Buffering Role of Religion against Normative and Traumatic Stressors in Community-Residing Older Adults

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RELIGIOSITY AND SUCCESSFUL AGING: THE BUFFERING ROLE OF RELIGION AND RELIGIOUS COPING AGAINST NORMATIVE AND TRAUMATIC STRESSORS IN COMMUNITY-RESIDING OLDER ADULTS

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ABSTRACT

There has been an increasing amount of elderly individuals who have avoided the crippling health and physical problems that appear to vex so much of the older adult population. These *successful agers* have also learned to cope more effectively with both the normative and traumatic stressors they encounter over time. Successful aging has been defined in numerous ways and studied in a variety of contexts. This study set to define successful aging in terms of anxiety, depression, and subjective well-being, while also examining the relationship of successful aging with religiosity. The fundamental goal of this study was to examine the extent of the relationship between religiosity and successful aging, with special attention paid to the actual role played by religiosity in the experience of both normative and traumatic stressors in community-residing older adults, age 65 years and older.

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CHAPTER I

INTRODUCTION

"The purpose of research on aging is to be able to characterize the nature of the older organism over time" (Birren, 1968). In a culture that cherishes the young and the beautiful, research on aging and the aging process has focused, not surprisingly, on successful aging, on *characterizing the nature of successful agers*, so to speak. According to Hooyman & Kiyak (2005), there has been an increasing amount of elderly individuals who have avoided the crippling health and physical problems that appear to vex so much of the older adult population. These *successful agers* have also learned to cope more effectively with both the normative and traumatic stressors they encounter over time.

What is successful aging? How can it be measured? Furthermore, how can the results of successful aging research be made useful and available so that a greater number of individuals may take advantage of the benefits it affords?

In their multidisciplinary approach to the study of aging, Hooyman and Kiyak (2005) defined successful aging as a combination of physical and functional health, high cognitive functioning, and an active involvement in society. Added to this discussion was an illustration of how successful aging is facilitated by such factors as social support,

productive involvement (either in paid or volunteer work), high affective well-being (i.e., the absence of depressive symptoms), high physical functioning, a lack of cognitive impairments, and a sense of meaningful purpose.

Unlike the approach taken by Hooyman and Kiyak (2005), the study presented here did not aim to examine the many different factors that influence successful aging, but, rather just one: religiosity. Although Hooyman and Kiyak discussed this construct, they did not recognize it as a factor contributing to the success of one's aging process. Many researchers have shown that certain patterns of religious involvement do impact the quality of life of older adults and that religiosity does have physical- and mental-health benefits (e.g., Hooyman & Kiyak; Idler, 2006; Krause, 2006). However, these studies have not credited religiosity as a predictor of or even as strong of an influence on successful aging as this study did. The figure on page 8 is a graphical representation of the positive and negative relationships between successful aging and various other factors, including religiosity.

This study also took a more specific stance than many others on what successful aging actually entails. Here, it was defined simply as happiness and life satisfaction, but more specifically, positive subjective well-being and freedom from depression and anxiety. It was assumed that factors like those mentioned by Hooyman and Kiyak (2005) do contribute significantly to the success of an individual's aging process; however, this study was mainly interested in the influence of religiosity on how successfully an individual ages.

Wilson and Moran (1998) reported that religion, faith, and spirituality make up an important part of the lives of many people. The degree of this importance was summed up in their definition of spiritual faith.

> More than a mere act of belief, spiritual faith is a disposition, a whole-hearted acceptance of, trust in, and commitment to that which gives meaning and purpose to existence…Faith is not a static moment of assent. Faith is a dynamic activity…[It] is epigenetic, it unfolds throughout the lifecycle, changing and advancing in virtue (p. 169-170).

These researchers discussed how religious and spiritual faith contributes to the healing and growth that result over time, even after the experience of trauma. This faith is typically so strong that it provides the individual with courage simply to exist in a chaotic and unpredictable world. As Wilson and Moran pointed out, this courage is rooted in God, the God who is present, even when His absence is assumed.

This idea of religious faith and the description of how important it is in the lives of so many individuals were key for the inquisition of the importance for successful aging. The fundamental goal of this research was to examine the extent of the influence of religiosity on how successful a person ages. Special attention was paid to the actual role played by religiosity in the experience of both normative and traumatic stressors in community-residing older adults, age 65 years and older. The mental health outcomes focused on most specifically here include anxiety, depression, and subjective well-being. Generally, it is thought that when an individual experiences some stressor, whether normative or traumatic, he or she will then experience some degree of anxiety and/or depression as a result. Also, his or her report of subjective well-being will likely deteriorate. However, in the presence of a strong sense of religiosity and the meaning that

typically accompanies it, that individual is assumed to buffer the effects of those stressors more successfully.

Five hypotheses were formulated to answer specific questions for this study. Each question and its associated hypothesis are listed below.

1. Is there a relationship between any demographic variable (i.e., age, sex, ethnicity, marital status, education, and religious affiliation) and religiosity and successful aging?

It was hypothesized that younger, married females would display the greatest degrees of both religiosity and successful aging. Supported by earlier research (e.g., Hooyman & Kiyak, 2005), it was assumed that, with increasing age, an individual would maintain his or her religious beliefs as well as private religious practices (e.g., praying, studying religious texts). However, it was also expected that, with age, an individual would participate in fewer public religious activities due to physical or functional impairments, as well as less access to transportation. Since much of religiosity is measured according to religious practices, it would seem to follow that religiosity would decrease with age. Also, with increasing age, most people are faced with more and more stressful life events and physical and functional limitations (Hooyman & Kiyak). So, it was assumed that, the younger the individual, the more likely he or she would be considered a successful ager.

With regard to gender, current research literature supports the idea that females display more religious behaviors and more positive religious beliefs than do their male counterparts (Bishop, 2006). However, it is unclear whether this is a result of females actually being more religious than males, or if it is simply because of the social and

emotional support obtained via religious involvement. Studies have shown that men obtain the majority of their social support from their wives (Norton, Skoog, Franklin et al., 2006); so, the support offered by the religious community may not have as much benefit for a man as it would for a woman. Therefore, it was assumed that men would seem less religious than women.

The reason married individuals were expected to be more successful agers over their non-married counterparts, was not because of the marriage itself, but rather the social and emotional support that is typically provided by the spouse. This was supported by Uppal (2006), who postulated that married individuals experience more positive subjective well-being than non-married individuals.

2. Are there significant differences in religiosity and successful aging among the three age groups of older adults (i.e., young-old vs. old-old, young-old vs. oldest-old, old-old vs. oldest-old)?

It was hypothesized that members of the young-old age group would display the greatest degrees of religiosity and successful aging, followed by members of the oldest-old age group. Religiosity research has shown that attendance of religious worship services peaks around the 60's and begins to decline sometime in the 70's (Hooyman & Kiyak, 2005). For this reason, as well as those described for the study's first hypothesis, young-old adults were expected to be more religious. However, members of the oldest-old age group often compensate for the decrease in their public religious activities by increasing the frequency of their private religious activities and the intensity of their personal religious beliefs (Hooyman & Kiyak). So, when comparing the three age groups of older adults, it was assumed that members of the middle group, the old-old age group,

would display the least religiosity. Also, considering the emotional and social support provided by religious involvement (Krause, 2006), and the assumption that old-old adults display the least degree of religiosity, members of this group were also hypothesized to be the least successful agers.

3. In the presence of traumatic experiences, life-threatening illnesses, and/or normative stressors of aging (e.g., physical disabilities or chronic illnesses), to what extent does an older adult perceive his or her religious practices and beliefs as having been affected?

It was hypothesized that traumatic experiences, life-threatening illnesses, and normative stressors of aging would all be perceived as having a negative impact on an individual's religious practices and beliefs. Pargament, Smith, Koenig, and Perez (1998) discussed the differences between positive and negative religious coping methods. Examples of negative religious coping methods include: spiritual and interpersonal religious discontent, negative reappraisals of God and/or His power, demonic reappraisals, and self-directing approaches to control. It was assumed that individuals who experience more traumas, illnesses, and other stressors would be more likely to cope with these experiences using negative religious coping methods, and Pargament et al. show how the use of these negative methods is associated with emotional distress and poorer health and mental health outcomes.

4. Do people tend to maintain the same religious affiliation as they age, or do their affiliations change over time? Also, does one's religiosity tend to intensify or deepen as he or she ages?

This study hypothesized that, if an individual affiliated him/herself with a particular religious affiliation, then that person would likely retain that affiliation in later life. Since most religious beliefs and practices are specific to particular affiliations, this assumption is supported by Hooyman & Kiyak's (2005) research, showing that an individual usually maintains the same religious beliefs and private religious practices as he or she ages. Also, with age, it was assumed that a person's beliefs and practices (and, hence, his or her religiosity) would intensify.

5. Finally, does religiosity have any influence on how successfully one ages?

It was hypothesized that religiosity does have a positive influence on successful aging. Several studies have shown that religiosity has the potential to provide both physical- and mental-health benefits (e.g., Hooyman & Kiyak, 2005; Idler, 2006). Some of these benefits include a promotion of better immune functioning, a decreased prevalence of both physical and mental illness, and generally increased longevity. These benefits may only be an indirect result of religious beliefs and practices; however, regardless of how religiosity contributes to successful aging, it does show an empirically supported protective effect on an individual's health and well-being (Hooyman & Kiyak).

Each of the above hypotheses will be discussed again in later chapters. Included in these discussions will be both the survey instruments and data analytic procedures used to address each hypothesis (Chapters III and IV, respectively), as well as results of analyses used to test the associated hypotheses. Also, Figure 1 is a graphical representation of the positive and negative relationships between successful aging and various other factors, including successful aging.

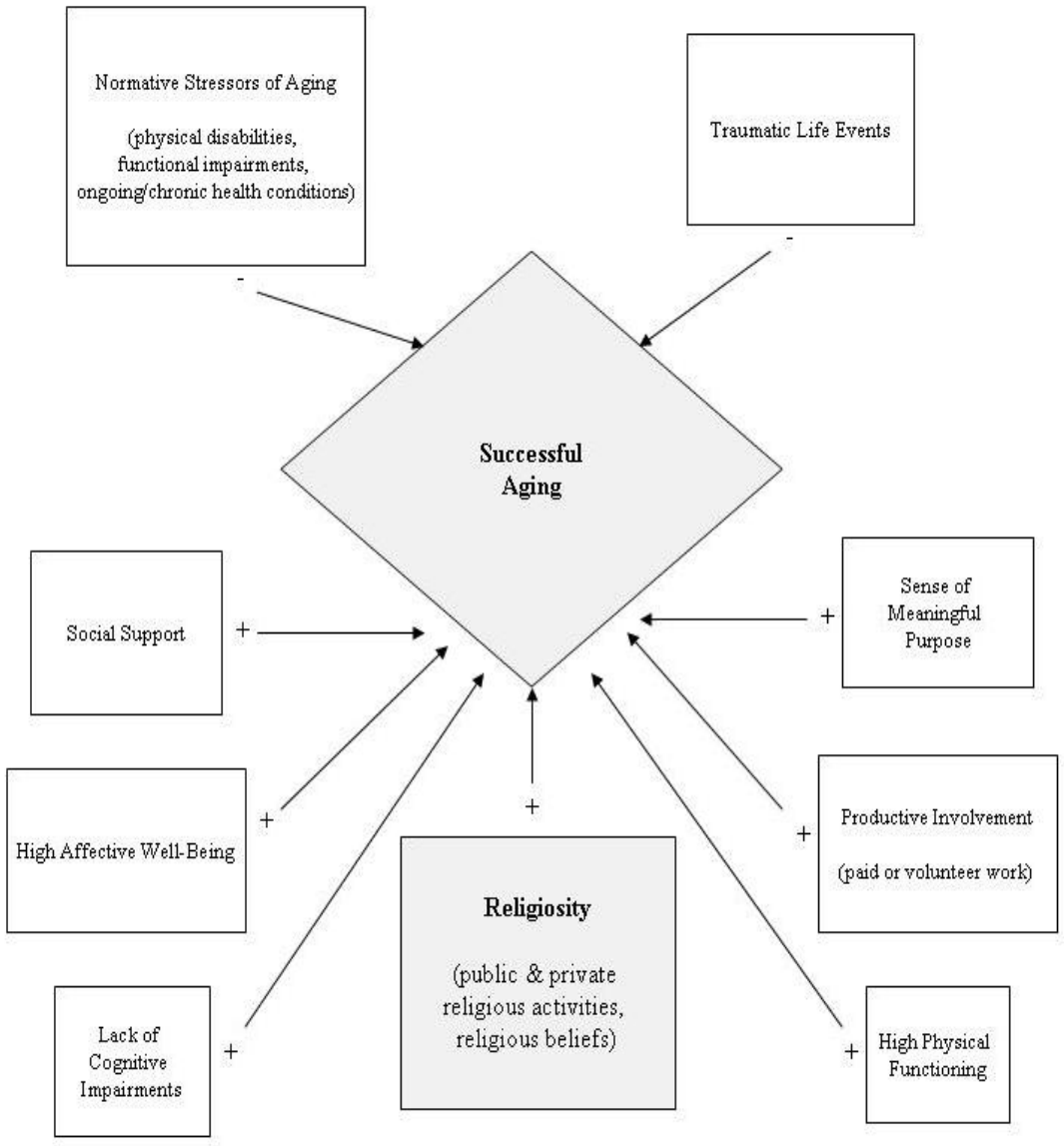

Figure 1. *Theoretical Model – Influencing Factors on Successful Aging*

CHAPTER II

LITERATURE REVIEW

2.1 Religiosity and Religion and Aging

Hooyman and Kiyak (2005) argue that religiosity can be broken into and examined in terms of three different factors: participation in religious organizations, the personal meaning of religion and private devotional activities, and the contribution of religion to an individual's adjustment to the aging process and his or her confrontation with the idea of death and dying. This present study approached the idea of religiosity in a more broad sense, referring simply to religious practices and beliefs. Specifically, this study measured religiosity in terms of church/temple attendance, amount of time spent reading and studying religious texts, frequency of prayer both at meals and at various times throughout the day, and general belief about God.

In *The Psychology of Religion*, Clark (1958) argued that "religion, more than any other human function, satisfies the need for meaning in life" (p. 417). Reker (1997) posited that *meaning* is "having a sense of direction, a sense of order, and a reason for existence, a clear sense of personal identity, and a greater social consciousness" (p. 710).

In two separate studies based both on Clark's definition of religion and Reker's definition of meaning, Krause (2003) concluded that older adults who derive a sense of meaning from religion tend to have lower levels of depression and higher levels of life satisfaction, self-esteem, and optimism than do their irreligious peers.

Many researchers have discovered that certain patterns of religious involvement actually have positive impacts on the health and quality of life of older adults (Idler, 2006). In fact, Hooyman and Kiyak (2005) point out that there are significant and consistent benefits to the physical and mental well-being of older adults resulting from the influence of religiosity. Participation in religious activities, especially in later life, appears to reduce the risk of mortality, lower the prevalence of physical illness, promote better immune functioning, lower blood pressure, and generally increase longevity. Psychologically, religious participation is associated with a decreased prevalence of mental illnesses, an increased rate of recovery from depressive disorders, and more well-adjusted approaches to death and dying. Hooyman and Kiyak concluded their discussion of religiosity's physical and mental benefits by pointing out that religious activities are not necessarily the sole (or even the primary) cause of these health benefits. However, the different ways in which religiosity is expressed may be a key factor in causing good health: a modification or decrease in risk factors (e.g., decreased substance use or, in some religious practices, complete abstinence), the provision of social support, and the availability of belief systems that aide in coping with poor circumstances.

Regardless of the precise ways in which religiosity influences an individual's physical and mental well-being, religious participation, whether public or private, has an empirically-supported protective effect on an individual's health. Furthermore, it is

capable of facilitating effective coping in adverse circumstances. Someone who is psychologically and spiritually well is more likely than an *unwell* individual to find meaning in life and have a reason to live, despite the losses and challenges associated with normative stressors of aging (Hooyman & Kiyak, 2005; Krause, 2006).

With regard to organized religious involvement, Hooyman and Kiyak (2005) reported that church/temple attendance peaks in individuals in their late 50's and early 60's. Around the late 60's or early 70's, attendance begins to decline. This decline could be the result of various reasons, such as a corresponding decline in physical health, functional limitations, or transportation difficulties. Despite the decline in church/temple attendance, and regardless of the reasons for this decline, older adults over the age of 65 years are still more involved in religious activities than any other age groups. Moreover, although a decline in public religious activities is observed in the older adult population, Hooyman and Kiyak noted that these individuals often compensate this decline by increasing their involvement in more private religious activities, such as personal devotions. This idea was validated by Koenig (2006), who observed that people tend to become more religious as they grow older. He concluded that this finding seems plausible since people may become more concerned with spiritual factors rather than public activities as they come closer to death.

Again, although religiosity in and of itself has been proven beneficial, it cannot be denied that the sense of belonging and social support provided by public involvement in religious activities also influences well-being. "Across the life span, religious groups provide support and reduce stress in people's lives" (Hooyman & Kiyak, 2005, p. 459). Church-based social support refers to the assistance provided to and shared with people

who worship together (Krause, 2006), and this support most often takes the form of emotional support and encouragement in times of stress (both traumatic and normative).

Aside from the changes in organized religious behaviors, there are other observable changes in religiosity throughout the life course. There are two main arguments with respect to the nature of these changes: changes in religiosity may result either from age or from cohort effects. Although there is no definitive evidence to substantiate either side of the argument, Hooyman and Kiyak (2005) reported that, instead of being a byproduct of cohort effects, recent Gallup Poll data suggest that religiosity actually does increase with age. One reason for the lack of definitive evidence in support of either position (age versus cohort effects) lies in the fact that most studies of religiosity have been conducted as cross-sectional research. There are very few longitudinal studies which measure older adults' past *and* present religious practices and beliefs. Those longitudinal studies that have been conducted on this topic suggest that cohort, and not age effects are responsible for the differences in religiosity observed among different age groups.

Krause (2006) speculated that, although people appear to become more involved in religion as they grow older, they do not necessarily become more deeply involved in all aspects of religiosity. He provided the example that some people may rely more on the church-based social support that is inherent in religiosity while others may utilize more religious coping methods such as prayer and meditation. He went on to discuss how changes in religiosity observed throughout the life course cannot be attributed solely to age effects or cohort effects. Instead, more research needs to be done cross-sectionally and longitudinally in order to resolve this debate. According to Krause's line of

reasoning, without applying an operational or working definition to religiosity, it is near impossible to conclude that one age group in particular is more or less religious than another. Instead, researchers must study patterns of change and differences in various aspects and dimensions of religiosity across all groups.

2.2 Anxiety, Trauma, and Other Life Stressors

Symptoms of anxiety are often overlooked in older adults because of their frequent comorbidity with depression and various other psychological and medical disorders (Sheikh, 2005). This is an important problem because approximately 20% of the community-residing elderly population experiences at least some symptoms associated with anxiety (American Psychiatric Association [APA], 2000a; Lowe & Reynolds, 2005).

Along with anxiety, older individuals are likely to experience more disabilities for Activities of Daily Life (ADL), and these disabilities increase with increasing age, as does the prevalence of chronic and ongoing health conditions (Tas, Verhagen, Bierma-Zeinstra et al., 2007). From this, it follows that, with older age and greater likelihood of physical and functional disabilities, as well as serious health conditions, an individual is at an even greater risk of experiencing at least some symptoms of anxiety than he or she would experience at a younger, less "disabled" age.

Before continuing, the difference between trait anxiety and the experience of anxious symptoms must be discussed. Trait anxiety is an enduring aspect of an individual's personality (McCrae, 1995), which the reader will recall, remains relatively stable over time (Hergenhahn & Olson, 2003). Therefore, for these individuals, "anxiety at any period of the lifespan is more likely to reflect enduring features of the individual

than either age or life circumstances" (McCrae, p. 74). Others who are not burdened with the nervousness, fear, and worry that define trait anxiety can attribute their anxious symptoms to various life experiences. Older adults, especially, are faced with several different anxiety-producing events, including, but certainly not limited to, declining health, functional limitations, economic insecurity, bereavement, and many other normative stressors of aging.

Many life events are re-experienced in old age during what some researchers call the *life review*. It is at this time that older adults reminisce and review their lives, making meaning from the events they have experienced and integrating that meaning into their personal identities (Butler, 1968). Krause (2004) argued that "older people derive a sense of meaning in life by reflecting on their pasts, thinking about how their lives have unfolded, and how their lives have been lived" (p. S289). It has even been speculated that at no other time in life besides old age is a force operating so fiercely toward self-awareness (Butler). Some researchers have argued that it is "the biological fact of approaching death, independent of – although possibly reinforced by – personal and environmental circumstances, [that] prompts the life review" (p. 488).

One must keep in mind that many life experiences have both positive and negative aspects. Even further, all events are experienced subjectively by each individual. Therefore, it is that individual who determines the significance of an event on his or her well-being (Hooyman & Kiyak, 2005; McGrath, 2006). The subjectivity with which each life event is experienced is the reason why the same event may be perceived as insignificant by some and anxiety-provoking by others. So, how an older adult perceives

the events in his or her life review, will contribute to the experience of any anxious symptoms.

Another factor that influences the experience of an event as anxiety-provoking is how well an individual has learned to cope with stress (Hooyman & Kiyak, 2005). Hooyman & Kiyak argued that "the anticipation of an event is more stressful than the actual experience, and previous experience with a life event can help the person cope better when a similar event occurs" (p. 206). Therefore, during an individual's life review, if he or she is able to cope with the events perceived as stressful, then the experience of anxious symptoms may be diminished. However, if that individual is unable to cope with the stressful event or the meaning integrated into his or her personal identity as a result of the event, then the experience of anxious symptoms is likely to be intensified.

Wilson (1989) proposed an interactional model of traumatic stress reactions, implying that individual differences such as personality traits, cognitive style, gender, intelligence, social support, family history, childhood experiences, and even preexisting mental conditions aid in the perception of a stressful event as traumatic. Likewise, the stressful event itself has the power to influence one's personality functioning and therefore the individual's "life-course development" (Wilson, 1989, p. 6; APA, 2000a).

Wilson (1989) went on to explain:

> Extreme stress affects organism functioning directly on four interrelated levels: physiological, psychological, social-interpersonal, and cultural…Although the immediate and long-term effects of a trauma may impact on one level more severely than another…, they are, in fact, interrelated processes which influence each other in direct and subtle ways that constitute the essence of the mind-body relationship (p. 21).

This relationship is, not surprisingly, an incredibly complex one. It is affected by numerous factors, such as one's culture, personal history, and any learned patterns of stress management (e.g., coping mechanisms). These personal and environmental factors all contribute to whether an event causes distress at one or more levels of functioning, or if it is effectively buffered and therefore managed by the individual in a manner that promotes adaptive coping (Wilson, 1989).

This holistic approach to the experience of trauma, which incorporates the interaction of the mind and body, is also relevant to the healing and growth process undergone after the experience of a stressful event. This process is known by several names within the psychological and helping communities: post-traumatic growth, psychological growth, positive change, post-traumatic adaptation, post-traumatic transcendence, and personal and/or social transformation (Wilson, 1989; Decker, 1993; Linley & Joseph, 2003; Tedeschi & Calhoun, 2004; Park, Mills-Baxter, & Fenster, 2005; McGrath, 2006). In order to engage in this healing and growth process, one must recognize a few assumptions concerning traumatically stressful events and the healing and growth that may actually take place.[1]

First, traumatically stressful experiences result in a disruption of functioning on at least one of the levels described earlier (physiological, psychological, social-interpersonal, and/or cultural); and since each level is part of a collective whole, by influencing one level of functioning, other levels are invariably affected as well. Secondly, these traumatically stressful experiences and the disruptions that follow may produce state-dependent learning, which may then lead to "chronic hyperarousal and a cognitive information-processing style that functions in trauma-associated ways in nearly

all situations" (Wilson, 1989, p. 22). Finally, healing and growth *can* take place, and this growth is related to better subsequent well-being (Park et al., 2005).

It is important to understand that the major stressors a person experiences, the way those stressors are dealt with, and the resulting meaning that is made and then incorporated into that person's identity can have a long-lasting influence on his or her adjustments to current and future stressors (Park et al., 2005). Therefore, it is logical to conclude that, if healing occurs in the form of post-traumatic growth, that individual will have better adjustment and more adaptive coping skills in the future. It is possible to glean strength from trauma and stress and hope from suffering.

For this to happen, one must actually face the horrors that accompany psychological trauma. Even if this confrontation results in a *breakdown* (e.g., an anxiety disorder such as Post Traumatic Stress Disorder, which may also include some depressive symptoms like hopelessness and despair), hope can be had because this so-called *breakdown* indicates that progress has indeed been made. One cannot overcome what one has not faced; and if the psychological trauma and its effects on one's life and functioning are not addressed, then the healing and growth process cannot begin. Decker (1993) addressed this issue by comparing the healing and growth process experienced after psychological trauma to the transformation of matter in an alchemical process. The science and philosophy of alchemy maintained that for any transformation to occur, the old being or material must undergo a death-like experience, followed by growth and a change process (Muir, 1918). Similarly, for any growth or healing to take place after a traumatically stressful experience, one must return to and face the original psychological

trauma. “When trauma occurs, internal chaos results,” and “we must face our personal shadow…to adequately develop psychological health” (Decker, p. 38).

There is hope in the fact that approximately 30% to 90% of individuals who have ever experienced a traumatic stressor have also experienced later positive changes (Linley & Joseph, 2003). Some examples of growth that take the form of positive changes include such things as learning to fully appreciate each day, reorganizing one’s priorities according to *what is really important*, acting more altruistically (i.e., demonstrating more care and concern and working for the welfare of others), developing a greater sense of resiliency and strength, developing new coping responses, and learning to use coping responses one already possesses more efficiently and effectively (Linley & Joseph; Krause, 2004; McGrath, 2006). In fact, it could be argued that growth may manifest itself most observably in new or more efficient coping processes/mechanisms, thus making an individual more confident about the future and more secure that he or she can cope with any past, present, or future stressor.

This healing and growth process may be influenced by a number of factors including social support systems and religiosity. Beginning with social support systems, it goes without saying that these relationships have the potential to reduce the deleterious effects of stress and trauma in complex ways (Krause, 1990; 2004). Traumatically stressful experiences often affect a person most notably by diminishing his or her sense of personal control and feelings of self-worth. Social support may help by strengthening and reinforcing these important psychological resources. In other words, stressful life events damage and have the ability to destroy a person’s meaning in life, but a strong social support system may act as a buffer against the effects of the trauma and stress.

Reker (1997) defines personal meaning as "having purpose in life, having a sense of direction, a sense of order and a reason for existence, a clear sense of personal identity, and a greater social consciousness" (p. 710). Further, it has been argued that there are three major components of personal meaning: values, purpose, and goals; and an individual's sense of meaning arises from the roles he or she occupies (Krause, 2004). Therefore, it can be concluded that one's roles provide a value system that guides behavior, a sense of purpose that validates behavior because the individual is part of a greater social whole, and a set of goals that gives the individual something to live and work for.

In the wake of a traumatically stressful experience, it is this sense of meaning (comprised of the individual's values, purpose, and goals) that suffers the most, especially when the trauma and stress arise in an individual's highly salient roles (Krause, 2004). This is evidenced by the fact that people actively confront stressors that threaten things and areas of their lives that they value greatly (Krause). For example, if a particular individual highly values his role as the financial provider for his family, and he experiences some trauma that leaves him disabled and therefore incapable of providing for his family any longer, then that individual's sense of personal meaning may be destroyed.

As mentioned earlier, a strong social support has the potential to reduce the deleterious effects of stress and trauma (Krause, 1990; 2004). The relationships maintained in this social network are effective in coping with stressful life events mainly because people naturally turn to the significant others in their lives when they are faced with challenges. One way the significant others in a person's social support may play an

effective role in the healing process is by helping the individual control and overcome the traumatic experience as well as its psychological effects. This can be accomplished by aiding that individual with the evaluation of the traumatically stressful experience and its resulting effects, the creation and execution of a plan towards healing, and the provision of feedback and guidance along the way.

Krause (2004) pointed out that "when events arise in highly valued roles, emotional assistance from significant others is especially useful for helping older people reflect on and reconcile the past" (p. S295). This emotional assistance may come in the form of reminding older adults of successes and accomplishments they have previously achieved in their highly salient roles; and this, in turn, helps them gain insight and therefore view any current stressor(s) in light of a successful or accomplished history. Another way members of one's social support network can offer emotional assistance is by helping that individual see that "setbacks are an inevitable part of life," and "important lessons and insights may be gleaned from challenges arising in highly valued roles" (p. S295). With this help, the older adult may be in a better position to reconcile and make meaning from the stressors he or she has had to face.

One important point to consider is that, although social support has a great potential for reducing the negative effects experienced as a result of a traumatic stressor, it also has the potential to actually worsen the situation. Krause (1990) brings to the reader's attention the notion that relying too heavily on one's social support system may foster feelings of dependence and diminish a sense of self-worth and personal control even further than the stressor and its effects already have. This is especially true for older adults when diminished feelings of self-worth and increased views of the self as

dependent, incapable, and aged may result from too much help and/or too much of a reliance on the help from significant others. As with many other things in life, social support is best when both given and received in moderation.

With regard to religiosity as an influencing factor in the healing and growth process, it is not surprising that religious coping is commonly used in response to traumatically stressful experiences. In fact, more than 50% of elderly medical patients use religiosity to cope with the stress of physical illness (Koenig, George, & Peterson, 1998). What the reader may not be familiar with is the notion of *positive* and *negative* religious coping methods and their association with both health and mental health outcomes following a stressful life event. Pargament et al. (1998) provide several examples of both positive and negative religious coping methods. Some positive methods include forgiveness, purification and confession, spiritual support (i.e., from God), religious appraisals (i.e., "redefining the stressor through religion as benevolent and potentially beneficial"), and religious approaches to control (i.e., "seeking control through a partnership with God" or "passively waiting for God to control the situation"). Examples of negative religious coping methods include spiritual and interpersonal religious discontent, negative reappraisals of God and/or His power (i.e., "redefining the stressor as a punishment from God in response to one's sins"), demonic reappraisals (i.e., "redefining the stressor as the act of the Devil"), and self-directing approaches to control (i.e., "seeking control through individual initiative rather than help from help from God") (p. 711).

Pargament et al. (1998) discovered that most people who use religiosity as a coping mechanism against trauma and stress use more positive than negative religious

coping methods. Also, the use of more positive religious coping methods reflects a more secure relationship with God and is related to more positive health and mental health outcomes following a traumatically stressful experience. It is interesting to note, though, that while the use of negative religious coping methods is associated with emotional distress and poorer health and mental health outcomes, they may actually be accompanied by long-term benefits. As mentioned before, one must come face-to-face with and address the trauma as well as its psychological effects in order to overcome it. Struggle is a precursor to growth.

2.3 Depression

Much like the symptoms associated with anxiety, depressive symptoms are among the most commonly reported complaints of older adults (Blazer, 1995). An average of approximately 20% of the community-residing elderly population experiences these symptoms, while close to 43% of older adults living in long-term care facilities suffer from depression (Reker, 1997). Similar to anxiety, depression is also overlooked far too often. It manifests itself in so many varied ways that it is easily confused with other conditions such as dementia and bereavement or general periods of sadness. Depression may also be mistaken simply as the result of a medical condition or a prescribed medication (APA, 2000b).

It has long been understood that many of the negative experiences associated with depression are also associated with aging in general (Lewinsohn, Rohde, Seeley, & Fischer, 1991; APA, 2000b). Lewinsohn et al. (1991) pointed out, for example, that depressed individuals are typically less socially active for several reasons, including an inability to find enjoyment in once-pleasurable activities. Likewise, many older adults are

less socially active, particularly because of physical illnesses and functional impairments. Other symptoms of depression such as difficulties with concentration and memory, psychomotor retardation, sleep disturbances, fatigue, apathy, and various somatic complaints, are all thought to be part of the normal aging process (Lewinsohn et al., 1991; APA). Because of these presumed similarities, it is incredibly difficult to differentiate a diagnosis of depression in the elderly from some other condition of mere aging. In fact, some individuals with milder forms of depression may be overlooked simply as someone who is just "getting crabby in old age" (Murphy & Macdonald, 1992, p. 603). Therefore, those older adults suffering with depression often go untreated and are doomed to continue in their misery.

Even with the array of symptomatology that seems to be shared by depression and aging, Murphy and Macdonald (1992) caution readers not to assume that the majority of older adults feel "depressed, unhappy, or unfulfilled" (p. 601). On the contrary, they argue. Instead of being haunted by depression, many older adults are actually satisfied with how their lives have turned out. In fact, a recent survey of 21,000 people in 21 different countries, ranging in age from 40 to 80 years, found that older adults over 75 report fewer symptoms of depressed mood and report being happy more than their younger counterparts (Andresen, Malmgren, Carter, & Patrick, 1994; Coombes, 2007). In fact, Miller (2008) found that only 1 – 5% of community-residing older adults suffer from depression. "The 'grumpy old man' is not about aging, it's about context" (Coombes, ¶ 8). Anyone who is faced with any type of loss will likely experience some depressive symptoms; however, the way in which that loss is dealt with determines if those depressive symptoms become indicative of a depressive disorder. Even so, the

minority group of elderly individuals who do develop a clinical depression must be attended to, and their symptoms should not be overlooked.

Knowing the extent of the similarities that aging and various physical, psychological, and cognitive conditions share with depression, it is important not only to differentiate causes of the depressive symptoms, but it is equally important to identify predictors of the disorder. It is valuable to note that late-life depression is influenced more by environmental events than it is by a genetic predisposition (Reker, 1997). One of the most influential factors contributing to depression in older adults is an increase in functional impairments (Zeiss, Lewinsohn, Rohde, & Seeley, 1996), which can be summed up in the one word *loss*. The impairments most often take the form of "loss of self-esteem (helplessness, powerlessness, alienation), loss of meaningful roles (work productivity), loss of significant others, declining social contacts owing to health limitations and reduced functional status, dwindling financial resources, and a decreasing range of coping options" (Reker, 1997, p. 709). Not surprisingly, the negative effects (i.e., depressive symptoms) resulting from the losses caused by functional impairments are greatly increased by chronic health problems, traumatically stressful events, financial difficulties, and a lack of social support (Reker). Furthermore, being depressed is associated with experiencing symptoms of psychological conditions and poorer physical health, including a greater number of diseases, increased medication use, delayed recovery from illness, increased length of hospital stay, and increased mortality (Lewinsohn et al., 1991; Koenig et al., 1998).

Since things like chronic health problems, traumatically stressful events, financial difficulties, and a lack of social support all contribute to the experience of depression and

its symptoms, it follows that their antitheses would help to buffer the stressors leading to the disorder. For example, countless studies have shown that a strong social support system has the ability to reduce the anxious and depressive symptoms experienced after a traumatically stressful event. As seen in problems with anxiety, these relationships may also aid in the healing and growth process that ensues (Krause, 1990; Reker, 1997; Krause, 2004; Norton et al., 2006).

An individual's religious involvement also contributes to the reduction of depressive symptoms after that person experiences some stressor. It does this by "offering coping strategies through spiritual, intellectual, and social avenues" (Norton et al., 2006, p. P129), especially in later life. In a study of over 4,000 adults age 65 to 100 years, Norton et al. not only found evidence for a relationship between religiosity and rates of depression, they also found striking differences between gender groups. Consistent with information on prevalence rates of depression provided by other research literature as well as in the *Diagnostic and Statistical Manual of Mental Disorders* (4^{th} ed. – text revision [DSM-IV-TR]; Andresen et al., 1994; APA, 2000b), Norton et al. discovered that depression was almost two times as frequent in women as it was in men. Interestingly, they also found that, although they had higher rates of depression, elderly women attended church services significantly more often than their male counterparts. However, gender played a key role in the effects religious involvement had on depression. The researchers found that, when compared with older adults who never attend church services, women who do attend church and involve themselves in religious groups tend to have a reduced risk for depression. Conversely, men who attend regular

church services actually display higher depression rates than their non-attending counterparts.

Norton et al. (2006) provided three possibilities for the results they found. First, women who attend church infrequently (less than monthly) report either feeling "disconnected" from the church community or experiencing religious doubt (which is correlated with greater psychological distress). Secondly, the higher rates of depression for men attending church services may be higher partly because of an "organizational power differential by sex" (p. P133). Traditionally, young men hold more organizational power within the church. So, older men may have a sense of being displaced once they no longer *fit the mold* of what is needed within the organizational structure. Finally, aside from being a means of expressing religiosity, church attendance also serves as a social outlet. Therefore, women who attend church infrequently may not have as strong a social support network as those women who attend services more often. With respect to older men, Norton et al. reported research showing that men obtain the majority of their social support from their wives. It follows then that the support offered by the church community would not have as much benefit for a man as it would for a woman; thus, higher rates of depression.

2.4 Subjective Well-Being

Subjective well-being (SWB) is defined according to how people evaluate their lives, and it is typically measured in terms of life satisfaction, a lack of depressive and/or anxious symptoms, and positive moods and emotions (Diener, Suh, Oishi, 1997). Put simply, it refers to the internal, subjective experience of the individual. Unlike some other measures of psychological functioning, SWB covers the entire range of well-being; it

focuses not only on a person's undesirable states but also on his or her individual differences in levels of positive well-being (Diener et al., 1997). Also, SWB focuses on both longer-term states *and* momentary moods. It has long been understood that a person's current mood and world perspectives influence the perception of his or her SWB. In fact, attributional and associationistic theories postulate that human memory networks are associative, and we recall memories that are affectively congruent with our current emotional state (Diener, 1984; Argyle & Martin, 1991; Schwarz & Strack, 1991; Diener et al., 1997).

Similar to SWB (and some would argue identical; Argyle & Martin, 1991; Heady & Wearing, 1991; Jacobsen, 2007), is the concept of *happiness*. In fact, the two terms *SWB* and *happiness* are often used interchangeably. *Ordinary happiness* is often referred to as "a brief state of mind during which the individual feels that all essential needs have been fulfilled and that all essential goals have been reached" (Jacobsen, p. 39). *Real* or *genuine happiness*, on the other hand, has been described as "a durable state of balance between the individual's wishes, goals, and needs on the one hand, and the surroundings or the world on the other. This style is associated with well-being, serenity, and relaxation" (p. 39).

Before continuing, some considerations of SWB, provided by Diener et al. (1997), should be noted. First, SWB does not necessarily indicate a state of mental health. For example, some delusional persons may be happy or satisfied with their lives; however, these individuals would not be considered mentally healthy. Secondly, SWB is not a necessary condition for mental health; it is only one of several aspects of psychological health and well-being. In fact, some people function extremely well in

many areas of their lives, and they may be considered mentally healthy although they might not be particularly happy.

Jacobsen (2007) summarized the work of various researchers and postulated that people direct their lives to work toward something, which can be referred to as one's *life-goal*. Life, therefore, can be divided into five stages, each one defined by the individual's relationship with his or her life-goals. The first stage typically takes place between birth and age 15 years, and it involves the development of one's will, identity, and the competence to make autonomous decisions. Next, between ages 15 and 25 years, that person begins to make preliminary decisions concerning his or her life-goals. In the third stage (25 – 40 years), the individual begins to make specific and definitive decisions regarding his or her numerous life-goals. Next, between the ages of 40 and 65 years, that individual undergoes a life review and re-orientation regarding the content of the remaining part of life. Finally, in the fifth stage of life, typically after age 65 years, one reflects on how good or successful his or her life has been in relation to the life-goals and values that were developed over time. The main idea stemming from these five life stages is that life satisfaction and SWB are determined by how one interprets and perceives his or her life. Throughout the stages of life, if the individual is unhappy or unsatisfied with life up to that particular point, then that person is motivated to make changes in his or her life-goals. Conversely, if that individual is satisfied with life, then his or her SWB and happiness are likely to be positively affected.

Diener (1984), Argyle and Martin (1991), and Diener et al. (1997) have all outlined and described three categorical components of SWB and happiness. The first component is *external criteria*. Here, the concept is that SWB is an ideal condition;

happiness is not equated with a subjective state but rather a desirable quality. This can best be explained by the "top-down" evaluative theoretical approach to happiness. According to this theory, the global features of one's personality influence how that individual reacts to life events, including those that are traumatically stressful (Diener).

Similarly, the logic behind judgment theories like the "adaptation" approach to happiness and SWB leads to the conclusion that generally-happy people adapt to their current life events and perceive their SWB accordingly. According to Flipp and Klauer (1991), this adaptation is considered a means of successful coping. However, these researchers also pointed out that some people, regardless of their personality features, may not completely adapt to all conditions, situations, or life events. It follows from their argument that it is irrational to assume complete adaptation to all life events, especially those which are traumatically stressful. So, even persons with global features of a "happy" personality, who may possess a quality of SWB, may still experience some depressive and/or anxious symptomatology.

The second categorical component of SWB and happiness described by Diener (1984), Argyle and Martin (1991), and Diener et al. (1997) refers to *life satisfaction*, the subjective determination of what is "the good life." This type of satisfaction refers not only to the general domain of life, but it also includes the individual facets of one's life (e.g., satisfaction in areas such as love, marriage, friendship, and recreation). Argyle and Martin have argued that the most important areas of satisfaction are in one's social relationships (i.e., family life, marriage, and friends). Krause (1994) supported this idea by proposing that stressors (normative or traumatic in nature) may have "an especially noxious impact on well-being if these events arise in social roles that are important or

highly salient for [the individual]" (p. P137). It follows from this argument that if stressors (especially those that are traumatic) arise in one's salient social roles, or if that individual is unsatisfied in any salient facet of his or her life, that person's SWB and happiness will suffer as a result.

Older adults may be especially sensitive to these particular stressors because these negative life events make a clear distinction between their real and ideal selves. Krause (1994) pointed out that this may result in that individual failing to meet the developmental challenges identified by Erikson (1980), especially the challenges of reviewing one's life, dealing with loss, and preparing for death. This failure may increase the likelihood of that older adult displaying more symptoms of depression and/or anxiety and therefore experiencing a diminished sense of SWB and thus *un*successful aging. It is important to note that, aside from, and sometimes along with religious coping, some older adults may choose to devalue the role(s) in which the stressors arise. This "cognitive redefinition" influences the severity of the stressors' impact by influencing whether the individual perceives the role(s) as salient (Krause, 1994). Regardless of the employment of religious coping or cognitive redefinition, social support and personal control (Each one of these will be discussed independently below.) are both buffers that can be used against the stressors affecting one's life satisfaction and SWB.

The idea of life satisfaction is closely related to judgment theories of SWB. These approaches to understanding happiness are founded on the idea that SWB and happiness result from comparisons between some standard and one's actual conditions (Diener, 1984; Flipp & Klauer, 1991; Veenhoven, 1991). Some different standards include social comparisons, where the individual compares his or her condition to that of other people;

adaptational outcomes (briefly mentioned above), where an individual is able to maintain or regain high levels of well-being, "even in the face of the most aversive life changes" (Flipp & Klauer, p. 213); and aspirational levels, where one's happiness is dependent upon the gap between that individual's real and ideal life conditions and situations (i.e., actual life versus aspirations).

The third and final categorical component of SWB and happiness described by Diener (1984), Argyle and Martin (1991), and Diener et al. (1997) refers to the prevalence of *positive over negative affect*. In other words, this component addresses the extent of an individual's pleasant emotional experiences, such as joy, affection, and pride versus negative emotions like shame, guilt, sadness/depression, anger, and anxiety. This component is most closely associated with the "bottom-up" evaluative theoretical approach to happiness and SWB. According to this theory, happiness is the sum of many small pleasurable experiences. Therefore, it does not matter if a person experiences mostly pleasant emotions, or if he or she is simply predisposed to such emotions; these positive experiences contribute to a more positive SWB.

Some other theoretical approaches to understanding happiness and SWB that were not already discussed include: the "telic," "pleasure and pain," and "activity" theories. The "telic" approach asserts that happiness is something that is gained when some state, goal, or need is reached or fulfilled (Diener, 1984). In Maslow's *A Theory of Human Motivation* (1943), he illustrated that, as humans, we are motivated to behave in ways that act as means to an ends of meeting our needs. One is driven by his or her most pressing needs or goals, and once those needs and goals are met, that individual experiences a sense of fulfillment and happiness.

The "pleasure and pain" theory is somewhat aligned with Maslow's (1943) *hierarchy of needs* as it proposes that needs are the result of some sort of deprivation, and deprivation is actually a necessary precursor to happiness (Diener, 1984). According to this theory, greater deprivation (and therefore *un*happiness) leads to greater joy upon the completion/achievement of some goal. Further, goals that meet intrinsic needs (i.e., autonomy, relatedness, competence) may have a direct influence on one's positive SWB, while goals that meet extrinsic needs may only influence SWB indirectly through the positive effects resulting from meeting and fulfilling those needs. One never achieves complete happiness, however. This theory assumes that persons who are goal-directed will continue to set goals when previous ones are achieved, and will, therefore, never be completely happy.

Finally, the "activity" theory suggests that happiness is a by-product of working toward goals and remaining active. Interesting activities may supplement the pleasures stemming from positive emotions and physical comforts (Diener, 1984; Tversky & Griffin, 1991). Searle, Mahon, Iso-Ahola, Sdrolias, and van Dyk (1995) contended that remaining active is a means of preserving one's autonomy, and "to be able to exercise control over one's life has often been described as the pillar of human functioning and living" (p. 108). A sense of freedom and control is critical to both physical and psychological health and well-being. The loss of personal control and competence is an acute concern among the elderly; physical illnesses, disabilities, and functional limitations all negatively affect SWB. However, by maintaining one's independence and remaining active help to buffer the negative effects of these stressors. In fact, the ability to make choices has been associated with a strong sense of control over one's leisure, and

feelings of being able to do an activity in a manner which is satisfying contributes positively to SWB (Searle et al.).

The "activity" approach to SWB and happiness is further supported by the idea that activities are only pleasurable when they are matched to the individual's skill and interest levels (Searle et al.; Camp, Breedlove, Malone, Skrajner, & McGowan, 2007; Skrajner, Malone, Camp, McGowan, & Gorzelle, 2007). Camp et al. and Skrajner et al. each described the use of Montessori-based activities with dementia patients. These activities are based on the educational system developed by Maria Montessori in the early 1900's. (For a detailed account of Maria Montessori and her educational system, see Montessori (1914) and The International Montessori Index (2007).) Montessori's methods for childhood education have been generalized for use with dementia patients. Camp et al. and Skrajner et al. described using Montessori-Based Dementia Programming to design and implement individual and group activities that are both meaningful and engaging for persons with dementia so as to foster a sense of autonomy and accomplishment. This goal is achieved by matching the skill and interest levels of the individual to the activities.

It is important to note that, like the concept of SWB, the above three categorical components of SWB and happiness (external criteria, life satisfaction, positive over negative affect) are culture-specific. Diener et al. (1997) showed that there are significant differences across nations in terms of the norms governing the experience of various emotions. These differences can also be seen in comparisons of individualistic and collectivistic cultures. For example, Uppal (2006) found that SWB varies by ethnicity; African Americans are typically less happy than Caucasian Americans. However, this

effect seems to be dependent on the gender and age of the individual. As Bishop (2006) pointed out, older African Americans are typically happier than older Caucasian Americans, thus supporting the idea of cultural, ethnic, and racial differences in SWB and promoting caution when assessing/working with individuals from various demographic groups.

With regard to age and gender effects on SWB, there is mixed evidence. Bishop (2006) reported that, regardless of culture, ethnicity, or race, satisfaction with life (and, therefore, SWB) among older men tends to peak at age 65 years, and it steadily declines until death. Furthermore, Bishop argued that there are gender differences in how older adults perceive the aging process: "Personal growth involves a conceptualization of one's life as an experience of growth, maturity, and change. Older men generally perceive aging in terms of loss…older women normatively frame aging as a process of continuous growth" (p. 140).

Diener (1984) and Schneider, Driesch, Kruse, Nehen, and Heuft (2006) each provided evidence against Bishop's 2006 arguments. Diener proposed that there is very little difference in global happiness and satisfaction between the sexes. Schneider et al. later found that longitudinal studies actually show no or only a slight tendency for an individual to decrease in life satisfaction and SWB in old age, regardless of gender. Furthermore, although the relationship is not well-defined, if the negative effects of functional impairment are controlled, increasing age is actually associated with a high level of positive and a low level of negative emotional states. In fact, these researchers all argued that one's ability to maintain a positive attitude and high levels of satisfaction,

despite increasing disabilities and handicaps, is indicative of resilience and is one component of successful aging.

Schneider et al. (2006) offered a good explanation for the lack of significant gender differences. They postulated that older adults may appear to experience a decline in life satisfaction and SWB when, in fact, they are only experiencing a decline in the *intensity* of their happiness. Schneider et al. reported that, contrary to Bishop's 2006 argument, most results actually show a slow rise in satisfaction with age although positive and negative affect are experienced more intensely by younger adults. Therefore, younger adults may seem to be happier than their older counterparts, but, in reality, older adults actually judge their lives more positively. The focus of research and therapy, then, should not be so much on age as it should be on life cycle patterns.

Overall, it is widely-accepted that there is a weak correlation between SWB and most demographic variables. Nevertheless, some variables, such as culture, race, age, and gender (which have already been discussed throughout this text) have been found to consistently predict SWB (Diener, 1984; Diener et al., 1997; Bishop, 2006; Schneider et al., 2006; Uppal, 2006). Uppal postulated that there is a relationship between SWB and yet other variables as well. A positive relationship between SWB and marriage has been found, but it may only be the result of the positive effects of being married (e.g., socialization). Income has little effect, if any, on SWB and happiness; however, the unemployed have been found to be less happy than those who are working. Like marriage, this relationship could be the result of factors associated with employment (e.g., socialization, a sense of accomplishment, etc.) rather than employment itself. Furthermore, Uppal argued that, although some differences in happiness and SWB have

been found between young and old adults, both groups seem to be happier than middle-aged individuals.

Some other variables that have been at least moderately associated with SWB include: some personality traits, actual and perceived health status, a sense of personal control, active engagement, education, social contact and support, and religiosity (Diener, 1984; Argyle & Martin, 1991; Diener et al., 1997; Bishop, 2006; Chales & Gafini, 2006; Uppal, 2006). Like most things, these factors may be culture-specific, depending on what is valued as a reward in a particular culture. Also, there is mixed evidence regarding the nature of the associations between these factors and SWB along with issues concerning why these relationships exist and under which conditions.

Diener et al. (1997) reported that "one's long-term baseline of well-being is strongly influenced by one's temperament (p. 34). Various personality factors, like those comprising the five-factor model of personality (neuroticism, extraversion, openness, agreeableness, and conscientiousness; McCrae & Costa, 1987), are some of the traits that are suspected to influence an individual's temperament. Diener (1984) and Diener et al. (1997) each discussed how low levels of neuroticism and high levels of extraversion are predictors of SWB.[2] The intensity of pleasant emotions experienced with higher levels of the openness trait has been positively associated with SWB due to its influence on the quality of one's happiness. An individual with high levels of openness may experience elation instead of mere contentment and distress versus a full-blown melancholic state, for example. Finally, there is a modest relationship between SWB and agreeableness and conscientiousness. Environmental rewards resulting from high levels of agreeableness and/or conscientiousness may heighten SWB by indirectly contributing to one's

happiness. Higher levels of conscientiousness, for instance, may lead to better pay at work, better grades in school, or a better marriage. As stated before, these extrinsic rewards may influence SWB indirectly through the positive effects related to them.

One's health directly affects his or her SWB by influencing how that individual feels physically, but it also determines what he or she can and cannot do functionally (Diener, 1984). Although no one can completely control illness, disability, or the natural progression of aging and its effects, one can control his or her cognitive attributions of an event. Diener et al. (1997) emphasized the power of perceptions and their impact on SWB, and Charles & Gafni (2006) supported this emphasis by suggesting that people tend to overestimate how negative or positive they will react to the consequences of an event, especially a serious illness or other traumatic stressor. Interestingly, Uppal (2006) found that, although the presence of a physical disability or other negative health state has no direct effect on SWB, the *severity* of the condition (independent of the *type* of impairment) is negatively related to SWB and happiness. Also, those persons who were affected by a serious illness or were disabled earlier in life are likely to be more adjusted and ultimately happier than those individuals who experienced these events later in life.

As discussed earlier, a sense of freedom and control is critical for both physical health and psychological well-being (Searle et al., 1995). Therefore, maintaining one's autonomy is an essential factor of positive SWB. Likewise, active engagement also promotes happiness and well-being (Diener et al., 1997). According to Diener et al., Camp et al. (2007), and Skrajner et al. (2007), activities matched to the individual's interest and skill levels show a consistent but modest relationship with SWB. One's

ability to take control, along with his or her active participation in some meaningful and engaging event is positively associated with his or her SWB.

The role of education in the perception of SWB is similar to that of marriage and employment (Uppal, 2006). As discussed earlier, the positive relationships between SWB and marriage and SWB and employment are likely the results of the positive effects of being married or being employed (i.e., socialization, a sense of accomplishment or achievement, etc.). Similarly, Uppal argued that the positive relationship between education and SWB could simply be a result of a comparison effect caused by high aspirations. In other words, education may serve as a resource to increase one's SWB by raising that individual's aspirations and alerting him or her to alternative lifestyles. It might also contribute to a person's self-actualization and provide opportunities for things like better jobs, healthier interpersonal relationships, and increased social contact and social skills.

Diener (1984), Argyle and Martin (1991), and Diener et al. (1997) all agree that social contact and social support are important buffers against both normative and traumatic stressors. These researchers all discussed how friendship and love have been positively associated with SWB. In fact, satisfaction in these areas is a strong predictor of life satisfaction and SWB. Since socialization correlates with positive mood, it follows that by focusing on one's interpersonal relationships, that individual's satisfaction with family and friends would increase, and he or she would likely experience greater SWB.

Both social and religious factors influence adjustment and well-being and are often closely related, especially in the elderly (Bishop, 2006). Social support and engagement have been associated with greater generativity, increased self-esteem (which

covaries with SWB; Diener et al., 1997), decreased depressive symptoms, and an improved sense of personal growth, at least among members of religious populations (Bishop). Further, although researchers like Diener (1984), Schneider et al. (2006), and Uppal (2006) provided evidence suggesting little, if any gender differences in well-being during late life, Bishop argued that there are definite gender differences in social engagement and religious activities. He proposed that older religious men are less committed to social relationships and more concerned with spiritual growth than their female counterparts. Older religious women, on the other hand, maintain "a continuous framework of self-identity and generativity" (p. 133). It is assumed, then, that religious activities (e.g., prayer, attendance at religious services) act as modified social events in strengthening one's personal relationship with God and the social community.

Other research has also shown differences in religiosity and well-being among different ethnic groups. Specifically, Krause (2007) discovered that, compared to older whites, older African Americans are likely to participate in more organized religious practices and to have stronger beliefs about God. These comparably different religious behaviors and beliefs would be expected to produce more positive well-being outcomes.

Bishop (2006) also reported that there are age differences in well-being and social and religious activities within the elderly population, with members of the "young-old" group (ages 65 – 74 years) reporting greater friendships/friendship ties and general coping behaviors than "old-old" individuals (ages 75 – 84 years). Members of the latter group report greater engagement in religious coping behaviors but fewer social ties. These individuals typically seek and gain both social and emotional support via prayer, attendance at religious services, and other religious experiences (Bishop, 2006; Uppal,

2006). Bishop postulated that these differences could be explained by the decrease in the number of close personal relationships maintained over time, thus resulting in less reliance on social resources when coping with stressors.

Diener (1984) and Uppal (2006) pointed out that religious behaviors, such as attendance at religious services, participation in religious groups and organizations, prayer, and religious certainty (i.e., faith) generally relate positively with SWB. Regular participation in social and religious activities has actually been shown to reduce depressive symptoms and improve SWB (Bishop, 2006). Therefore, when elderly persons are unable to participate in social and religious activities (due to declining psychological, physical, and/or functional health, for example), they may be susceptible to experience an increase in depressive symptoms and a decrease in well-being.

"Adaptation and SWB in late and very late life involve the use of resources" (Bishop, 2006, p. 132), especially social supports and religion. The utilization of these and other resources determine how well older adults cope with stress. Finally, it should be noted that although religiosity has some effect on individuals under the age of 65 years, it seems to influence the SWB of older adults more significantly, especially if they are or already have been religious (Diener, 1984).

CHAPTER III

METHOD

3.1 Hypotheses

This study proposed to examine five hypotheses. Each question addressed by the hypotheses is listed below, followed by a brief discussion regarding how they were assessed. Also included in this discussion are the survey instruments, found in Appendix A, that were used to test the accuracy of each hypothesis in response to the questions addressed by the study. The individual survey instruments are discussed in greater detail in section 3.3 of this chapter.

1. Is there a relationship between any demographic variable (i.e., age, sex, ethnicity, marital status, education, and religious affiliation) and religiosity and successful aging?
2. Are there significant differences in religiosity and successful aging among the three age groups of older adults (i.e., young-old vs. old-old, young-old vs. oldest-old, old-old vs. oldest-old)?
3. In the presence of traumatic experiences, life-threatening illnesses, and/or normative stressors of aging (e.g., physical disabilities or chronic illnesses), to

what extent does an older adult perceive his or her religious practices and beliefs as having been affected?

4. Do people tend to maintain the same religious affiliation as they age, or do their affiliations change over time? Also, does one's religiosity tend to intensify or deepen as he or she ages?
5. Finally, does religiosity have any influence on how successfully one ages?

Before any question or hypothesis could be addressed properly, religiosity and successful aging composite scores had to be computed using the scales employed for the measurement of each respective construct. First, religiosity was measured in terms of an individual's general belief about God and the frequency of his or her participation in various religious practices. The *Religious Commitment Scale* (Glock, 1962) was used to measure the "religious beliefs" aspect of religiosity (see Appendix A, top of page 5), and the *Religiosity* (Orbach, 1961) and *Social Integration of the Aged in Churches* (Moberg, 1965) scales were used to measure the aspect of religiosity pertaining to religious practices (see Appendix A, bottom of page 5). Since successful aging was defined in terms of positive subjective well-being and freedom from depression and anxiety, the *Beck Anxiety Inventory* (BAI; Beck & Steer, 1990; see Appendix A, p. 13), *Center for Epidemiologic Studies Short Depression Scale* (CES-D 10; Radloff, 1977; Andresen et al., 1994; see Appendix A, top of page 14), and *Satisfaction with Life Scale* (SWLS; Diener, Emmons, Larsen, & Griffin, 1985; see Appendix A, bottom of page 11) were used to assess this construct. Finally, religiosity and successful aging composite scores were computed for each participant by standardizing and combining each individual's scores on the respective scales.

Hypothesis #1 was addressed by comparing religiosity and successful aging composite scores across different demographic groups within the sample. Information compared included age, sex, ethnicity, marital status, education, and religious affiliation. (See page 2 and the top of page 4 of Appendix A for survey questions pertaining to demographic information.)

Hypothesis #2 was answered by comparing the religiosity and successful aging composite scores across the three different age groups of older adults to determine if members of each group differed significantly on these constructs. Three main comparisons were conducted: young-old vs. old-old, young-old vs. oldest-old, and old-old vs. oldest-old.

Hypothesis #3 was answered in two parts. First, information obtained from a survey of chronic and ongoing health conditions composed by the Benjamin Rose Institute (2006; see Appendix A, top of page 3) was compared to responses on the questionnaire item referring to the impact of these conditions on an individual's religiosity (see Appendix A, bottom of page 3). Next, information regarding the experience of various stressful life events, as measured by the *Life Stressors Checklist – Revised* (LSCL-R; Wolfe & Kimerling, 1997; see Appendix A, pp. 6-11) was compared to the questionnaire item referring to the impact of these events on an individual's religiosity. (See Appendix A, top of page 12.)

Hypothesis #4 was answered in a two-step process. First, the question regarding retention or change of religious affiliations over time was answered simply by looking at how participants answered survey items regarding childhood and early adulthood religious affiliations and the retention of those affiliations into later life. Next, another

survey question was used to assess the degree of change (i.e., intensification or deepening) in religiosity as a person ages. These survey questions were adapted from Bahr and Caplow's *Religious Disaffiliation Index* (1973; see Appendix A, bottom of page 4).

Finally, Hypothesis #5 was addressed by determining if there is a relationship between religiosity and successful aging. Further, the nature of this relationship was studied (i.e., what, if any, influence religiosity has on the construct of successful aging). This particular hypothesis was addressed using the religiosity and successful aging composite scores computed earlier.

3.2 Sample

The sample consisted of 49 community-residing older adults recruited from Golden Age Community Centers in the Greater Cleveland, Ohio area. Participants had a mean age of 75.67 years and a standard deviation of 7.218. Most participants were female (83.7%; n = 41), African American or Caucasian (85.8%; n= 42), married (34.7%; n = 17), and had at least a high school education (55.1%; n = 27). Furthermore, most participants reported Christian religious affiliations, with many respondents maintaining a Protestant affiliation (63.3%; n = 31). A description of the sample can be seen in Table 1.

Eligibility criteria required that participants be at least 65 years old and reside within the community, rather than in a long-term care facility. If participants met both exclusion criteria and consented to participate, they completed the research questionnaire either in an interview or self-administration format, depending on their preference and ability. Those individuals who took part in the study were compensated with a free gift.

3.3 Measures

Measurements used in this study assessed religiosity, symptoms of anxiety and depression, subjective well-being, the experience of chronic and ongoing health conditions, and the experience of stressful life events. The research questionnaire was comprised of standardized scales, used in their entirety; parts or modifications of scales; and miscellaneous interview questions concerning the subjective effect of various experiences on an individual's religious practices and beliefs. See Appendix A for a copy of the survey instruments used in this study; Appendix B for a summary table of all survey instruments, including sample items, mean scores, minimum and maximum score ranges, and various psychometric properties; and Appendix C for correlation matrices for each individual instrument and composite.

3.3.1 *Religiosity, Religious Commitment, Religious Disaffiliation Index, and Social Integration of the Aged in Churches*.

For this study, four different survey instruments were used to measure religious practices, beliefs, and affiliation patterns. Only three of those measures were used to assess the religiosity construct (*Religiosity, Religious Commitment Scale, and Social Integration of the Aged in Churches*). The fourth measure (*Religious Disaffiliation Index*) was used to assess the tendencies of retention of a particular religious affiliation and intensification of religiosity over time.

Consistent with Krause's (2006) idea that researchers must measure specific dimensions and patterns of religiosity, the instruments used here assess only religious beliefs and practices. Orbach's *Religiosity* indicator (1961) and Bahr and Caplow's

Religious Dissafilliation Index (1973) assess the frequency of church/temple attendance now and during childhood and early adulthood. Moberg's *Social Integration of the Aged in Churches* scale (1965) measures the frequency of various religious practices, such as watching or listening to religious programs on the television or radio, reading religious texts, and praying. Finally, Glock's *Religious Commitment* indicator (1962) evaluates an individual's general beliefs about God.

Orbach's *Religiosity* (1961) is a single-item indicator that was originally used to measure the extent of church attendance in a Detroit Area Study of respondents 60 years old and older. This scale is most frequently used in measuring age and religiosity, and since the scale was originally used with individuals over the age of 60 years without any reported problems, it was used with confidence in this present study.

Bahr and Caplow's *Religious Disaffiliation Index* (1973) measures various aspects of religiosity such as affiliation and participation in religious activities. The scale was originally used in a study of homelessness and disaffiliation. It was normed for men of all ages (both men who were homeless and those who were not), and it was later used with women of all ages. For this present study, only items dealing specifically with past and present religious affiliation were used. In this context, the items had a Cronbach's alpha of .451 (n = 48).

Moberg's *Social Integration of the Aged in Churches* scale (1965) was developed in response to the 1961 White House Conference on Aging that decreed older adults continue to have fair access to special services, programs, and educational materials. The study in which this scale was originally used evaluated the social integration of older adults ages 65 years and older in church congregations. For this present study, the only

items used from Moberg's original scale were those that deal directly with the frequency of religious activities, such as watching or listening to religious programs on television or the radio, reading religious texts, and praying.

Finally, Glock's *Religious Commitment* indicator (1962) was designed to measure three conceptual dimensions of religious commitment: individual, internal aspects of commitment, communal and relational aspects of commitment, and actual involvement in religious activities. Originally, the scale was used with respondents between the ages of 15 and 85 years, therefore, it may only be reliable with individuals who are functionally capable. Given that the exclusion criteria of this present study required participants be free of any major mental infirmities, this scale was deemed appropriate for this study's use.

Orbach's *Religiosity* indicator (1961) and items from Moberg's *Social Integration of the Aged in Churches* scale (1965) were combined to create a scale measuring the frequency of religious practices. This scale consisted of five items and had a strong internal reliability, with a Cronbach's alpha of .799 (n = 42).

3.3.2 *Religiosity Composite*.

Participants' responses to Glock's *Religious Commitment Scale* (1962) were used to represent the "religious beliefs" aspect of religiosity, and scores on Orbach's *Religiosity Scale* (1961) and Moberg's *Social Integration of the Aged in Churches Scale* (1965) were used to represent the aspect of religiosity pertaining to religious practices. Both sets of scores were standardized and then combined to compute a religiosity composite score for each participant. This composite of standardized scores had an

internal consistency of .889 (n = 42), thus indicating that this was a very good measure of religiosity for this study.

3.3.3 *Beck Anxiety Inventory (BAI).*

Because of anxiety's high frequency of comorbidity with numerous psychiatric conditions (including, for example, depression and other mood disorders, some personality disorders, and substance-related disorders) and medical problems (Murphy & Macdonald, 1992; APA, 2000a), and since anxious symptoms are some of the most pervasive symptoms experienced in other psychological disorders (de Ayala, Vonderharr-Carlson, & Kim, 2005), it is no surprise that anxiety is considered such a serious health condition (Contreras, Fernandez, Malcarne, Ingram, & Vaccarino, 2004). Anxiety states such as exacerbated worry, apprehension, and heightened physical arousal or reactivity underlie numerous psychological disorders. These states are also linked to "significantly impaired social and physical functioning" (p. 447). For this reason, assessment of anxiety should be a priority and even a regular scanning procedure, especially with increasing age.

Assessment of anxiety incorporates various modes of measurement, including clinician-administered interviews, behavioral rating scales, behavioral observations, psychophysiological assessments, and self-report instruments (Lowe & Reynolds, 2005). One of the most frequently used and effective measurements is the self-report. However, few self-report instruments have been developed specifically to assess anxiety in the older adult population (Lowe & Reynolds).

Of the instruments that have been designed for the purpose of assessing anxiety, the Beck Anxiety Inventory (BAI; Beck & Steer, 1990) is one of the most commonly used measures. Its popularity is due primarily to its efficiency, cost-effectiveness, completeness, and ease of administration and interpretation (Contreras et al., 2004; de Ayala et al., 2005). Also, the BAI demonstrates satisfactory reliability and convergent validity in older community samples (Wetherell & Gatz, 2005). This is mainly a result of the BAI's ability to reliably discriminate anxiety from depression by measuring only those symptoms of anxiety that are least shared with depression (University of Pennsylvania Health System, 2005; Nova Southeastern University Center for Psychological Studies, 2005). However, because of the overlapping nature of anxiety and depression, even those symptoms which are least shared by the two disorders are enough to keep the BAI, as well as other measures of anxiety, from displaying acceptable discriminant validities (Wetherell & Gatz; de Ayala et al.).

Accounting for this as much as possible, "both physiological and cognitive components of anxiety are addressed in the 21 items describing subjective, somatic, or panic-related symptoms" (University of Pennsylvania Health System, 2005). Use of two separate components is supported by factor analytic studies that provide a two-factor solution: one representing the physiological (or somatic) symptoms of anxiety and one representing the psychological (or cognitive) symptoms (Contreras et al., 2004). When compared to other forms of anxiety assessment, it is this feature of the BAI that seems to make it so effective for assessing anxiety in older adults. Unlike a clinical interview or a psychophysiological assessment alone, the BAI incorporates both the physical and the psychological factors contributing to the overall condition. Therefore, there is less chance

of overlooking the problem either because of the individual's physical symptoms being mistaken for a medical condition or because of the high overlap with both cognitive and somatic depressive symptoms.

In terms of its psychometric properties, the BAI has good internal consistency and test-retest reliability (.92 and .75, respectively) (Contreras et al., 2004; de Ayala et al., 2005). According to de Ayala et al., the convergent validity of the BAI ranges with correlations between .47 and .81 when compared to the following measures of anxiety: the Cognition Checklist Anxiety subscale, the State-Trait Inventory, the anxiety subscale of the Symptom Checklist-90-Revised, the Hamilton Rating Scale for Anxiety, and the anxiety diaries.

As mentioned above, despite the attempt to reduce the overlap between depression and anxiety via the inclusion of both the physiological and cognitive components of anxiety, researchers like Wetherell and Gatz (2005) and de Ayala et al. (2005) have failed to find strong evidence of discriminant validity between the BAI and measures of depression. "The BAI tends to be linearly related to depression scales…However, items from the BAI and the BDI [Beck Depression Inventory] have a strong tendency to load on separate factors" (de Ayala et al., p. 744-745). The measurement problems caused by the comorbidity of anxiety and depression increase with age of respondent, making it even more difficult to differentiate between the two conditions in elderly populations (Wetherell & Gatz).

One notable point to make is the effectiveness of the BAI to measure anxiety across different demographic groups. Cross-culturally, the scale provides similar factor structures for groups of Caucasian Americans and Latinos (Contreras et al., 2004),

therefore suggesting that the BAI is equivalent in both groups. Also, women (even those from different cultural groups) tend to score higher than their male counterparts (Contreras et al.) These gender differences further support the BAI as a valid measure of anxiety since, according to several references (e.g., APA, 2000a; Contreras et al.; de Ayala et al., 2005; Lowe & Reynolds, 2005), women have a higher prevalence of anxiety than men.

The 21 items comprising the BAI had a high internal consistency, with a Cronbach's alpha of .749 (n = 44). This, along with the scale's other good psychometric properties, is all evidence that the BAI was an appropriate measure to use in this study when assessing anxiety.

3.3.4 *Measure of Health Conditions (Benjamin Rose Institute) and Life Stressors Checklist – Revised (LSCL-R).*

Due to the subjective nature of perceiving events and life experiences as traumatic and anxiety-provoking instead of perceiving them as insignificant stressors, it is extremely difficult to objectively measure psychological trauma. Originally, this study intended to follow the lead of researchers like Park et al. (2005) who simply asked participants whether or not they had ever experienced a traumatically stressful event. If they had, follow-up questions would have been asked, inquiring as to a description of the event and how long ago it had occurred. Obviously, there are no psychometric properties attached to this method of assessment. For this reason, as objective an approach to studying self-reported trauma and chronic and ongoing health conditions was employed.

Current research literature deems self-reports an appropriate measurement tool for issues regarding trauma and life stressors (e.g., Goodman, Thompson, Weinfurt et al., 1999; Bramsen, Dirkzwager, van Esch, & van der Ploeg, 2001; Park et al., 2005). However, this study assumed that, unless probed for particular experiences that would typically be considered traumatic or stressful, participants might not think to report some of these stressors. Therefore, the Benjamin Rose Institute's measure of health conditions from the *Strength Based Skills Training for Managing Memory Loss – Caregiver Interview* (2006) was used to assess the presence of chronic or ongoing health conditions, and Wolfe and Kimerling's *Life Stressors Checklist – Revised* (LSCL-R; 1997) was used to assess traumatically stressful events.

The measure of health conditions provided by The Margaret Blencher Research Institute of the Benjamin Rose Institute in Cleveland, Ohio was originally used in a federal survey and has since undergone numerous revisions and modifications (W. Looman, personal communication, April 15, 2008). The Institute used the scale in a 2006 caregiver interview for a study funded by the National Alzheimer's Association and the National Institute on Aging, relating to the management of memory loss (Benjamin Rose Institute, 2006). For this study, the scale was used as an assessment of experienced health conditions as reported by the respondent, instead of a caregiver.

The 18 items used to measure the experience of chronic and ongoing health conditions provided a Cronbach's alpha of .645 (n = 28). This indicates that this particular scale was adequate as an assessment of chronic and ongoing health conditions for this study.

The LSCL-R is a 30-item self-report measure that assesses stressful life events, including those typically considered traumatic. Participants are asked to endorse events they may have experienced at various times in their life. For events the respondent endorses, he or she is then asked to indicate ages when the event occurred, whether there was a belief of being in harm, and whether there were any experienced feelings of helplessness. At the end of the survey, respondents are asked if they have ever experienced any stressful or traumatic life event(s) not listed in the survey.

Unfortunately, no psychometric properties could be found regarding this measure. Also, since so few participants of this study provided enough information to produce a score for the LSCL-R, internal reliability of the scale could not be computed. (This limitation is discussed further in Chapter V. Conclusions.) Therefore, although this scale was used in this study, any conclusions resulting from its analysis should be approached with caution.

3.3.5 *Center for Epidemiologic Studies Short Depression Scale (CES-D 10).*

The 10-item short form of the CES-D 10 (Radloff, 1977; Andresen et al., 1994) was used in this study to assess levels of depressive symptomatology. The CES-D was originally developed as a 20-item scale measuring current levels of depression, based on symptoms such as "depressed mood, feelings of guilt and worthlessness, feelings of helplessness, psychomotor retardation, loss of appetite, and sleep disturbance" (Radloff, p. 386). These symptoms are among those on which a clinical diagnosis of depression is based; however, the CES-D is not a diagnostic tool but rather a screening instrument (Radloff; Andresen et al.; Lewinsohn, Seeley, Roberts, & Allen, 1997).

The original 20-item CES-D is one of the most widely used depression inventories and has been judged as one of the best self-report measures for current levels of depression (Stommel, Given, Given, Kalaian et al., 1993; Andresen et al., 1994; Lewinsohn et al., 1997). Research concerning the CES-D has shown consistently strong psychometric properties for clinical and nonclinical samples in different gender, racial/ethnic,[3] and age groups, as well as for individuals with varying levels of physical functioning, cognitive impairment, and educational levels (Radloff, 1977; Devins, Orme, Costello et al., 1988; Roberts, Rhoades, & Vernon, 1990; Stommel et al.; Andresen et al.; Lewinsohn et al., 1991). It has internal consistencies of .85 and .90 for general population and patient samples, respectively; consistent factor structures within different subgroups of the general population, with coefficient alphas of .80 or above in all subgroups; and moderate test-retest correlations ranging from .40 to .70 (Radloff; Devins et al.).

The 10-item short form of the CES-D has similar psychometric properties as the original 20-item version. More specifically, this particular short form has a test-retest overall score correlation of 0.71 (Andresen et al., 1994); and factor analyses indicate that it taps the same cognitive, affective, behavioral, and somatic symptoms associated with depression as does the original 20-item version of the scale (i.e., depressed affect, positive affect, somatic and retarded activity, and interpersonal qualities; Radloff, 1977; Kohout, Berkman, Evans, & Cornoni-Huntley, 1993). Therefore, it is assumed that results of research conducted with the 20-item version of the CES-D can be generalized for use with the 10-item short form of the measure.

In terms of validity, scores on the CES-D are moderately related to self-reported health status, daily pain, self-assessed stress, and positive affect (Andresen et al., 1994).

Decreases in health status and pain (r = 0.36, each) and increases in stress (r = 0.43) are positively correlated with depressive symptoms and scores on the CES-D. Conversely, increases in positive affect are negatively associated with depressive symptoms and CES-D scores (r = -0.63). Further, the CES-D has shown evidence of good convergent validity when compared with other measures of emotional and physical distress (i.e., a self-report depression adjective checklist and the Beck Depression Inventory; Radloff, 1977; Andresen et al.). This suggests that the CES-D measures not only clinical depression but also the presence of more general depressive symptoms and was, therefore, considered a valid screening tool for use in this study.

A reliability analysis of the 10 items included in this scale revealed a Cronbach's alpha of .681 (n = 41). This indicates that the CES-D 10 was an adequate scale to use as an assessment of depression for this study.

3.3.6 *Satisfaction with Life Scale (SWLS).*

According to Kercher's 1992 evaluation of the assessment of SWB as well as reports from other researchers (e.g., Pavot & Diener, 1993; Diener et al., 1997), there are three broad dimensions underlying the concept. The first two – *positive affect* and *negative affect* – are what Kercher described as emotional reactions coming "from the gut" (p. 132). He referred to the third dimension – *cognitive life satisfaction* – as an intellectual evaluation of one's life as a whole.

Since most research has focused more on the affective rather than the cognitive aspect of SWB, Diener et al. (1985) developed the Satisfaction with Life Scale (SWLS) to assess the cognitive over the affective aspect of this construct. These and other

researchers (e.g., Pavot & Diener, 1993; Diener et al., 1997) asserted that SWB is an evaluation of an individual's life as a whole, and a measure used to assess this construct should address global life satisfaction, not individual life domains. However, these domains are considered to still be important in the subjective assessment of one's life satisfaction and well-being; therefore, the SWLS gives the respondent the freedom and opportunity to weight individual life domains as he or she deems necessary (Pavot & Diener).

The logic behind this weighting is that "although there may be some agreement about the important components of 'the good life,' such as health and successful relationships, individuals are likely to assign different weights to these components" (Pavot & Diener, p. 164). Since life satisfaction and well-being are subjective evaluations made by the individual, it makes sense that that particular individual would be responsible for deciding on the bases of these judgments. Furthermore, different individuals may have very different standards for success and satisfaction within the various life domains; they may also differ according to how greatly or how little particular domains are valued. For these reasons, it seems necessary and methodologically sound to assess one's global rather than domain-specific life satisfaction as a means of assessing SWB, which is precisely what the SWLS aims to do (Diener et al., 1985; Pavot & Diener, 1993).

This measure consists of five items that are rated by the respondent on a scale ranging from *strongly disagree* (1) to *strongly agree* (7). Responses to the five items are then added together to produce a total score, which is then interpreted according to the categorical rating provided by Diener et al. (1985). Total scores on the SWLS can range

from a low score of 5, indicating extreme dissatisfaction with life to a high score of 35, indicating extreme satisfaction with life. It should be noted, however, that these ratings should not be used to make or clarify a clinical diagnosis but should only be used to assess an individual's global satisfaction with his or her life. Pavot and Diener (1993) even recommended that the SWLS be used in conjunction with other scales that focus on one's psychopathology or emotional well-being so as to obtain a more valid and complete conceptualization of an individual.

With regard to the psychometric properties of the SWLS, this measure has displayed strong internal reliability (.87) and moderate temporal stability. A two-month test-retest reliability of .82 decreases to a level of .54 over longer periods of time, suggesting that the SWLS has the ability to reflect both momentary and somewhat stable mood states. In fact, when assessed over even longer periods of time, researchers discovered that life events are predictive of changes in one's life satisfaction as measured by the SWLS (Diener et al., 1985; Pavot & Diener, 1993). In terms of the scale's validity, it demonstrates adequate convergent validity with other measures used to assess life satisfaction and discriminant validity with clinical measures of distress and psychopathology (Diener et al., 1985; Pavot & Diener). Furthermore, results from the SWLS are positively correlated with extraversion and negatively correlated with neuroticism, "thus adding to the construct validity of the scale" (p. 168). Pavot and Diener also point out that scores on the SWLS (and, therefore, one's evaluation of his or her well-being) are positively correlated with marital status, health, and self-esteem, while they seem to be unrelated to both gender and age. Finally, normative data for the SWLS have been collected from diverse populations, such as students, adults, older

adults, clinical and nonclinical respondents, prisoners, and various other classifications from both Caucasian American and cross-cultural groups (Diener et al., 1985; Pavot & Diener). Therefore, this scale has been shown to be well-suited for use with different age, gender, and cultural groups as it has been used in this study.

A reliability analysis revealed that the five items comprising this scale had a Cronbach's alpha of .802 (n = 44). This indicates that it was a very good scale to use when assessing subjective well-being in terms of satisfaction with life.

3.3.7 *Successful Aging Composite*.

Since successful aging was defined in terms of positive subjective well-being and freedom from depression and anxiety, the Beck Anxiety Inventory (BAI; Beck & Steer, 1990), Center for Epidemiologic Studies Short Depression Scale (CES-D 10; Radloff, 1977; Andresen et al., 1994), and Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) were used to assess this construct. Participants' scores on each of these scales were standardized and then combined to compute a successful aging composite score. This composite had a good internal consistency (Cronbach's alpha = .735, n = 39), thus indicating it was an adequate representation of successful aging in this study.

3.4 Procedure

Participation was randomly solicited from patrons of Golden Age Community Centers in the Greater Cleveland, Ohio area. Eligibility criteria required that participants be at least 65 years old and reside within the community, rather than in a long-term care facility. If participants met both exclusion criteria and consented to participate, they

completed the research questionnaire (see Appendix A) either in an interview or self-administration format, depending on their preference and ability.

Completion of the research questionnaire took approximately 30 minutes. Participants were asked questions regarding their religious affiliation, religious involvement, and religious beliefs, as well as questions pertaining to happiness and subjective well-being; the experience of life-threatening and chronic illnesses, traumatic events, and physical disabilities; physical sensations associated with symptoms of anxiety; and feelings of depression. Once participants completed the questionnaire, they were given a free gift as compensation for their time.

CHAPTER IV

DATA ANALYSES – RESULTS & DISCUSSION

SPSS v. 15.0 was used in the data analyses. Descriptive statistics were conducted (see Table I), and participants were divided into three older adult age groups: young-old (65 – 74 years; n = 23), old-old (75 – 84 years; n = 19), and oldest-old (85 years and older; n = 7). Once this was done, further analyses were conducted to test the hypotheses.

Table I. *Sample Descriptive Statistics (N = 49)*

Variable	%	n	Variable	%	n
Age:			Education:		
Young-old (65-74 years)	46.9	23	None	4.1	2
Old-old (75-84 years)	38.8	19	Jr. High/Middle School	2.0	1
Oldest-old (85 years +)	14.3	7	High School	32.7	16
Sex:			Vocational Training after High School	6.1	3
Male	16.3	8	College	14.3	7
Female	83.7	41	Graduate/Medical/Law School	2.0	1
Ethnicity:			Employment:		
African American	42.9	21	Part-time	4.1	2
Caucasian	42.9	21	Retired	53.1	26
Asian	4.1	2	Unemployed	2.0	1
Other	8.2	4	Other	2.0	1
Marital Status:			Religious Affiliation:		
Married	34.7	17	None	2.0	1
Widowed	28.6	14	Christian – Protestant	63.3	31
Separated/Divorced	20.4	10	Christian – Catholic	32.7	16
Single	14.3	7	Christian - Other	2.0	1

Before reporting the results of the data analyses, the reader is reminded that the religiosity and successful aging composite scores were computed from the standardized scores of their respective scales. Also, successful aging was defined as positive SWB and low levels of anxiety and depression. Operationally, this means that, the higher an individual scored on the SWLS, and the lower he or she scored on the BAI and CES-D 10, the more successful that person had aged. In order to compute the successful aging composite score, responses to the SWLS were recoded so that low scores indicated more positive SWB (similar to the score distribution for the BAI and CES-D 10). Therefore, lower successful aging composite scores indicate more successful aging; higher scores indicate less successful aging. Remembering this information will be helpful when interpreting this study's results.

Hypothesis #1 refers to a relationship between demographic variables (i.e., age, sex, ethnicity, marital status, education, and religious affiliation) and religiosity and successful aging. Two multiple regression analyses were conducted to predict the religiosity (M = -.03, sd = 1.763) and successful aging (M = -.22, sd = 1.779) composite scores, respectively, from these demographics. One block used age as a predictor of religiosity and successful aging, while another used sex (coded as 0 = male and 1 = female) as a predictor. A third block included dummy-coded ethnicity variables (African American, Caucasian, and Other); yet another block included dummy-coded variables regarding marital status (married, widowed, and separated/divorced); and yet another block used education (coded as 0 = less than a high school education and 1 = at least a high school education) as a predictor. The final block included dummy-coded variables regarding religious affiliation (Protestant, Catholic, and Other).

The only significant findings were the correlations between age and religiosity (r = -.323, p = .040) and African American ethnicity and religiosity (r = .318, p = .040). Neither of the two blocks revealed statistically significant predictions of religiosity (see Table II).

Table II. *Multiple Regression Summary Table – Criterion Variable: Religiosity Composite Score*

Model	**Variable**	***r***	***R*^{2} Change**	***F* Change (*df*)**	**Final *β***	***R*^{2}**	**Adjusted *R*^{2}**	***F* (*df*)**
1			.134	1.080 (5, 35)		.134	.010	1.080 (5, 35)
	Age	-.323*			-.371			
	Sex (Female)	.256			.209			
	Marital Status:							
	Married	.009			.043			
	Widowed	-.147			.130			
	Separated/Divorced	.065			-.175			
2			.201	1.211 (7, 28)		.335	.050	1.175 (12, 28)
	Ethnicity:							
	African American	.318*			.365			
	Caucasian	-.210			-.027			
	Other	-.154			-.194			
	At least High School Education	.234			.203			
	Religious Affiliation:							
	Christian-Protestant	.096			.295			
	Christian-Catholic	-.040			.558			
	Christian-Other	-.114			.116			

*Significant at p < .05 (2-tailed).

The significant correlational results indicate that, as age increases, religiosity tends to decrease. In other words, younger-older adults may be more religious than their older counterparts. Also, African Americans tend to display greater degrees of religiosity

than those individuals who are not African American. No other demographic variables were significantly related to religiosity, and no significant results were found in the analysis for successful aging. (See Table III for a summary of successful aging multiple regression analyses.)

Table III. *Multiple Regression Summary Table – Criterion Variable: Successful Aging Composite Score*

Model	**Variable**	***r***	**R^2 Change**	***F* Change (*df*)**	**Final *β***	**R^2**	**Adjusted R^2**	***F* (*df*)**
1			.124	.903 (5, 32)		.124	-.013	.903 (5, 32)
	Age	.101			.236			
	Sex	-.195			-.015			
	Marital Status:							
	Married	-.093			.003			
	Widowed	-.030			.008			
	Separated/Divorced	.251			.289			
2			.224	1.226 (7, 25)		.348	.034	1.110 (12, 25)
	Ethnicity:							
	African American	.018			-.121			
	Caucasian	-.141			-.441			
	Other	.211			.271			
	At least High School Education	.009			-.377			
	Religious Affiliation:							
	Christian-Protestant	.225			.740			
	Christian-Catholic	-.118			.424			
	Christian-Other	-.063			.287			

Hypothesis #2 refers to significant differences in religiosity and successful aging among the three age groups of older adults. A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of membership in the three age

groups (young-old, old-old, and oldest-old) on the two dependent variables, religiosity and successful aging composite scores. Although the two dependent variables were significantly correlated (r = -.329, p = .05), no significant differences were found among the three age groups on these variables, Wilk's Λ = .985, $F(2, 32)$ = .243, p = .785. Table IV contains the means and standard deviations on the dependent variables for the three groups.

Table IV. *Means and Standard Deviations of Religiosity and Successful Aging Composite Scores for the Three Age Groups*

	Religiosity Composite Score		Successful Aging Composite Score	
Age Group	*M*	*sd*	*M*	*sd*
Young-old (65-74 years)	0.46	1.462	-0.53	1.69
Old-old (75-84 years)	-0.35	1.927	0.14	1.977
Oldest-old (85 years +)	-0.54	2.176	-0.09	1.762

Due to the non-significance of results, no follow-up analyses were conducted. It was originally hypothesized that members of the young-old age group would display the greatest degrees of religiosity and successful aging. However, results indicate that this assumption, like that for the first hypothesis was inaccurate.

Hypothesis #3 refers to the influence trauma, illness, physical disability, and other stressors have on an individual's religious practices and beliefs. It was hypothesized that chronic and ongoing health conditions, as well as stressful life events would have negative impacts on these variables. To test this hypothesis, correlational analyses were conducted among the following variables: (1) scores on the Benjamin Rose Institute's health conditions scale and (2) the questionnaire item referring to the impact of a person's

health conditions on his or her religious practices and beliefs and (3) scores on the LSCL-R and (4) the questionnaire item referring to the impact of stressful life events have had on his or her religious practices and beliefs. Using the Bonferroni approach to control for Type I error for the two correlations, a *p* value of less than .025 (.05 / 2 = .025) was required for significance.

The results of the correlational analyses are presented in Table V and show that the only significant relationship is that between scores on the Benjamin Rose Institute's health conditions scale and the questionnaire item referring to the impact a person's conditions have had on his or her religious practices and beliefs, $r = .448$, $p = .022$. This relationship indicates that the experience of chronic and ongoing health conditions do have a significant effect on an individual's perception of the impact of health conditions on his or her health religious practices and beliefs.

Table V. *Correlations of Health Conditions and Life Stressors with Perceived Impacts on Religious Practices and Beliefs*

	BRHC	Conditions' Effect		LSCL-R	Stressors' Effect
BRHC score	-	.448*	LSCL-R score	-	-.482
Conditions' effect on religious practices & beliefs		-	Stressors' effect on religious practices & beliefs		-

* Significant at $p < .025$ (2-tailed).

Hypothesis #4 refers to the tendency of an individual to maintain the same religious affiliation over the course of his or her life, as well as the tendency of that individual's religiosity to intensify or deepen over time. It was hypothesized that, if a person had affiliated him/herself with a particular religion as a child or early adult, it was

likely that that affiliation would be maintained into later life; and his or her religiosity would, in fact, intensify or deepen over time.

Correlation coefficients were computed among the following three variables from the *Religious Disaffiliation Index*: religious affiliation as a child or early adult, retention of that same affiliation into late life, and intensification/deepening of religiosity over time. Using the Bonferroni approach to control for Type I error across the three correlations, a *p* value of less than .02 (.05 / 3 = .017) was required for significance. The results of the correlational analyses presented in Table VI show that two of the three correlations were statistically significant.

Table VI. *Correlations among Childhood/Early Adulthood Religious Affiliation, Retention of Affiliation, and Intensified Religiosity*

	Early Affiliation	Maintenance	Intensification
Childhood/Early Adulthood Religious Affiliation	-	.456**	.358*
Maintenance of Religious Affiliation		-	0.008
Intensification/Deepening of Religiosity			-

** Significant at $p < .01$ (2-tailed).

* Significant at $p < .015$ (2-tailed).

The relationship between child/early adult religious affiliation and retention of that affiliation into late life had a correlation coefficient of .456 ($p = .001$). This supports the hypothesis by suggesting that, if a person had affiliated him/herself with a particular religion as a child or early adult, it was likely that that individual retained that affiliation later in life.

The results also support the idea that religiosity intensifies or depends over time if a person had affiliated him/herself with a particular religious affiliation as a child or early

adult (r = .358, p = .013). However, contrary to the hypothesis, there was no significant relationship between maintenance of a childhood/early adulthood religious affiliation and the intensification/deepening of religiosity (r = .008, p = .957). In general, these results indicate that individuals do tend to maintain their childhood/early adulthood religious affiliations into late life, and affiliating oneself with a particular religion as a child or early adult contributes to a person's experience of his or her religiosity intensifying or deepening over time.

Hypothesis #5 refers to the influence religiosity has on successful aging. To address this question, a linear regression analysis was conducted. The scatterplot for the two variables, as shown in Figure 2, indicates that religiosity and successful aging are linearly related such that as religiosity composite score increases, successful aging composite score decreases. In other words, as religiosity increases, so does successful aging. The regression equation for predicting successful aging composite score is:

Predicted Successful Aging Composite Score = -.339 *Religiosity Composite Score* - .210.

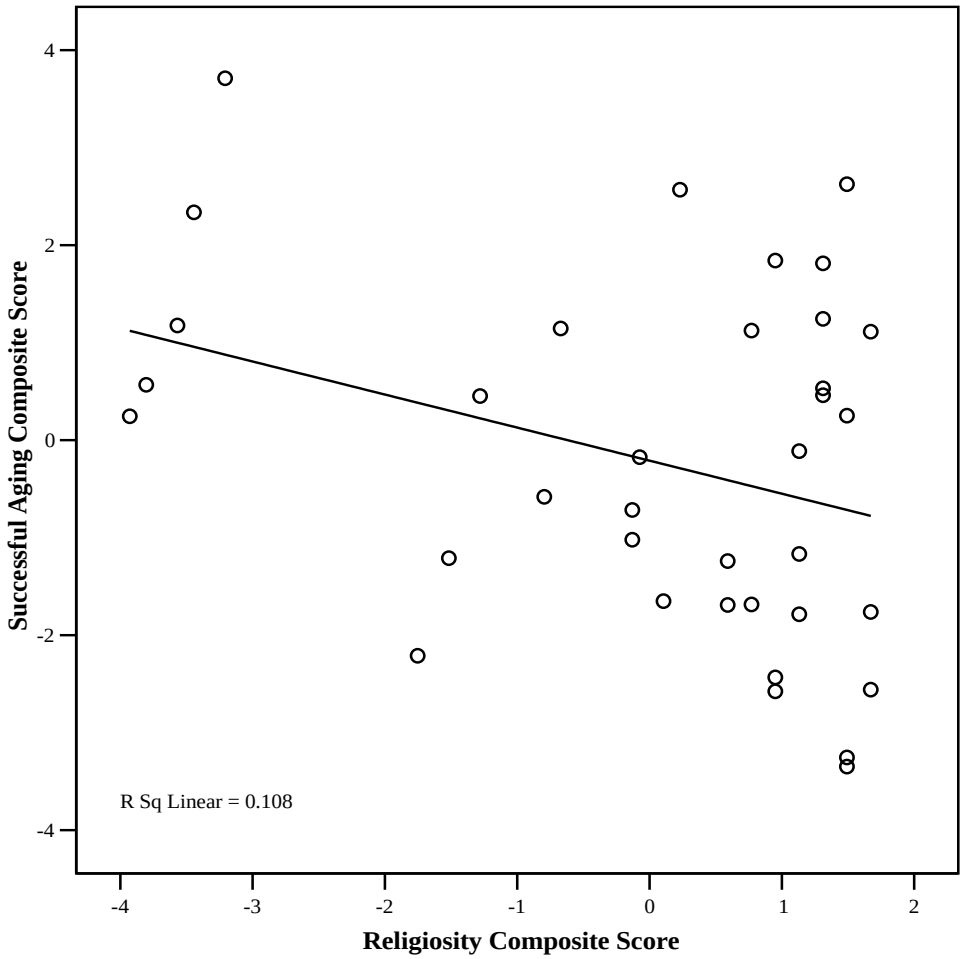

Figure 2. *Religiosity Composite Score as a Predictor of Successful Aging Composite Score*

Accuracy in predicting successful aging composite score from religiosity composite score was moderate. The correlation between the two variables was -.329 (p = .050). Approximately 11% of the variance of the successful aging composite score was accounted for by its linear relationship with the religiosity composite score. See Table VII for a summary of these results.

Table VII. *Bivariate Linear Regression Summary Table – Religiosity Composite Score as a Predictor of Successful Aging Composite Score*

Criterion	*r*	*β*	R^2	Adjusted R^2	*F* (*df*)
Successful Aging Composite Score	-.329	-.339	.108	.082	4.114* (1, 34)

* Significant at $p = .05$ (2-tailed).

Since these results revealed a statistically significant predictive relationship between religiosity and successful aging, the analysis was taken a step further to determine if this relationship held true when other factors were considered. A linear regression analysis was conducted to determine the predictive nature of religiosity composite score while controlling for demographic variables such as age, sex (female), ethnicity, marital status, education, and religious affiliation. Results indicate that, although religiosity was a significant predictor of successful aging when analyzed alone, that predictive relationship did not hold true when controlling for the above demographic variables.

The regression analysis consisted of two blocks of predictors. The first block used age, sex (coded as 0 = male and 1 = female), dummy-coded ethnicity variables (African American, Caucasian, and Other), dummy-coded variables regarding marital status (married, widowed, and separated/divorced), education (coded as 0 = less than a high school education and 1 = at least a high school education), and dummy-coded variables regarding religious affiliation (Protestant, Catholic, and Other) as one large demographic predictor of successful aging. The second block used religiosity composite score as a predictor.

The findings indicate that, when controlling for demographic variables such as these, religiosity does not significantly predict successful aging (R^2 = .450, F(13, 21) = 1.323, p = .275). However, without controlling for these demographic variables, the results were near significant, indicating that, with a larger sample, perhaps there would be significant findings that would suggest a predictive relationship between religiosity and successful aging in other circumstances (R^2 change = .086, F change (1, 21) = 3.294, p = .084). It is interesting to note that, although the supplementary regression analysis did not reveal statistically significant findings at the .05 alpha level, it did indicate that there was still a considerable amount of variance of successful aging accounted for by religiosity (8.6%). This is a mere 2.2% difference from when successful aging was analyzed with religiosity as a lone predictor and when other factors were introduced to the equation. Therefore, although the findings of this study indicate that religiosity was not a significant predictor of successful aging when demographic variables were considered, perhaps a study with a larger sample size would provide more definitive results. (See Table VIII for a summary of the supplementary regression analysis.)

Table VIII. *Linear Regression Summary Table – Religiosity Composite Score as a Predictor of Successful Aging Composite Score, while Controlling for Demographic Variables*

Model	**Variable**	***r***	***R*^{2} Change**	***F* Change (*df*)**	**Final *β***	***R*^{2}**	**Adjusted *R*^{2}**	***F* (*df*)**
1	Age	.142	.364	1.050 (12, 22)	.111	.364	.017	1.050 (12, 22)
	Sex	-.214			.062			
	Ethnicity:							
	African American	.046			.126			
	Caucasian	-.195			-.439			
	Other	.228			.237			
	Marital Status:							
	Married	-.080			.150			
	Widowed	.035			.181			
	Separated/Divorced	.217			.308			
	At least High School Education	.037			-.298			
	Religious Affiliation:							
	Christian-Protestant	.175			.806			
	Christian-Catholic	-.061			.657			
	Christian-Other	.069			.359			
2	Religiosity Composite Score	-.352	.086	3.294 (1, 21)	-.359	.450	.110	1.323 (13, 21)

CHAPTER V

CONCLUSIONS

Five main conclusions can be made from the results of this study, and three major limitations merit discussion. First, it was discovered that younger-older adults and African Americans display greater degrees of religiosity. The relationship between age and religiosity may be due to the fact that younger-older adults typically experience fewer physical and functional limitations than do older-older adults. Freedom from these limitations may allow these individuals to participate in more religious activities and therefore provide a more active assessment of religious behaviors. Further research is needed to determine the precise cause for the influence of younger age on religiosity. Further research is also needed to better clarify the marginal relationship of sex with religiosity. The relationship between African American ethnicity and religiosity may be due to the cultural differences observed in African Americans when compared to other people of other ethnic backgrounds.

Next, it must be concluded that there is no definitive relationship between membership in any of the three prescribed age groups and religiosity or successful aging.

Further research, with a greater sample size than that presented here, is needed to support this conclusion. It is interesting to note that, although a significant relationship was found between religiosity and age, in general, there were no significant findings to indicate a relationship between religiosity and a specific age group.

The next conclusion to be made from this study's results is that chronic and ongoing health conditions do have a significant perceived effect on an individual's religious practices and beliefs. This conclusion supports the idea that physical and functional limitations do, indeed, affect a person's perceived religiosity. Although it can be assumed that this relationship is a negative one, with health conditions imposing a negative influence on religiosity, it must be researched further to confirm this speculation. For now, it can only be concluded that a significant relationship between health conditions and their perceived impact on religiosity does exist.

With regard to the tendency of an individual to retain the same religious affiliation he or she held as a child or early adult and the tendency of his or her religiosity to intensify or deepen over time, the following conclusions can be made: If a person had affiliated him/herself with a particular religion as a child or early adult, that individual is likely to retain the same religious affiliation in late life. Also, a person's religiosity can be expected to intensify or deepen with time if that individual was affiliated with a particular religion in earlier years. However, retention of the same religious affiliation over time does not predict this intensification or deepening of religiosity. Further research is needed to determine if these relationships hold true only for *perceived* impacts on religious practices and beliefs or *actual* ones as well.

Finally, results indicate that there is a statistically significant predictive relationship between religiosity and successful aging with regard to how the two constructs were measured here. However, this relationship only holds true when religiosity is the only variable analyzed as a predictor of successful aging. When controlling for demographic variables, this predictive relationship is no longer statistically significant. It seems that more participation in public and private religious activities and stronger/more positive religious beliefs *may* have a slight influence on how successfully an individual may expect to age. However, the influence of other variables must also be considered.

It is assumed that an increased sample size might reveal more of a significant relationship between religiosity and successful aging while considering the influence other variables. Further research is needed to determine if this is true. In the event that this assumption were accurate, and a significant relationship were found, the nature of that relationship would require more intense investigation to determine if it were a direct result of religiosity itself, if it were a residual effect of the meaning religious practices and beliefs attributes to one's life, or if it were simply a result of the social support that accompanies participation in religious activities. Even more research would need to be conducted to determine if this relationship would hold true when other factors of successful aging are considered (e.g., social support, health factors, physical and cognitive impairments, etc.).

It is expected that with an increased sample size, there should be a rise in both power and significant results. More specifically, it is hypothesized that there would be more of a difference in religiosity and successful aging among the various age groups of

older adults as well as more demographic differences, especially sex, with regard to religiosity. It is also expected that the experience of stressful life events may have more of a significant effect on religious practices and beliefs. Once again, it is also expected that the relationship between religiosity and successful aging would be more significant while controlling for other variables.

Although there were some successes to this study in terms of significant findings and applicable conclusions (described below), there were also limitations that must be addressed. The first limitation refers to the small sample size. Only 49 participants were surveyed for this study, and of those 49, many refused to answer (or simply skipped over) a number of questionnaire items. The area of assessment that suffered the most in terms of missing data was the LSCL-R. Only 13 participants provided enough information on this measure to produce a score. Of those 13, no one provided enough information to provide a weighted score of stressful life experiences, only a score of endorsements, thus depreciating the value of this assessment.

Secondly, the sample may have been a biased one. Participants were recruited from community centers, thus implying that these individuals were physically and mentally well enough to travel outside of their homes. This would then indicate that those individuals who were well enough to travel and therefore participate in the study were probably more successful agers already. Although one of the study's exclusion criteria was that participants had to be residing within the community and not in a long-term care facility, it did not intend to exclude individuals who were home-bound.

The third major limitation of this study is the need for more precise and inclusive measurements of both religiosity and successful aging. Although this study aimed to

assess religiosity, in general, the majority of participants endorsed Christian religious affiliations. For this reason, the study was not successful at assessing religiosity, per se, but rather Christianity. With regard to successful aging, there are numerous ways to define this construct, and there are even more factors known to facilitate it. This study may have been limited in the specific way in which it defined successful aging; therefore, it may be that this study only measured a piece of what is included in the construct of successful aging.

Despite these limitations, this study's findings do imply the possibility of some significant relationships that may be revealed with further research. The most promising of these relationships is that between religiosity and successful aging. Results indicated that there was a significant correlation between the two constructs and that, before other variables were introduced to the analysis, religiosity was a significant predictor of successful aging. However, once other variables (in this case, demographics) were considered, the statistical significance of this predictive relationship was diminished. The most that can be said about religiosity as a predictor of successful aging is that it does seem to be slightly influential.

There is not much else that can be concluded from the findings presented here. However, the realm of ambiguity in which this study has left off seems to be an appropriate starting point for further research.

NOTES

[1] These assumptions are modeled after those outlined by Wilson (1989).

[2] Argyle and Martin (1991) argued that extraversion is one of the best predictors of happiness and SWB because of the positive reinforcements received during social interactions.

[3] Roberts et al. (1990) found that although the CES-D was an effective screening tool for depression cross-culturally, the measure was ineffective with non-English speaking participants, regardless of culture.

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APPENDIX A

Survey Instruments

Religiosity and Successful Aging: The Buffering Role of Religion against Normative and Traumatic Stressors in Community-Residing Older Adults

Research Questionnaire

1. Demographics
2. Ongoing/Chronic Health Conditions
3. Religiosity
    a. Religious Disaffiliation Index
    b. Religious Commitment Scale
    c. Religiosity Scale
    d. Social Integration of the Aged in Churches Scale
4. Life Stressors Checklist-Revised
5. Beck Anxiety Inventory
6. Center for Epidemiologic Studies Short Depression Scale

Please answer the following questions about yourself. When given multiple choices, please place an "X" next to the appropriate response. No identifying information will be used in this study or any presentation or publication that may result from it; therefore, your individual identity will be kept confidential. Please proceed when you're ready.

How old are you today? _____

What is your birth date?

_____/_____/_____
Month Day Year

Are you male or female?
_____ Male
_____ Female

Which of the following best describes your race/ethnicity?
_____ African American/Black, not of Hispanic origin
_____ Caucasian/White, not of Hispanic origin
_____ Hispanic
_____ Asian
_____ Other (Please specify: _____)

What is your marital status?
_____ Married
_____ Widowed
_____ Separated/Divorced
_____ Single

What is the highest level of education you've completed?
_____ None
_____ Jr. High/Middle School
_____ High School
_____ Vocational Training after High School
_____ College
_____ Graduate/Medical/Law School

What is your employment status?
_____ Employed full-time
_____ Employed part-time
_____ Retired
_____ Unemployed
_____ Volunteer
_____ Other (Please specify:_____)

Please complete the table below by indicating with an "X" whether or not you have any of the following ongoing or chronic health conditions. Please feel free to skip any question you feel uncomfortable answering.

	NO	YES
Arthritis or problems with your joints		
Back problems		
Cancer or leukemia		
Diabetes		
Hearing problems, even with a hearing aid		
Heart disease/heart problems		
High blood pressure/circulation problems		
Incontinence		
Kidney or liver disease		
Lung conditions such as asthma, emphysema, or chronic bronchitis		
Mental health problem/illness		
Stroke or physical effects of a stroke		
Stomach/digestive problems		
Thyroid condition		
Alcohol or drug problems		
Vision problems, even with glasses or contact lenses		
Physical disability		
Other: (Please specify)		

Measure of Health Conditions (Benjamin Rose Institute)

If you have ever experienced a life-threatening or chronic illness, how has it affected your religious practices and beliefs?

_____ Not at all
_____ Moderately
_____ Severely

Please answer the following questions about your religious affiliation, religious involvement, and religious beliefs by placing an "X" next to the appropriate response. Please feel free to skip any question you feel uncomfortable answering.

What is your religious affiliation?

_____ None

_____ Jewish
- _____ Orthodox
- _____ Reform
- _____ Conservative

_____ Christian
- _____ Protestant
- _____ Catholic
- _____ Other (Please specify: _____)

_____ Muslim
- _____ Sunni
- _____ Shi'a
- _____ Other (Please specify: _____)

_____ Hindu

_____ Buddhist

_____ Other (Please specify: _____)

Did you affiliate yourself with a particular religion as a child or early adult?
_____ No
_____ Yes

Do you retain the same religious affiliation now?
_____ No
_____ Yes

Has your religiosity/spirituality intensified or deepened over time?
_____ No
_____ Yes

Religious Disaffiliation Index

Which of the following statements comes closest to expressing what you believe about G-D/higher power? (Please check only one answer.)

_____ I know G-D/higher power really exists, and I have no doubts about it.
_____ While I have doubts, I feel that I do believe in G-D/higher power.
_____ I find myself believing in G-D/higher power some of the time but not at other times.
_____ I don't believe in a personal G-D/higher power, but I do believe in a higher power of some kind.
_____ I don't know whether there is a G-D/higher power, and I don't believe there is any way to find out.
_____ I don't believe in G-D/higher power.
_____ None of the above represents what I believe. What I believe about G-D/higher power is: (Please specify)

_____

_____

Religious Commitment

Please complete the table below by placing an "X" in the box that indicates how often you participate in each religious activity. Please feel free to skip any question you feel uncomfortable answering.

	Not At All	One or more times a day	One or more times a week	One or more times a month	One or more times a year
Frequency of attendance at temple, church, or other religious worship services					
Frequency of listening to/watching recordings of religious services					
Frequency of reading/studying religious texts (e.g., Bible, Qur'an, Talmud, Torah)					
Frequency of prayer before meals					
Frequency of prayer (other than at meals)					

Religiosity

Social Integration of the Aged in Churches

Please complete the table on the next few pages by indicating whether or not you have experienced each event listed. For those events you have experienced, please report how old you were when the event began and ended, if you believed you were in harm, and if you felt helpless at the time. Finally, on a 5-point scale (1 = Not at all; 5 = Extremely), please indicate how the event has affected your life and how upsetting the event was when it occurred. Please feel free to skip any question you feel uncomfortable answering.

Life Stressors Checklist – Revised (LSCL-R)

pp. 6-11

	Y/N	Age when event began	Age when event ended	Did you believe you were in harm? **(Y/N)**	Did you feel helpless at the time of the event? **(Y/N)**	How has this event affected your life? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**	At the time, how upsetting was this event? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**
1. Have you ever been in a serious disaster (for example, a massive earthquake, hurricane, tornado, fire, explosion)?							
2. Have you ever seen a serious accident (for example, a bad car wreck or an on-the-job accident)?							
3. Have you ever had a very serious accident or accident-related injury (for example, a bad car wreck or an on-the-job accident)?							
4. Was a close family member ever sent to jail?							
5. Have you ever been sent to jail?							

	Y/N	Age when event began	Age when event ended	Did you believe you were in harm? (Y/N)	Did you feel helpless at the time of the event? (Y/N)	How has this event affected your life? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**	At the time, how upsetting was this event? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**
6. Were you ever put in foster care or put up for adoption?							
7. Did your parents ever separate or divorce while you were living with them?							
8. Have you ever been separated or divorced?							
9. Have you ever had serious money problems (for example, not enough money for food or a place to live)?							
10. Have you ever had a very serious physical or mental illness (for example, cancer, heart attack, serious operation, felt like killing yourself, hospitalized because of severe nerve problems)?							
11. Have you ever been emotionally abused or neglected (for example, being frequently shamed, embarrassed, ignored, or repeatedly told that you were "no good")?							

	Y/N	Age when event began	Age when event ended	Did you believe you were in harm? (Y/N)	Did you feel helpless at the time of the event? (Y/N)	How has this event affected your life? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**	At the time, how upsetting was this event? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**
12. Have you ever been physically neglected (for example, not fed, not properly clothed, or left to take care of yourself when you were too young or ill)?							
13. WOMEN ONLY: Have you ever had an abortion or miscarriage (lost your baby)?							
14. Have you ever been separated from your child against your will (for example, the loss of custody or visitation or kidnapping)?							
15. Has a baby or child of yours ever had a severe physical or mental handicap (for example, mentally retarded, birth defects, can't hear, see, walk)?							
16. Have you ever been responsible for taking care of someone close to you (not your child) who had a severe physical or mental handicap (for example, cancer stroke, Alzheimer's disease, AIDS, felt like killing themselves, hospitalized because of nerve problems, can't hear, see, walk)?							

	Y/N	Age when event began	Age when event ended	Did you believe you were in harm? (Y/N)	Did you feel helpless at the time of the event? (Y/N)	How has this event affected your life? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**	At the time, how upsetting was this event? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**
17. Has someone close to you died suddenly or unexpectedly (for example, an accident, sudden heart attack, murder, or suicide)?							
18. Has someone close to you died (do not include those who died suddenly or unexpectedly)?							
19. When you were young (before age 16) did you ever see violence between family members (for example, hitting, kicking, slapping, punching)?							
20. Have you ever seen a robbery, mugging, or attack taking place?							
21. Have you ever been robbed, mugged, or physically attacked (not sexually) by someone you did not know?							
22. *Before age 16,* were you ever abused (not sexually) or physically attacked (hit, slapped, choked, burned, or beat up) by someone you knew (for example, a parent, boyfriend, or husband)?							

	Y/N	Age when event began	Age when event ended	Did you believe you were in danger? (Y/N)	Did you feel helpless at the time of the event? (Y/N)	How has this event affected your life? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**	At the time, how upsetting was this event? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**
23. *After age 16*, were you ever abused (not sexually) or physically attacked (hit, slapped, choked, burned, or beat up) by someone you knew (for example, a parent, boyfriend, or husband)?							
24. Have you ever been bothered or harassed by sexual remarks, jokes, or demands for sexual favors by someone *at work or school* (for example, a co-worker, a boss, a customer, another student, a teacher)?							
25. *Before age 16,* were you ever touched or made to touch someone else in a sexual way because they forced you in some way or threatened to harm you if you didn't?							
26. *After age 16*, were you ever touched or made to touch someone else in a sexual way because they forced you in some way or threatened to harm you if you didn't?							

	Y/N	Age when event began	Age when event ended	Did you believe you were in danger? (Y/N)	Did you feel helpless at the time of the event? (Y/N)	How has this event affected your life? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**	At the time, how upsetting was this event? **1 = Not at all** **2 = Somewhat** **3 = Mildly** **4 = Moderately** **5 = Extremely**
27. *Before age 16*, did you ever have sex (oral, anal, genital) when you didn't want to because someone forced you in some way or threatened to harm you if you didn't?							
28. *After age 16*, did you ever have sex (oral, anal, genital) when you didn't want to because someone forced you in some way or threatened to harm you if you didn't?							
29. Are there any events we did not include that you would like to mention?							
30. Have any of the events mentioned above ever happened to someone close to you so that even though you didn't see or experience the event yourself, you were seriously disturbed by it?							
31. Of all the events you experienced which three have the greatest impact on you currently? # # #							

If you have ever experienced a traumatic or stressful event, how has it affected your religious practices and beliefs?

_____ Not at all

_____ Moderately

_____ Severely

Below are five statements you may agree or disagree with. Using the scale below, please indicate your agreement with each item by placing an "X" in the appropriate box. Please be open and honest in your responding. Please feel free to skip any question you feel uncomfortable answering.

	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1. In most ways, my life is close to my ideal.						
2. The conditions of my life are excellent.						
3. I am satisfied with my life.						
4. So far, I have gotten the important things I want in life.						
5. If I could live my life over, I would change almost nothing.						

Satisfaction with Life Scale (SWLS)

Below is a list of common physical sensations. Please carefully read each item in the list and indicate how much you have been bothered by that sensation **during the past month**, including today. Mark your responses by placing an "X" in the appropriate box. Please feel free to skip any question you feel uncomfortable answering.

	Not At All	Mildly, but it didn't bother me	Moderately – it wasn't pleasant at times	Severely – it bothered me a lot
Numbness or tingling				
Feeling hot				
Wobbliness in legs				
Unable to relax				
Fear of worst happening				
Dizzy or lightheaded				
Heart pounding/racing				
Unsteady				
Terrified or afraid				
Nervous				
Feeling of choking				
Hands trembling				
Shaky/unsteady				
Fear of losing control				
Difficulty in breathing				
Fear of dying				
Scared				
Indigestion				
Faint/lightheaded				
Face flushed				
Hot/cold sweats				

Beck Anxiety Inventory (BAI)

Below is a list of some ways you may have felt or behaved. Please indicate how often you have felt this way **during the past week** by placing an "X" in the appropriate box. Please feel free to skip any question you feel uncomfortable answering.

Center for Epidemiologic Studies Short Depression Scale (CES-D 10)

During the past week…	Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	All of the time (5-7 days)
1. I was bothered by things that usually don't bother me.				
2. I had trouble keeping my mind on what I was doing.				
3. I felt depressed.				
4. I felt that everything I did was an effort.				
5. I felt hopeful about the future.				
6. I felt fearful.				
7. My sleep was restless.				
8. I was happy.				
9. I felt lonely.				
10. I could not "get going."				

You have reached the end of the interview. Your participation is greatly appreciated.

Thank you.

APPENDIX B

Table of Survey Instruments

Survey Instrument		Author	# Items	Sample Items	*n*	*M*	*sd*	Score Range		Psychometric Properties	
								Min	Max		
Measures of Religiosity	Religiosity	Orbach (1961)	1	Frequency of attendance at temple, church, or other religious worship services (*Not at all; One or more times a day; One or more times a week; One or more times a month; One or more times a year*).	46	2.02	1.183	0	4	**Note**: No psychometric properties were available; and, since the measure is a single-item indicator, Cronbach's α was not computed.	
	Social Integration of the Aged in Churches	Moberg (1965)	4	Frequency of listening to/watching recordings of religious services (*Not at all; One or more times a day; One or more times a week; One or more times a month; One or more times a year*)	45	10.20	4.962	0	16	Cronbach's α	.812
	Religious Commitment Scale	Glock (1962)	1	Which of the following statements comes closest to expressing what you believe about G-D/higher power?	47	5.47	.975	3	6	**Note**: No psychometric properties were available; and, since the measure is a single-item indicator, Cronbach's α was not computed.	
	Religious Practices[a]	-	5	**Note**: This scale was a combination of *Religiosity* and *Social Integration of the Aged in Churches*.	42	12.74	5.548	0	20	Cronbach's α	.799
	Religiosity Composite[a]	-	6	**Note**: This scale was a standardized combination of *Religious Practices* and *Religious Commitment*.	42	.01	1.753	-4	2	Cronbach's α	.899
Measures of Successful Aging	Beck Anxiety Inventory (BAI)	Beck & Steer (1990)	21	During the past month, I have been bothered by… Numbness or tingling (*Not at all; Mildly, but it didn't bother me; Moderately, it wasn't pleasant at times; Severely, it bothered me a lot*)	44	11.86	9.612	0	42	Internal consistency Test-retest reliability Convergent validity[b] Cronbach's α	.92 .75 .47-.81 .749
	Center for Epidemiologic Studies Short Depression Scale (CES-D 10)	Radloff (1977); Andresen et al. (1994)	10	During the past week… I was bothered by things that usually don't bother me (*Rarely or none of the time; Some or a little of the time; Occasionally or a moderate amount of time; All of the time*)	41	7.83	3.930	1	15	Internal consistency[c] Test-retest reliability Convergent validity[b] Discriminant validity Cronbach's α	.85-.90 .71 .36-.43 -.63 .641
	Satisfaction with Life Scale (SWLS)	Diener, Emmons, Larson, & Griffin (1985)	5	In most ways, my life is close to my ideal (*Strongly disagree; Disagree; Slightly disagree; Slightly agree; Agree; Strongly agree*)	44	24.98	6.392	5	35	Internal consistency Test-retest reliability[d] Cronbach's α	.87 .54-.87 .802
	Successful Aging Composite[a]	-	36	**Note**: This scale was a standardized combination of *BAI*, *CES-D 10*, and *SWLS*.	39	-.18	1.771	-3	4	Cronbach's α	.735

Table continues on next page.

Survey Instrument		Author	# Items	Sample Items	*n*	*M*	*sd*	Score Range		Psychometric Properties	
								Min	Max		
Additional Measures	Religious Disaffiliation Index	Bahr & Caplow (1973)	3	Did you affiliate yourself with a particular religion as a child or early adult? (*Y/N*	48	2.10	.951	0	3	Cronbach's α	.451
	Measure of health conditions	Benjamin Rose Institute (2006)	18	Please indicate whether or not you have any of the following chronic or ongoing health conditions… Arthritis or problems with your joints (*Y/N*)	28	4.71	2.258	2	12	Cronbach's α	.645
	Life Stressors Checklist – Revised (LSCL-R)	Wolfe & Kimerling (1997)	30	Have you ever been in a serious disaster (for example, a massive earthquake, hurricane, tornado, fire, explosion)? (*Y/N*)	13	7.77	6.057	2	19	**Note**: No psychometric properties were available; and, due to insufficient data, no reliability analyses were conducted.	

Note: Cronbach α coefficients computed for this study

[a] Created for use in this study

[b] Range of coefficients is result of comparisons with multiple measures

[c] Range of coefficients is result of analyses across different populations

[d] Range of coefficients is result of different latency periods between testing

APPENDIX C

Correlation Matrices of Survey Instruments

List of Correlation Matrices

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I.	Religious Practices	108
II.	Religious Beliefs, Religious Practices, & Religiosity Composite	108
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IV.	Beck Anxiety Inventory (BAI)	109
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VI.	SWLS, BAI, CES-D 10, Successful Aging Composite	112
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IX.	Life Stressors Checklist – Revised (LSCL-R)	114
X.	All Measures	118

I. *Religious Practices*

	1	2	3	4	5	Total Score
Frequency of attendance at temple, church, or other religious worship services	-	.319*	.434**	.593**	.475**	.705**
Frequency of listening to/watching recordings of religious services		-	.615**	.395**	.267	.674**
Frequency of reading/studying religious texts (e.g., Bible, Qur'an, Talmud, Torah)			-	.643**	.515**	.842**
Frequency of prayer before meals				-	.660**	.861**
Frequency of prayer (other than at meals)					-	.763**
Total Score						-

* Significant at .05 alpha level (2-tailed).
** Significant at .01 alpha level (2-tailed).

II. *Religious Beliefs, Religious Practices, & Religiosity Composite*

	Religious Beliefs	Religious Practices	Religiosity Composite
Religious Beliefs	-	.588*	.877*
Religious Practices		-	.895*
Religiosity Composite			-

* Significant at .01 alpha level (2-tailed).

III. *Satisfaction with Life Scale (SWLS)*

	1	2	3	4	5	Total Score
In most ways, my life is close to my ideal.	-	.599**	.569**	.410**	.387**	.748**
The conditions of my life are excellent.		-	.792**	.441**	.628**	.883**
I am satisfied with my life.			-	367*	.573**	.832**
So far, I have gotten the important things I want in life.				-	.452**	.664**
If I could live my life over, I would change almost nothing.					-	.797**
Total Score						-

* Significant at .05 alpha level (2-tailed).
** Significant at .01 alpha level (2-tailed).

IV. *Beck Anxiety Inventory (BAI)*

	1	2	3	4	5	6	7	8	9	10	11	12	13
Numbness or tingling	-	.277	.305*	.094	.366*	.028	.171	.203	.234	.166	.314*	.533**	.295*
Feeling hot		-	.062	.155	.045	.209	.197	.065	-.046	.155	.108	.319*	.189
Wobbliness in legs			-	.555**	.021	.409**	.317*	.718**	.172	.555**	.405**	.548**	.809**
Unable to relax				-	.330*	.584**	.383**	.614**	.268	.806**	.375*	.326*	.511**
Fear of worst happening					-	.091	.354*	.081	.455**	.330*	.340*	.217	.017
Dizzy or lightheaded						-	.246	.413**	-.184	.615**	.469**	.120	.465**
Heart pounding/racing							-	.433**	.152	.483**	.497**	.224	.270
Unsteady								-	.091	.544**	.376*	.401**	.661**
Terrified or afraid									-	.268	.270	.404**	.134
Nervous										-	.415**	.326*	.541**
Feeling of choking											-	.513**	.471**
Hands trembling												-	.505**
Shaky/unsteady													-

Matrix continues on next page.

	14	15	16	17	18	19	20	21	Total Score
Numbness or tingling	-.015	.424**	.358*	.220	.361*	-.016	.158	.129	.436**
Feeling hot	-.109	.484**	.133	.099	.287	.289	.501**	.573**	.411**
Wobbliness in legs	.424**	.106	.170	-.036	.310*	.500**	.218	.173	.648**
Unable to relax	.466**	.291	.169	.333*	.545**	.570**	.291	.323*	.755**
Fear of worst happening	.283	.362*	.412**	.477**	.486**	.145	.243	.015	.464**
Dizzy or lightheaded	.388**	.302*	.056	-.076	.494**	.829**	.290	.379*	.607**
Heart pounding/racing	.326*	.296*	.367*	.263	.373*	.323*	.116	.395**	.584**
Unsteady	.449**	.132	.106	-.064	.224	.454**	.135	.204	.607**
Terrified or afraid	.312*	.225	.568**	.635**	.026	-.041	.231	.060	.394**
Nervous	.501**	.360*	.327*	.372*	.545**	.605**	.370*	.292	.798**
Feeling of choking	.429**	.358*	.252	.049	.251	.493	.130	.303	.628**
Hands trembling	.138	.493**	.462**	.271	.212	.257	.259	.200	.604**
Shaky/unsteady	.345*	.200	.082	-.075	.380*	.515**	.252	.249	.659**
Fear of losing control	-	.049	.325*	.231	.354*	.594**	.287	.280	.575**
Difficulty in breathing		-	.433**	.316*	.355*	.295	.610**	.456**	.596**
Fear of dying			-	.637**	.225	.238	.316*	.203	.516**
Scared				-	.317*	.063	.240	.111	.409**
Indigestion					-	.567**	.395**	.363*	.674**
Faint/lightheaded						-	.399**	.445**	.717**
Face flushed							-	.503**	.557**
Hot/cold sweats								-	.554**
Total Score									-

* Significant at .05 alpha level (2-tailed).

** Significant at .01 alpha level (2-tailed).

V. *Center for Epidemiologic Studies Short Depression Scale (CES-D 10)*

	1	2	3	4	5	6	7	8	9	10	Total Score
I was bothered by things that usually don't bother me.	-	.354*	.175	.279	-.232	.048	.125	-.163	.182	.098	.379*
I had trouble keeping my mind on what I was doing.		-	.514**	.287	-.079	.178	.396**	.122	.306*	.384*	.623**
I felt depressed.			-	.334*	.113	.343*	.308*	.177	.522**	.046	.658**
I felt that everything I did was an effort.				-	-.239	.111	.329*	-.094	.407**	.241	.512**
I felt hopeful about the future.					-	.239	-.118	.304*	.077	-.368*	.104
I felt fearful.						-	.082	-.058	.155	-.007	.299
My sleep was restless.							-	-.133	.288	.543**	.534**
I was happy.								-	.156	-.012	.292
I felt lonely.									-	.194	.682**
I could not "get going."										-	.452**
Total Score											-

* Significant at .05 alpha level (2-tailed).

** Significant at .01 alpha level (2-tailed).

VI. *SWLS, BAI, CES-D 10, & Successful Aging Composite*

	SWLS	BAI	CES-D 10	Successful Aging Composite
SWLS	-	.045	-.176	-.584*
BAI		-	.401*	.534*
CES-D 10			-	.814*
Successful Aging Composite				-

* Significant at .01 alpha level (2-tailed).

VII. *Religious Disaffiliation Index*

	1	2	3	Total Score
Did you affiliate yourself with a particular religion as a child or early adult?	-	.456**	.358*	.778**
Do you retain the same religious affiliation now?		-	.008	.705**
Has your religiosity/spirituality intensified or deepened over time?			-	.680**
Total Score				-

* Significant at .05 alpha level (2-tailed).
** Significant .01 alpha level (2-tailed).

VIII. *Measure of Health Conditions (Benjamin Rose Institute)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total Score
Arthritis or problems with your joints	-	.256	.181	-.447*	-.256	-.393	.013	.213	.204	.159	.139	.145	-.101	-.101	.145	-.037	.213	.145	.207
Back problems		-	.194	-.049	.265	.042	.084	.090	.070	-.110	.324	.061	-.127	.194	.061	-.016	.090	.345	.499**
Cancer or leukemia			-	.037	.037	.009	-.009	.189	.189	.009	.352	-.096	-.200	.253	.352	-.091	-.141	.352	.357
Diabetes				-	.137	.420*	-.073	-.032	-.247	-.247	.136	-.175	-.183	.037	.132	.045	-.032	-.175	.081
Hearing problems, even with a hearing aid					-	.587**	-.242	.194	-.247	.086	.136	.132	-.183	.292	.132	.045	-.032	-.175	.367
Heart disease/heart problems						-	-.181	.156	-.268	.194	.112	.106	-.044	.256	.106	.126	.156	-.191	.433*
High blood pressure/circulation problems							-	.062	.062	-.181	.191	-.106	.044	-.009	.191	.181	.062	-.106	.187
Incontinence								-	-.167	.156	.679**	-.113	.000	.189	.283	.234	.417*	-.113	.559**
Kidney or liver disease									-	-.268	-.109	.283	.000	-.141	.283	.029	.125	.679**	.145
Lung conditions such as asthma, emphysema, or chronic bronchitis										-	.112	.106	.132	-.238	-.191	.126	.156	-.191	.192
Mental health problem/illness											-	-.077	.160	.352	.462*	.298	.283	-.077	.724**
Stroke or physical effects of a stroke												-	-.160	-.096	.462*	.298	.283	-.077	.286
Stomach/digestive problems													-	-.200	-.160	.124	.000	-.160	.037
Thyroid condition														-	.352	.141	-.141	-.096	.305
Alcohol or drug problems															-	.298	.283	-.077	.599**
Vision problems, even with glasses or contact lenses																-	.234	-.258	.507**
Physical disability																	-	-.113	.467*
Other: (Please specify)																		-	.036
Total Score																			-

* Significant at .05 alpha level (2-tailed).

** Significant at .01 alpha level (2-tailed).

IX. *Life Stressors Checklist – Revised (LSCL-R)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Been in serious disaster?	-	.239	.490*	.285	.362	.403*	-.062	-.076	.147	-.107	.348	.397*	.177	.138	.433*
Seen a serious accident?		-	.703**	.239	.079	.255	.378	.338	.319	.095	.194	.247	.207	.175	.263
Accident-related injury?			-	.315	.192	.361	.089	.033	.192	.044	.087	.352	.176	.239	.385
Close family member sent to jail?				-	.640**	.372	.335	.298	.544**	.533**	.508*	.365	.318	.426*	.397*
Been sent to jail?					-	.677**	.180	.033	.273	.236	.228	.674**	.046	.550**	.674**
Put in foster care or up for adoption?						-	.283	.000	.280	.053	.217	1.000**	.184	.455*	1.000**
Parents separate or divorce?							-	.408*	.413*	.503**	.427*	.277	.525**	.342	.277
Been separated or divorced?								-	.433*	.106	.308	.000	.183	.277	-.022
Serious money problems?									-	.282	.872**	.277	.272	.797**	.273
Serious physical or mental illness?										-	.290	.045	.358	.389	-.038
Been emotionally abused or neglected?											-	.217	.242	.796**	.116
Been physically neglected?												-	.155	.455*	.799**
Had an abortion or miscarriage?													-	.470*	.374
Been separated from your child against your will?														-	.342
Had child with severe physical or mental handicap?															-

Matrix continues on next page.

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total Score
Been in a serious disaster?	.316	.195	-.020	.270	-.101	-.200	-.132	-.115	.167	.100	***	.100	.256	.275	.339	.771**
Seen a serious accident?	.344	.278	-.247	.311	-.060	***	.176	.170	.356	-.051	***	-.051	.255	.171	.439*	.518
Accident-related injury?	.657**	.292	-.243	.447*	.026	.247	.250	.015	.478*	.051	***	.051	.201	.243	.586**	.706**
Close family member sent to jail?	.394*	.522**	.038	.622**	-.168	.100	.258	.678**	.108	.076	***	.076	-.017	.253	.500*	.819**
Been sent to jail?	.454*	.228	-.169	.408*	-.190	-.085	-.085	.266	-.065	.273	***	.273	.180	.466*	.200	.786**
Put in foster care or up for adoption?	.316	.337	.104	.229	-.135	-.080	-.053	.126	.100	.460*	***	.460*	.352	.693**	.211	.786**
Parents separate or divorce?	.047	.282	.154	.338	.070	-.100	.471*	.186	-.074	-.118	***	-.118	-.141	-.085	.109	.640*
Been separated or divorced?	-.033	.300	.120	.078	-.269	.010	.192	.511**	-.052	-.273	***	-.273	.115	-.200	-.083	.308
Serious money problems?	.033	.498**	.154	.333	.062	.348	-.082	.414*	-.074	-.118	***	-.118	-.118	-.085	.036	.566*
Serious physical or mental illness?	.080	.233	-.066	.622**	-.007	.076	.239	.197	-.107	-.235	***	-.235	-.279	-.171	.009	.167
Been emotionally abused or neglected?	-.017	.450*	.194	.427*	.242	.270	-.102	.300	-.129	-.147	***	-.147	-.147	-.107	.083	.566*
Been physically neglected?	.316	.365	.123	.225	-.141	-.083	-.055	.126	.100	.460*	***	.460*	.460*	.693**	.206	.786**
Had an abortion or miscarriage?	-.019	.233	-.019	.584**	-.296	.150	.331	-.014	.120	-.167	***	-.167	-.167	-.121	.224	.640*
Been separated from your child against your will?	.036	.385	.120	.674**	-.114	.457*	-.060	.138	.078	-.091	***	-.091	-.109	-.066	-.181	.557*
Had child with severe physical or mental handicap?	.187	.236	-.175	.180	-.176	-.104	-.069	.020	.020	.348	***	.348	.250	.553**	.256	.786**

Matrix continues on next page.

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total Score
Took care of someone close to you who had a severe physical or mental handicap?	-	.283	-.033	.381*	-.235	.032	.222	.073	.158	.032	***	.032	.167	.216	.594**	.806**
Someone close to you died suddenly or unexpectedly?		-	.365	.175	-.023	.365	-.163	.369	.213	.053	***	.053	.341	.234	.176	.683*
Someone close to you died (expectedly)?			-	-.062	-.062	.123	.082	.271	.295	.118	***	.118	.118	.085	.171	.187
Before age 16, see violence between family members?				-	-.227	.229	.413*	.108	.270	-.135	***	-.135	-.162	-.098	.307	.640*
Seen a robbery, mugging, or attack taking place?					-	.280	-.090	-.101	.108	-.135	***	-.135	-.162	-.085	-.256	-.187
Been robbed, mugged, or physically attacked by someone you did not know?						-	-.053	.155	.400*	-.080	***	-.080	-.096	-.058	-.171	***
***Before age 16,* abused (not sexually) or physically attacked by someone you knew?**							-	.304	.280	-.053	***	-.053	-.064	-.038	.405	.309
***After age 16*, abused (not sexually) or physically attacked by someone you knew?**								-	.073	.132	***	.132	.132	.302	.339	.412
Been bothered or harassed by sexual remarks, jokes, or demands for sexual favors by someone *at work or school*?									-	.106	***	.106	.403*	.302	.225	.370
***Before age 16,* touched or made to touch someone else in a sexual way because they forced you in some way or threatened to harm you if you didn't?**										-	***	1.000**	.462*	.693**	.211	.200
***After age 16*, touched or made to touch someone else in a sexual way because they forced you in some way or threatened to harm you if you didn't?**											***	***	***	***	***	***

Matrix continues on next page.

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total Score
***Before age 16*, have when you didn't want to?**												-	.462*	.693**	.211	.200
***After age 16*, have sex when you didn't want to?**													-	.693**	.211	.420
Any events we did not include that you would like to mention?														-	.402	.507
Any of the events happened to someone close to you so that even though you didn't see or experience the event yourself, you were seriously disturbed by it?															-	.513
Total Score																-

* Significant at .05 alpha level (2-tailed).

** Significant at .01 alpha level (2-tailed).

*** Correlation could not be computed.

X. *All Instruments*

	Religiosity Composite	Religious Beliefs	Religious Practices	Successful Aging Composite	SWLS	BAI	CES-D 10	Religious Disaffiliation Index	Measure of Health Conditions	LSCL-R
Religiosity Composite	-	.887**	.895**	-.329*	.212	-.220	-.237	.368*	-.066	-.056
Religious Beliefs		-	.588**	-.339*	.087	-.180	-.314*	.339*	-.157	.460
Religious Practices			-	-.204	.216	-.193	-.089	.378*	.072	-.395
Successful Aging Composite				-	-.584**	.534**	.814**	.104	.486*	-.018
SWLS					-	.045	-.176	.188	-.085	-.121
BAI						-	.401**	-.091	.537**	-.263
CES-D 10							-	.149	.543**	-.010
Religious Disaffiliation Index								-	-.242	-.044
Measure of Health Conditions (BRI)									-	.004
LSCL-R										-

* Significant at .05 alpha level (2-tailed).

** Significant at .01 alpha level (2-tailed).

APPENDIX D

Human Subjects Form

Cleveland State University
College of Graduate Studies and Research
Office of Sponsored Programs and Research
Institutional Review Board (IRB)

Memorandum

To: Boaz Kahana
Psychology

From: Patrick Murray
Consultant for IRB Compliance
Institutional Review Board

Date: 9 May 2007

Re: Results of IRB Review of your project number: 27222-KAH-HS
Co-Investigator: Jessica York
Entitled: Religiosity and successful aging

The IRB has reviewed and approved your application for the above named project, under the category noted below. Approval for use of human subjects in this research is for one year from the approval date listed below. If your study extends beyond this approval period, please contact this office to initiate an annual review of the project. ***This approval expires on 5/7/2008***

By accepting this decision, you agree to notify the IRB of: (1) any additions to or changes in procedures for your study that modify the subjects' risk in any way; and (2) any events that affect that safety or well-being of subjects.

Thank you for your efforts to maintain compliance with the federal regulations for the protection of human subjects.

Approval Category: **Date: 5/8/2007**

☒ Exempt Status: Project is exempt from further review under 45 CFR 46.101 (b)(2)

☐ Expedited Review: Project approved, Expedited Category

☐ Regular IRB Approval

cc: Project file

Mailing Address: 2121 Euclid Avenue, KB 1150 • Cleveland, Ohio 44115-2214
Campus Location: Keith Building, Room 1150 • 1621 Euclid Avenue • Cleveland, Ohio
(216) 687-3630 • Fax (216) 687-9382

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Cleveland State University

Institutional Review Board for Human Subjects in Research
Application for Project Review

I. Title Page

Date: (mm/dd/yy): 04/03/07 **Transaction Number (office use only):** 27222-KAH-HS
Project Title Religiosity And Successful Aging

PRINCIPAL INVESTIGATOR OR ADVISOR
Name: (Last, First): Kahana, Boaz Degree Attained: PhD, ThD, PhL, PhB
Department: PSYCHOLOGY Title: Professor
Electronic Mail Address: b.kahana@csuohio.edu
Campus Address: CR 1786
Office Phone: (216) 687-3762 Home Phone: ____
Has the investigator completed the CITI course in the protection of human subjects? ☒ Yes ☐ No

CO-PRINCIPAL OR STUDENT INVESTIGATOR
Name: (Last, First): York, Jessica Degree Attained: BA, BS, BBA, BSW
Department: Psychology Title: Student
Electronic Mail Address: jwork84@yahoo.com
Office Phone: _____ Home Phone: (440) 221-1969
Has the investigator completed the CITI course in the protection of human subjects? ☒ Yes ☐ No

If this is a student investigator, please indicate status:
☐ Undergraduate ☒ Master level student ☐ Doctoral level student
and level of involvement in the research:
☐ Assisting Faculty Research ☒ Thesis ☐ Dissertation ☐ Classroom project: Class name/number ____

If there are more CSU investigators, please complete the "Additional CSU Investigators" form

PROPOSED PROJECT DURATION (research may not begin prior to IRB approval):
From (mm/dd/yy): 05/01/07 To (mm/dd/yy): 05/01/08 (date following anticipated approval; maximum one year later)

If expected duration of project exceeds 12 months, continuation of IRB approval will require additional action by the IRB. Renewal requests will be sent to you prior to the expiration date.

Type of funding or support: None

FOR IRB USE ONLY

Initial Evaluation	**Final IRB Action**
☐ Approve as is	☒ Exempt Status: Project is exempt under 45 CFR 46.101 (2)
☐ Requires Revision before evaluation or final action	☐ Expedited Review: Approval Category _____
☐ Full IRB review required	☐ Regular IRB approval
	☐ Other: _____

Reviewer: _____ Signature: _____ Approval Date: 5/8/2007

Cleveland State University Office of Sponsored Programs and Research IRB
Form updated 10/4/2006
All other forms are obsolete
pam

APPENDIX E

Relevant Correspondence

GAGC
GOLDEN AGE CENTERS
Providing Support Services for Seniors Since 1954

12200 Fairhill Road
Cleveland, Ohio 44120-1013
phone 216/231-6500 • fax 216/231-8741
Web Site - www.gacgc.org

April 25, 2007

To Whom It May Concern:

As President/CEO of the Golden Age Centers of Greater Cleveland, I authorize Jessica York to collect data at the Lake Shore Golden Age Center. I have discussed with Ms. York her research proposal and have reviewed a copy of the questionnaire she will use. I am, therefore, well informed and approve of the goals of her research and the means she intends to employ in her data collection.

If you have any questions concerning my authorization of Ms. York and her use of my facility, please feel free to contact me at my office at (216) 231-6500, extension 101 or contact me via email at palandt@gacgc.org.

Sincerely,

Paul W Alandt
President/CEO