RELIGIOSITY, HEALTH, AND LIFE SATISFACTION

IN RETIREMENT COMMUNITIES

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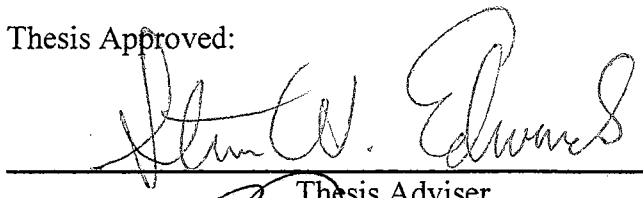

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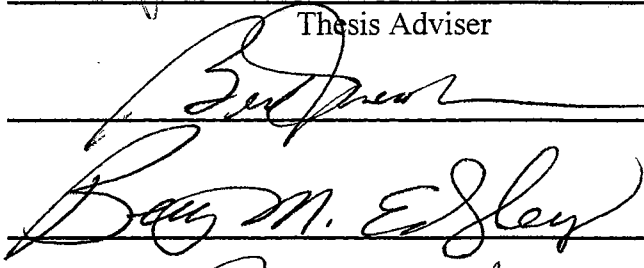

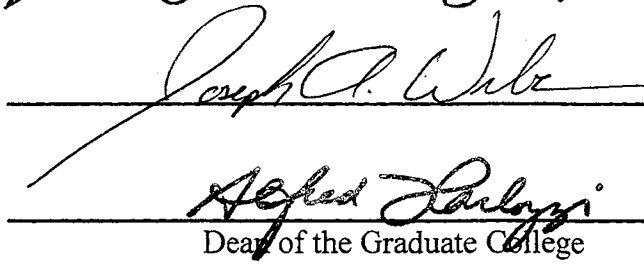

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CHAPTER I

INTRODUCTION

I hear with my ears and see only with my eyes;
I react with my heart as well as my mind,
But yet my soul has complete control,
So it is, whereby my soul is free,
So shall my mind and body be.
Debra A. Cook

Religion and its effects on health and life satisfaction in the older population has been a growing research interest that merits investigation. The research interest is particularly noteworthy because of the continued necessity to accommodate the physical, mental, social, and spiritual needs of this growing population. Research interest comes in light of the significant increase in the over 65 population and the increased life expectancy of the older adult. The 1991 U.S. Census data indicates that there are approximately 12.7% of the population now 65 years and older, with that percentage expected to rise to 20% by 2030 (U.S. Bureau of the Census, 1991). By 2030, nearly half of the older population will be 75 years or older with the United States actually having more adults than children. To date, adults over 85 make up the most rapidly growing segment of our population (U.S. Senate Special Committee on Aging, 1991a). Not only is the older population increasing but their life expectancy is as well. Today, a female born in the United States has a life expectancy of 79.3 years and her male counterpart

74.3 years. Individuals who reach their sixty-fifth birthday can expect to live nineteen years longer (Ferrini & Ferrini, 2000). Findings from studies indicate that older adults who are more religious tend to enjoy better physical and mental health than older people who are less involved in religion (Koenig, 1995; Koenig, George, Hays, Larson, Cohen, & Blazer, 1998; Krause, 1998). As early as1972, researchers from the Johns Hopkins University School of Public Health found that cardiovascular diseases were reduced significantly in early old age by a lifetime of regular church attendance (Fagan, 1996). Continuing to study religion and its association to older adult's life satisfaction and health is an important issue to further explore, especially since religion and spirituality are integral components of the lives of many older adults.

"Religiousness" and "spirituality" are two distinct domains although usually considered indistinguishable. Religiousness has specific behavioral, social, doctrinal, and denominational characteristics because it involves a system of worship and doctrine that is shared within a group (John E. Fetzer Institute Publication, 1999). Spirituality is more concerned with the transcendent and addressing ultimate questions about life's meaning (John E. Fetzer Institute Publication, 1999). Spirituality points to a relationship with religion much deeper than any thing that can be measured by participation in congregational activity (Thomas & Eisenhandler, 1994). Even though religion and spirituality are separate domains the term "religion" will be used most often when describing an aging person's belief system.

Robert Atchley (1991) noted that church participation is the number one form of organizational activity among older adults. National surveys conducted at the Princeton Religion Research Center (PRRC) indicate that 76% of older Americans rate religion as

very important in their lives. This compares with 44% of person under 30, 54% of persons ages 30-49, and 69% of persons ages 50-64 who say that religion is very important to them (PRRC, 1994). Among persons over 65, 52% attend religious services regularly (PRRC, 1994). Nine of every ten older Americans say that religion is important in their lives, and nearly three-fourths say that it is extremely important (Moore, 1995). Perhaps this increased importance in religion can be viewed as resources differentially employed by aging persons to adapt to changes associated with the aging process (McFadden, 1995).

Mounting evidence indicates that various dimensions of religiousness and spirituality may enhance subjective states of health and well-being (Ellison, 1991), therefore it is prudent to further explore the link between religion and health issues in the aging.

The association between religion and health has been the subject of numerous studies (Levin & Schiller, 1987; Levin & Vanderpool, 1987; Troyer, 1988; Witer, Stock, Okun, & Haring, 1985). These studies showed a positive relationship between religious affiliation, church attendance, religious feelings, and physical and mental well-being. More frequent religious attendance has even been associated with lower blood pressure, less subsequent disability, and better perceived health (Graham et al., 1978; Idler & Kasl, 1992; Levin & Markides, 1986). Epidemiologists have argued that religion regulates daily behavior, such as diet, fertility, smoking and alcohol (Troyer, 1988). Certain religious denominations advocate healthy diets and advise against smoking (Cochran, Beeghley, & Bock, 1988). Highly religious people tend to not use or abuse drugs or alcohol in comparison to less religious people. While not all religions have specific

teaching regarding health-risk behaviors, theologians have argued that "purity of life" is a "generic religious value" and that most religious and spiritual traditions have beliefs about maintaining the health of the mind, body, and soul. Maintaining the health of the mind, body, and soul result in overall well-being leading to "life satisfaction."

Ellison (1991) conducted a study that examined the multifaceted relationship between religious involvement and subjective well-being. The study showed a positive influence of religious certainty on well being. Individuals with strong religious faith reported high levels of life satisfaction, greater personal happiness, and fewer negative psychosocial consequences of traumatic life events. A study of older persons on religion and life satisfaction concluded that there is a general tendency toward increased religiosity with aging, and it appears to be associated with both life satisfaction and subjective health (Hunsberger, 1985). Another study showed that church attendance was among the six top predictors of life satisfaction, after income and other variables were accounted for (Usui, Keil, & Durig, 1985).

Religion, health, and life satisfaction play an important role in the lives of the older adults as they move into another facet of their lives. Older adults face major transitions as they learn to adjust to retirement, loss of a spouse, reduced incomes, declining physical strength and health, and establishing satisfactory living arrangements.

This study wishes to further investigate the relationship between religion, health, and life satisfaction and determine possible implications for the future empowerment of the older adult female living in retirement communities.

Definitions

Continuing Care Communities – The Continuing Care Community (CCRC) is a retirement community designed to provide a full range of accommodations and services for older adults from independent apartments to nursing facility care. These retirement communities typically provide an array of individual homes and apartments, group dining, and a broad spectrum of recreation activities, as well as fully staff medical and long-term care facilities, all on one campus (Dychtwald & Fowler, 1990). Residents are charged either monthly maintenance and entrance fees or pay on a fee-for-service basis. As a continuum-of-care (independent, assisted, and nursing) concept that fosters aging in place, CCRCs constitute the most comprehensive, and thus the most complex senior living environment.

Retirement Communities – Retirement communities are operated by churches and private industry for the purpose of providing independent housing and support services for older adults. These independent living environments are designed for older adults who are able to manage daily activities, such as housekeeping, cooking, and personal care, with little assistance from others (Resource Guide for Older Oklahomans, 1997). Retirement communities provide quality housing to senior adults in a caring community of friends and neighbors. The communities provide residents the freedom from maintaining a large house and yard and from paying property taxes. They have the freedom to travel and visit family and friends while knowing their home is safe. Residents can find a wide range of activities to match their interests. The activities may

include regularly scheduled trips, sing-a-longs, exercise classes, arts and crafts, friendship dinners, gardening, and Resident's Council.

Successful Aging – Older adults who age successfully tend to have a strong sense of life satisfaction, high self-esteem, and positive morale. Among the theories that attempt to explain successful aging is Eric Erikson's psychosocial theory of life-span development. Erikson has posited that the major developmental task that underlies successful aging is that of generativity, which is defining one's life contributions and ensuring one's legacy through active participation in meaningful, contributory roles (Erikson, 1963).

Need for the Study

The topic of religion and its effects on health and life satisfaction is important to many in the field of aging. There are implications to researchers, educators, healthcare institutions, housing industries and policy makers to more aptly meet the changing needs of our elders. It is of the utmost importance to better understand these relationships so as to accommodate this group in ways that impact their lives in a positive manner.

Statement of the Problem

The purpose of this study was to investigate perceived religiosity between religious-affiliated and nonreligious-affiliated retirement community residents. A second problem under investigation related to the differences, if any, in health status measures based on perceived measures of religiosity. A sub-problem was to investigate if there were any differences in perceived religiosity based on levels of pain and chronic illnesses.

A third problem to be investigated was whether life satisfaction differed based on perceived religiosity. Finally, did perceived measures of religiosity differ based on age stratification (65-74, 75-84, 85+), income and education?

Hypotheses

The following hypotheses were tested at the .05 level to determine if there was significance:

1. There will be no difference on measures of religiosity between persons in religious-affiliated and nonreligious-affiliated retirement communities.
2. There will be no significant difference in health status of subjects based on measures of religiosity.
3. There will be no significant difference in life satisfaction of subjects based on perceived religiosity.
4. There will be no significant difference in subjects' perceived religion based on age, education, and income.
5. There will be no significant difference in subjects' perceived religion based on levels of pain and chronic illnesses.

Delimitations

The following study was delimited to:

1. Subjects were female adults over age 65 living at religious-affiliated retirement communities in northeastern Oklahoma.

2. Subjects were female adults over age 65 living at non-religious-affiliated retirement communities in northeastern Oklahoma.
3. Measurement of life satisfaction via the Life Satisfaction Index A (LSIA).
4. Measurement of religiousness/spirituality via the Brief Multidimensional Measure of Religiousness/Spirituality: 1999.
5. Measurement of health status via the Short-Form-36 Health Survey.

Limitations

The results of the study may be affected by:

1. The fact that the Brief Multidimensional Measure of Religiousness/Spirituality is a work-in-progress.
2. Inaccurate reporting of life satisfaction, health status, and religiosity on the Life Satisfaction Index A (LSIA), the Short-Form-36 Health Survey, and the Brief Multidimensional Measure of Religiousness/Spirituality.

Assumptions

The following assumptions were made:

1. Use of random selection was used to select a random sample.
2. Subjects made an honest attempt to answer questions from the surveys.
3. Subjects voluntarily consented to participate in this study.
4. The subjects for the study were honest and able to follow instructions.

Theoretical Perspectives

A theoretical perspective provides a framework for understanding aging and the many complexities of the life process as it relates to the aspects of religiosity. Two such theoretical perspectives that seem to encompass the aging process are Erikson's (1963) psychosocial theory of life span development and Havighurst's (1972) Activity Theory.

The field of gerontology devotes much attention to the study of successful aging, knowing those that age well, live well. Those who age successfully tend to have a strong sense of life satisfaction, high self-esteem, and positive morale. Erikson's eighth stage of development explains this transition. Erikson viewed the crisis of ego integrity versus despair as central to late-life development. The premise is that older persons who achieve a sense of ego integrity are able to look back on their lives with a sense of satisfaction, acknowledging that they are basically happy with their decisions in life. Erikson defines this stage as "the ego's accrued assurance of its proclivity for order and meaning . . . the acceptance of one's one and only life cycle and of the people who have become significant to it as something that had to be" (1986, pg. 139). Failure to achieve this sense of integrity is characterized by a sense of regret, realizing that it is now too late to make significant changes. In Erikson's last publication he suggests that it may be necessary to add a ninth stage of development to the present eight, "a sense or premonition of immortality...as creatively given form in the world religions" (Erikson, Erikson & Kivnick, 1986, pp. 336-337).

Another widely accepted theory is that of Havighurst (1972), who proposed a series of developmental tasks that must be learned if persons are to age successfully.

These various tasks include adjusting to the loss of a spouse, adjusting to retirement and reduced income, adjusting to declining physical strength and health, establishing an explicit affiliation with one's age group, meeting social and civic obligations, and establishing satisfactory living arrangements. These developmental tasks are adjustments that an older person makes to continue in their life quest for successful aging and meaning. Religiosity gives one purpose and meaning and provides a coping mechanism for accepting the adjustments of aging and continuing to stay active!

Summary

The population of the older adults has increased significantly and will continue to do so well into the 21st century. The life expectancy of adults has increased and now Americans are living longer than ever before. Older adults face major transitions in their lives as they learn to adjust to retirement, loss of a spouse, reduced incomes, and declining health. Religion, health, and life satisfaction play a major role in the lives of the older adult as they meet these challenges of aging. Each of these roles play an integral part in the further development and movement toward successful aging as noted by the theoretical perspectives of Erikson and Havighurst.

CHAPTER II

LITERATURE REVIEW

Investigation into the relationship between religion, health, and life satisfaction and the possible implication for the older adult living in retirement communities is the focus of this study. The literature review will cover the topics of religion, the various dimensions of religion, and the associations between health and the aging society. Life satisfaction will be explained as it relates to the general well-being of the older adult and the relationship to religion. The last topic of interest will consider the retirement community profile as well as a profile of the resident. The typology of the resident mobility will be covered as it pertains to the various reasons older adults choose to relocate to retirement communities. Finally, a summary will provide an integration of the various topics and the future prospective.

A number of studies have investigated the relationship between religion and aging, as well as religion and health, but few articles have delved into the religious connection to life satisfaction in retirement settings. Now that this nation is experiencing such an increase in the aging population it is imperative to seek further insight into the possible implications this growth may have. The projected growth in the older population is depicted in Figure 1, which shows the actual and projected growth rate and the age stratification.

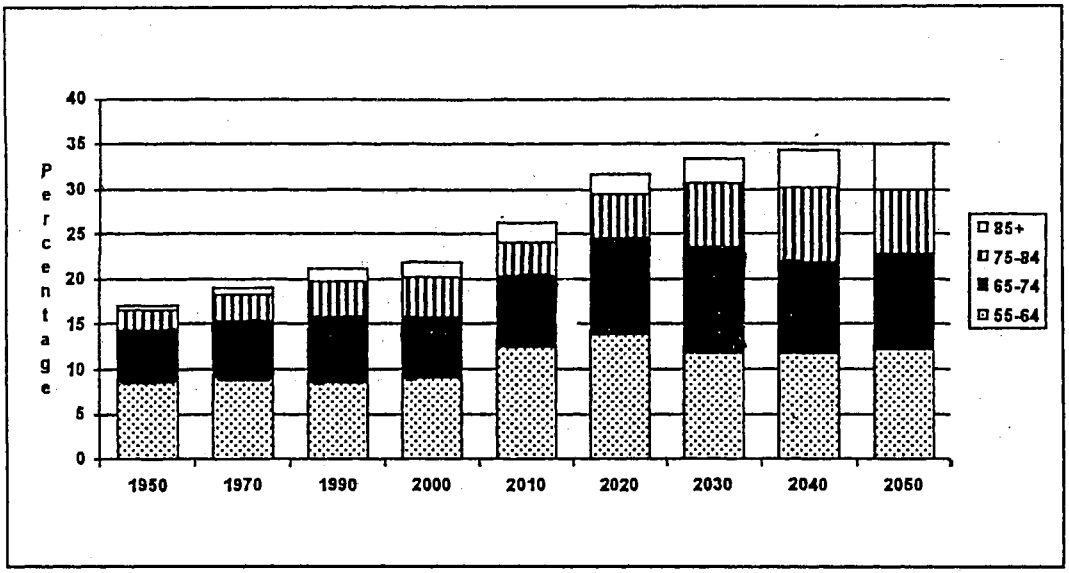

Figure 1. Actual and Projected Growth of the Older Population. Source: Compiled from data from U.S. Senate Special Committee on Aging (1991a).

According to the U.S. Bureau of the Census (1993), persons aged 65 and older constituted 8.1 percent of the population in 1950 but by the year 2050, that percentage will increase to 22.9 percent. The percentage in each age category is also increasing. For example, the 65-74 is up to 16 percent, the 74-84 is up to 20 percent, and the 85+ group, the fastest growing age group, is now up to 22 percent. In fact, the adults 85 and older will more than double from 3 million in 1990 to 7 million in 2020 and increase to 14 million by 2040. This tremendous rise will most certainly continue to impact the retirement housing industry.

Not only is there tremendous growth in the older cohort, but the life expectancy has increased dramatically as well. Life expectancy for both men and women in the

United States continues to increase. In 1997, the average age was 76.5 years, noting though there is a gender difference. Women continue to live longer than men do. This is due to lifestyle factors such as dangerous jobs, taking more risks, and stressful conditions. For instance, the life expectancy for white women born in 1997 was 79.3 years, for white men, 74.3. Figure 2 shows the Increasing Life Expectancy of both males and females.

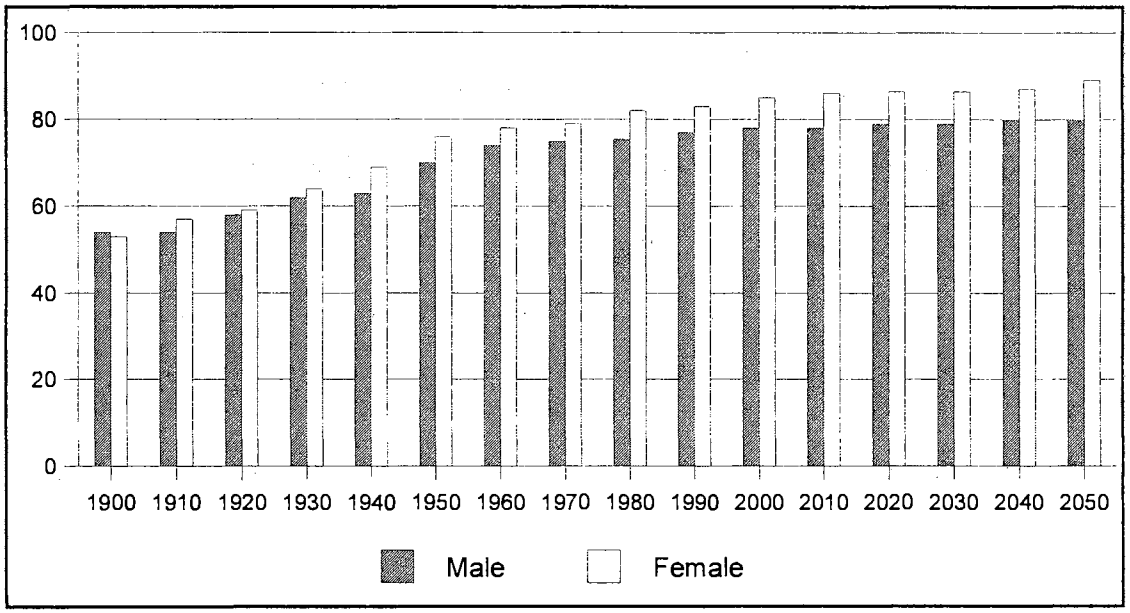

Figure 2. Increasing Life Expectancy. Source: Health in the New Millennium, 1998. Worth Publishers.

As shown in Figure 2, female life expectancy has reached over age 80 and is beginning to level off. The life expectancy is certainly noteworthy, but unfortunately this may not be all good news. The quality of this long life may not be what is hoped for; in other words not all elders live a disability-free life. Instead of living long, healthy lives,

some elders are in a disabled state, with a loss of some functional ability. Even though improved medical care is enabling persons to live longer, some live with disability and chronic health problems (Kunkel & Applebaum, 1992). This, along with high rates of depression, anxiety and substance abuse among aging baby boomers (Klerman & Weissman, 1989), has caused some to predict a possible epidemic of mental health problems among older adults in the first half of the 21st century (Koenig et al., 1994). Financially this could cause an overload on the federal budget, specifically Medicare. Therefore, it is prudent for other programs to come into play to relieve some of the overload. As a matter of fact, health promotion and disease prevention programs are now receiving a lot more attention and alternative resources within the community to possibly help supplement state and federal programs. Prior to state and federal programs for the sick, mentally ill, religious institutions commonly cared for these individuals. It is a possible contention that they may once again play a major role. This is why it is so important to further investigate the issues surrounding "successful" aging. Why do some people age well and others not, why do some transcend the meaning of life into successful aging? What role does religion play in the aging society and what role will it play? According to a 1981 Gallup Poll, individuals with a high level of religious involvement and spiritual commitment were more likely to be extremely satisfied with life. This study wishes to further delve into the role retirement communities can play in providing a supportive environment for "successful aging."

Religiosity in the Aging Society

Religion has long been considered an important force in shaping social life (Ferraro & Albrecht-Jensen, 1991). Religion and spirituality are integral components in the lives of many individuals (Tix & Frazier, 1998). Approximately 95% of adults in America express a belief in God, and nearly 88% pray to God (Hoge, 1996). In addition, 90% of Americans classify themselves as being "religious (Goldman, 1991), and 72% regard religion as the single most important influence in their lives (Bergin & Jensen, 1990). Nearly three-fourths of older Americans say that religion is extremely important to them (Moore, 1995). Belonging to a religious organization is important to individuals, especially the older adults. Church participation is the number one form of organizational activity among older persons (Atchley, 1991). Religion and spirituality provide a strong sense of meaning and purpose to older adults; it is a resource to rely on in their life course. Before examining the various ways that religion impacts older adults, let's first examine two terms that researchers use to differentiate between types of religious involvement. These two terms that account for being religious and practicing religion are referred to as "organizational" religiosity and "nonorganizational" forms of religiosity. Mindel and Vaughan (1978) first distinguished these differences in religious involvement. Subsequent research has confirmed the importance of this distinction (Koenig, Moberg, & Kvale, 1988; Young & Dowling, 1987).

Organizational Religiosity

Organizational expression of religiousness includes church or synagogue attendance and membership and participation in other activities sponsored by religious institutions. Conventional religious involvement which includes religion attendance and devotion is positively associated with life satisfaction, personal happiness, physical health, and longevity, and inversely associated with depression and other undesirable psychosocial states (Levin, 1994). Mindel and Vaughan (1978) further expands organizational religion to include attending religious revivals, taking part in religious services, and contributing money to religious activities.

Nonorganizational Religiosity

Included in nonorganizational religiosity is: listening to religious services on radio and television, praying alone or with family, listening to religious music, and relying on religious ideas to help understand one's life. Ainlay and Smith (1984) and Ainlay and Hunter (1984) found that organizational religious activities decrease, and informal or nonorganizational religious activities increase, with advancing age. They also found that the importance people attach to participation in the life of the church remains constant through their later years (age 50 and beyond). Interestingly, Mindel and Vaughan (1978) examined the organizational and nonorganizational participation relationship because supposedly declining physical health reduces organizational participation. Their study found that people with high levels of health impairment were more involved in informal religious activities. Consequently, they concluded that

"apparently being ill does not draw one away from religion but perhaps draws one to it in a more subjective, personal way" (p. 107).

Religion and Meaning

The search for meaning has been defined as one of the critical functions of religion. Frankl (1963) viewed meaning in religious terms, contending that it was something to be "discovered rather than created," that is, every individual was said to have a unique, externally given purpose in life. Participation in a church or synagogue contributes to personal adjustment of older adults particularly if they continue to volunteer for church projects (Payne 1977, 1984). Membership and participation provides older persons with continuity, social identity, and access to meaningful social roles. Even when other organizational memberships are dropped, the membership in a church or synagogue is retained (Payne 1988). This shows that older adults are attached to their religious institutions. This attachment represents a significant source of meaning in their lives.

David O. Moberg (1990) identified spiritual well-being with symptoms and signs of mental health, personality integration, meaning in life, and functional social relationships. Moberg points out that well-being is based on feelings of personal integration, meaning in life, or wholeness. In essence, a religious theodicy provides a framework through which individuals can find meaning (Berger, 1967). There is mounting evidence that persons who enjoy a greater sense of coherence and order in their lives also are healthier physically and psychologically (Antonovsky, 1987). Researchers

have suggested that strong religious beliefs and experiences may deepen this sense of meaning and comprehensibility (Idler, 1987; Petersen & Roy 1985; Pollner, 1989).

Aging individuals who no longer experience the "youthful" look and feel, and who have fallen into the ageism trap can find their own affirmation in religion. Religion conveys meaningful portrayals of late life possibilities for spiritual growth and fulfillment (Moody, 1990). Cole (1983) has argued that today the social meanings of age and aging are impoverished because of the inability to tolerate the ambiguities and paradoxes of age. The alternative images offered by religious narratives, symbols, and rituals accept the tensions of late life and therefore have significant implications for older persons' well-being. Individual and social acceptance of religious values about the meaning of age may be one more way religion can have a positive association with well-being in old age.

Dimensions of Religion

In recent years, a growing body of literature has explored religion and spirituality for various mental and physical health outcomes (Koenig, 1994 ; Levin, 1994, 1996). In these studies it has become apparent that it is difficult to conceptualize and measure religion because there are several dimensions to religion (Krause, 1993; Williams, 1994). It has become clear that religious/spiritual variables cannot simply be combined into a single scale that examines the effects of a single variable, "religiosity;" rather, each relevant dimension of religiousness and spirituality should be examined separately for its effects on physical and mental health. These various dimensions are all included in the instrument, the Brief Multidimensional Measure of Religiousness/Spirituality: 1999 that will be used in this study. The domains were chosen because of the strength of their

conceptualization and theoretical empirical connection to health outcomes. The following key domains of religiousness/spirituality have been identified as essential for studies where some measure of health serves as an outcome. This list includes: 1) Daily Spiritual Experiences, 2) Meaning, 3) Values, 4) Beliefs, 5) Forgiveness, 6) Private Religious Practices, 7) Spiritual Coping, 8) Religious Support, 9) Spiritual History, 10) Spiritual Commitment, 11) Organizational Religiousness, and 12) Religious Preference. A brief explanation of each of these domains is provided.

Daily spiritual experiences are the individual's perception of the transcendent (God, the divine) in daily life and the perception of interaction with, or involvement of, the transcendent in life. Constructing *meaning* from life's events is an essential human endeavor; it provides a sense of purpose in life (Dufton & Perlman, 1986). *Value* is based on the approach of Merton (1968), who described values as goals, and norms as the means to those goals. *Beliefs* differ from religion to religion, so finding a set of beliefs common to all religion, not to mention finding beliefs that religions might have in common with spirituality, is impossible. Members of religious groups are identified as "believers." *Forgiveness* is overcoming of negative effect and judgment toward the offender, not by denying ourselves the right to such effect and judgment, but by endeavoring to view the offender with compassion, benevolence, and love while recognizing the right to them (Enright, et al, 1992, pg. 101). *Private religious practices* are nonorganizational in that they occur outside the context of organized religion. They are private behaviors that occur at home, individually or in a family setting. These behaviors could include praying, watching or listening to religious programs, and listening to music. *Religious/spiritual coping* is a mechanism for dealing with stressful

life events. In times of crisis people translate their general religious orientation into specific methods of religious/spiritual coping. *Religious support* is defined as the social relationship between an individual and others in their shared place of worship. *Religious/spiritual history* assesses the individual's religious/spiritual history over their life course. *Commitment* is defined as the importance and commitment one has to their religious/spiritual beliefs. *Organizational religiousness* assesses the involvement a person has with a formal public religious institution: a church, synagogue, temple, mosque, ashram, etc. The last domain is *religious preference*; it ascertains the religious tradition or denomination with which an individual identifies.

These various domains are vital in assessing an individual's religiousness and spirituality. The domains may have potential mechanisms for health outcomes by various pathways. Behavioral, social, psychological, and even physiological causal pathways are potential links to religion. These various religious/spirituality links to health outcomes provide the framework for understanding these associations. Each of these mechanisms for health outcomes will be covered to further explain the multifaceted relationships that exist.

Religion and Health

A growing body of empirical evidence suggests that religious involvement have salutary effects on health (Ferraro & Albrecht-Jensen, 1991; Idler & Kasl, 1997; Koenig, 1997; Levin, 1996). Many of the domains discussed previously have been shown to be associated to certain health outcomes. The potential mechanisms for health outcomes can be behavioral, social, physiological, and psychological in nature. The following

discussion will explain each mechanism and its prospective association to religion. Behavioral and social mechanisms will be covered, then the physiological mechanisms. The physiological mechanism discussion will cover the stress response, mortality, morbidity, and chronic diseases findings and how they relate to religiousness in the lives of older adults. The psychological mechanism will be included in the life satisfaction discussion as it relates to the overall psychological well-being of older adults. A retirement community profile will be included as well as the typology of the resident and their mobility. In conclusion, a summary will provide an overview of the chapter.

Behavioral Mechanisms

Behavioral mechanisms refer to an individual's actions or lifestyle choices. Religiousness/spirituality may protect against disease indirectly by association with healthy lifestyles. Certain religious denominations advocate healthy diets and advise against unhealthy habits (Cochran, Beeghley, & Bock, 1988). A 12-year study exploring the impact of participation in religious services on risky health behaviors, friendships and family ties, and depression found three major findings. One finding showed a lowered frequency of unhealthy behaviors among the participants. These participants were healthier because they were more likely to engage in good health habits, such as exercise. They were less likely to have participated in risky behaviors, such as excessive smoking and heavy drinking, due in part to the social and behavioral guidelines set forth and reinforced by the religious organizations (Idler & Kasl, 1997). Strict religious denominational teachings influence better health practices among some religious groups.

Mormons and Seventh-Day Adventists have been found to prescribe to health practices that may include not smoking cigarettes, drinking alcohol, or eating meat (Levin, 1994).

Socializing or being in fellowship with fellow believers have been associated with improved information about health care resources, better compliance with health care regimens, and quicker response to acute health crises (Blumenthal, et al., 1982; Doherty, et al., 1983; Umberson, 1987). A study that analyzed the long-term association between religious attendance and mortality over 28 years validated this premise. This study determined whether the association between religious attendance and mortality is explained by improvements in health practices and social connections for frequent attendees. The results showed that frequent attendees had lower mortality rates, partly explained by improved health practices. The results were stronger for females. During a followup, frequent attendees were more likely to stop smoking, increase exercising, increase social contacts, and stay married (Strawbridge, Cohen, Shema, & Kaplan, 1997).

Gardner and Lyon (1982) found a lower rate of cancer among some religious groups, a finding attributed to the dietary and hygienic practices of the more religiously involved.

While not all religions have specific teaching regarding these risky health behaviors, theologians have argued that "purity of life" is a generic religious value" and that most religion and spiritual traditions have beliefs about maintaining the health of mind, body, and soul.

Social Mechanisms

Social mechanisms purport the view that religious groups may provide supportive, integrative communities for their members. Numerous epidemiological studies report that religious group membership have reduced mortality in a linear fashion as the number of ties increases (Berkman & Syme, 1979; House, et al., 1988). Participation in organized religious activities may enhance individual perceptions of well-being in four ways. First, organizational religiosity or active religious involvement in a community of believers provides continuity across life-course stages by emphasizing life's intrinsic and enduring meaning and fostering a sense of being blessed by God (Tobin, 1991). Churches and synagogues offer institutional settings and regular opportunities for socialization between persons of similar interests and values (Witter, Stock, Okun, & Haring, 1985).

Secondly, religious communities are often conduits for various kinds of social support, tangible or instrumental aid (e.g, goods and services), and socioemotional assistance (e.g., companionship). Indeed, compassion and kindness, especially toward the less fortunate, are theological imperatives in most major religious traditions, and helping behavior is central to the rhetoric and rationale of many religious communities (Ellison & Levin, 1998). Many religious communities offer various programs, services and outreach opportunities for their members. These formal-type programs provide assistance to persons with special needs. The members may visit shut-ins, comfort the bereaved, and pray for those in need. Participation in formal and informal support programs provide the

older adult a sense of giving back to society. Participation in these programs can offer a sense of purpose and meaning to the group and the person individually.

Third, in addition to serving as a social support system, religious groups often play an integral role in providing social resources that mediate and/or moderate the negative health consequences of social stress (Ellison & George, 1994). Religious involvement tends to enhance an individual's social network. Individuals will frequently cultivate friendships with similar believers, and persons embedded in religious communities often enjoy social networks that are larger than those of secular friends. Likewise, it is reported that persons who participate regularly in religious congregations receive more social support than nonparticipants. In addition, the programs and personnel of religious institutions often can provide information and material assistance useful in the problem-solving phases of coping with stress (Eng, Hatch, & Callan, 1985).

Fourth, participants in religious congregations feel more confident that their friends and associates value and care for them and can be there for them in times of need, in relation to non church members. Religious rituals and congregational events such as revivals or luncheons may foster a sense of community by reminding members of their past and renewing their sense of that common purpose. The religious experiences may reinforce private beliefs and may increase the importance of religious interpretations of personal life experiences.

Religious social activity does play an integral role in the lives of older adults, and specifically, life satisfaction of older women is related to their engagement in social activities (Neill & Kahn, 1999). Brittain and Adams (1987) found that women were more likely than were men to participate in church activities. Religious community may

provide the friendships and support system that are beneficial to older women's well-being and happiness. Cutler (1976) for example found that church membership and affiliation correlated higher with well-being than any other voluntary associations for older adults. In addition, Ruffing-Rahal and Anderson (1994), found that well-being increased when community dwelling older women were able to attend religious services. Religious communities may provide support to older women without the stress of reliance on family members (Harvey, Bond, & Greenwood, 1991). In addition, one study found that involvement in the social aspects of religion reduced loneliness more than contact with family and friends (Johnson & Mullins, 1989). Finally, a study that analyzed the prospective association between attending religious services and all-cause mortality found that persons who attended religious services had lower mortality than those who did not. Religious attendance tended to be slightly more protective for those with high social support (Oman & Reed, 1998). Religious social support does indeed play an integral role in the lives of our older adults.

Physiological Mechanisms

The physiological mechanisms of religiousness/spirituality may provide a cushion against the major and minor stressors through direct physiological pathways. In other words, the neuroendocrine messengers such as catecholamines, serotonin, and cortisol, influence negative emotions that have been associated with pathogenesis. These pathogenic mechanisms include myocardial ischemia (Babyak & Krantz, 1996; Jiang, 1996), arrhythmias (Kamarck & Jennings, 1991), arteriosclerotic heart disease (Comstock & Partridge, 1972; Durkheim, 1951; Dwyer, Clarke, & Miller, 1990), and suppressed

immune response (Stone & Bovbjerg, 1994). Religious/spiritual practices tend to elicit the "relaxation response," an integrated physiological reaction that opposes the "stress response," known as the fight-or-flight response – a physiological change that prepares human in times long past to fight off or run away from mortal danger. In today's world, the fight-or-flight response is evoked many times a day. In response, the body cranks out stress hormones such as adrenaline. Such hormones boost blood pressure, dampen the immune system and, over time, can damage a variety of body systems. Any type of repetitive prayer or meditation can block the cascade of stress hormones and may help improve health (Benson, 2000). Repeated elicitation of the relaxation response results in reduced muscle tension, less activity of the sympathetic branch of the autonomic nervous system, and less activity of the anterior pituitary-adrenocortical axis. This results in lower blood pressure, lower heart rate, and improved oxygenation, in addition to altered brain wave activity and function (John E. Fetzer Institute Publication, 1999).

Levin (1989) found higher levels of religious involvement and subjective religiosity to be positively associated with health. Religiosity and religious coping have been found to affect health status positively including overall morbidity and mortality (Levin, 1994). More than 250 published empirical studies in medicine and epidemiology have explored the effects of one or more religious measures or indicators of nearly every cause of morbidity and mortality imaginable (Jarvis & Northcut, 1987; Levin & Schiller, 1987). These epidemiological studies are of great importance because of the possible implications concerning chronic diseases in the older adults. Chronic diseases are considered to be the most prevalent, costly and preventable of all health problems and are the leading causes of disability among adults as specified in Figure 3.

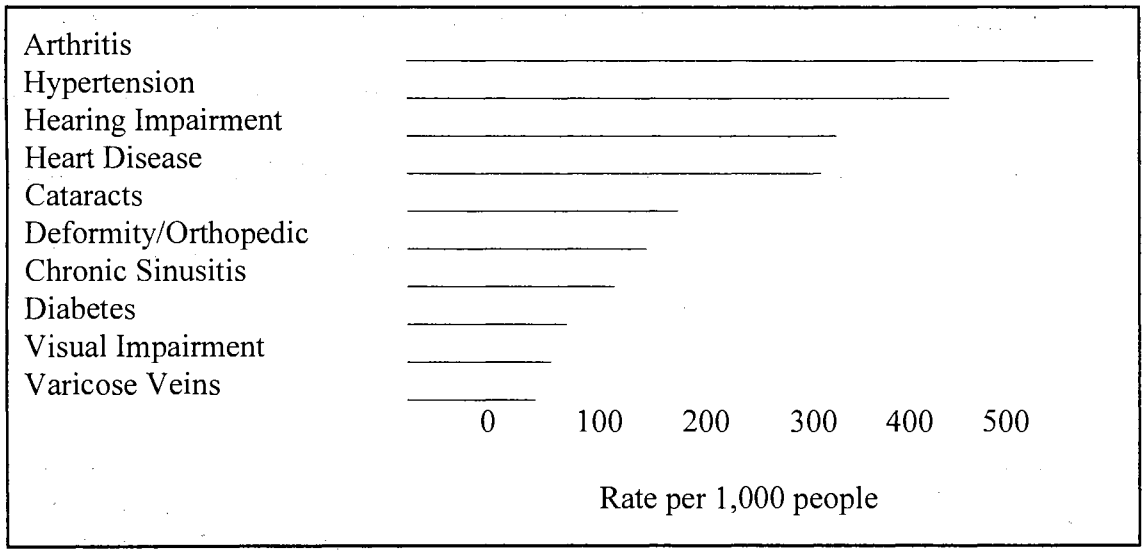

Figure 3. The Top Ten Chronic Conditions Affecting People Age 65 and Older. Source: Health in the New Millennium, Worth Publishers, 1998.

As you can see from Figure 3, elders account for 40 percent of all chronic illness reported in the United States and more than four of every five elders have at least one chronic disease. Women report more chronic illnesses than men report. Unfortunately chronic illnesses account for seven of the ten leading causes of death, or more than 90 percent of deaths among elders and a significant proportion of deaths. Chronic illnesses can occur at any age, but become more common in the middle and later years. More than 100 million Americans live with chronic conditions. The direct health care costs for these illnesses account for 75 percent of the health care expenditures in the United States. Chronically ill patients account for 80 percent of all hospital stays. In 1990, an estimate of $425 billion was spent on treatment and medication; by 2030 the projected costs will increase to $798 billion with 148 million individuals affected (Hoffman, Rice, & Sung, 1996). As indicated in Table 3, arthritis and hypertension are the two most prevalent

chronic illnesses. Arthritis affects almost half of the older adults over 65. Hypertension is reported in almost 400 out of 1,000 people. Figure 4 shows the ten leading causes of death in the United States for people age 65 and over. Heart disease is the leading cause of death, followed by cancer, and stroke.

1. Heart Diseases	6. Diabetes mellitus
2. Malignant neoplasms (cancers)	7. Accidents & Adverse effects
3. Cerebrovascular diseases (stroke)	8. Alzheimer's disease
4. Chronic obstructive pulmonary diseases	9. Nephritis (kidney disease)
5. Pneumonia and influenza	10. Septicemia

Figure 4. Ten Leading Causes of Death in 65 Years and Over: United States, 1996. National Vital Statistics Reports, Deaths: Final Data for 1996, November 10, 1998. 47(9).

People often turn to religion in times of trouble, including, and especially, during serious illness. Religious groups can offer both spiritual and practical help to the sick: prayers, visitors, and hot meals. Perhaps even more important to the elder is the belief in divine authority over human affairs (Follner, 1989). Taking this into consideration it is evident that older people increasingly turn to religion, but data has shown that indicators of religiosity remained fairly stable over time, with the possible exception of religious attendance, which declined slightly among the very old. This is probably due to declining health that prevents them from organizational religious participation. Mindel & Vaughan (1978) purport that religious participation is compensated by an increase in nonorganizational forms of religious expression, such as private prayer. A study on

religion, health, and nonphysical sense of self by Idler (1994) concluded that disabled persons frequently turn to religion for help. One of the ways religion helps is by allowing them to "rise above" their problems by putting them in a context in which one's own physical body doesn't matter that much. Nonorganizational or private expressions of religiosity, as well as positive subjective religious attitudes or beliefs are promotive of health, especially when formal or public participation is lessened because of declining health (Levin, 1994). The following research details the various associations between religion and health.

The following research studies have investigated the relationship between religion and mortality, hypertension, stroke, and cancer. A study in New Haven, CT with 400 persons age 62 and over examined the role of religion, well-being, and social contacts as predictors of mortality. The results showed that religiousness had a protective effect, but only among the elderly in poorer health. The non-religious elderly in poor health were almost two and one-half times more likely to die than the religious elderly in poor health (Zuckerman, Kasl, & Ostfeld, 1984). Another study on mortality among the elderly in Alameda County examined the relative importance of social ties as predictors of 17-year survival for participants. Their results indicated that membership in church groups was associated with decreased mortality risk in all age groups (except ages 50-59), whereas membership in other types of social groups was generally not significantly related to mortality risk. Compared with other forms of social ties, church membership is among the strongest predictors of survival for persons age 60 or over (Seeman, Kaplan, Knudsen, Cohen, & Guralnik, 1987). Koenig (1994) examined the effects of religious coping on survival and use of health services. The results from this study showed that mortality rate

during the 14 month average follow-up period was 25% for religious copers and 23% for non-religious copers, a non-significant difference. Their conclusions stated short-term follow-up of physically ill, hospitalized men found no differences in healthcare service use or mortality between religious and non-religious copers. To the contrary, though, a study just released by the Duke University Medical Center found that healthy senior citizens who said they rarely or never prayed ran about a 50% greater risk of dying during the study than seniors who prayed or meditated more than once a month (USA Today, 2000). A study by Oman and Reed (1998) analyzed the prospective association between attending religious services and all-cause mortality to determine whether the association is explainable by six confounding factors. Their results showed that persons who attended religious services had lower mortality than those who did not, even when considering the six confounding factors of demographics, health status, physical functioning, support, and psychological state. In the Tecumseh Community Health Study, frequent church attendance was associated with lower 2-year mortality for females but not males (House, Robbins, & Metzner, 1982).

Statistically significant associations have been found linking religion and health variables in the areas of cardiovascular disease such as hypertension (HBP) and stroke (Levin & Schiller, 1987). A study conducted by the Department of Health and Human Services reviewed literature and encouraged churches to take a more active effort in blood pressure control and prevention of stroke. Their conclusions indicated that religiously sanctioned health-related behaviors and stress-alleviating effects of religious worship could explain the effects of religion on blood pressure. This was one of the first government periodicals advocating a cooperative effort between the church and the

medical community in detecting, treating, and preventing health problems. A study conducted by a preventive medicine specialist at the Maharishi University of Management in Fairfield, Iowa, and his colleagues at the University of California at Los Angeles studied 60 African-Americans with high blood pressure. After seven months, people in the study who had meditated twice a day showed significant reversal of the carotid thickening (Schneider, 2000). Finally, another convincing study examined the relationship between blood pressure and the importance of religion and church attendance. Their results showed that diastolic blood pressures of men with high church attendance and high religious importance were significantly lower than those of men in the low importance, low attendance group (Larson, Koenig, Kaplan, Greenberg, and Tyroler, 1989). An interesting study examined psychosocial variables (including religiousness) for the development of stroke over time in community-dwelling older adults. Their results concluded that stroke incidence among persons who never attended church was almost double that of those who attended church weekly or more often (8.6% vs 4.7%) (Colantonio, Kasl, & Ostfeld, 1992).

There have also been studies that examine the relationship between religious belief and cancer. One such study examined the relationship between religious belief, activity and connections, with ratings of happiness, life satisfaction, and pain level. A questionnaire was administered to 71 cancer patients (61% women), who had a projected survival rate of 3 to 12 months, as part of the Cancer Care and Rehabilitation Project at Vermont Regional Cancer Center in Burlington. Religious beliefs, church affiliation, importance of church, attendance at services, and closeness to God were religious variables measured. The results showed that pain level was inversely correlated with

religious belief. They concluded that religion provided an important source of support for these patients, but was not related to survival (Yates, Chalmer, James, Follansbee, & McKegney, 1981). Another cancer study tested the hypothesis that intrinsic religious values and life meaning enhance adjustment and well-being in patients with cancer. The results showed that intrinsic religiosity and transcendent meaning were slightly lower in those with cancer. The researchers concluded that religious values, meaning, and images can be utilized to help support cancer patients to develop "broader, sustaining felt connections with larger horizons of life beyond the self" (Acklin, Brown, & Mauger, 1983). Finally, a study examined the effect of religious concentration and religious affiliation on cancer mortality rates. Sample data was used from the National Center for Health Statistics. This study showed that conservative Protestants had lower rates of cancer mortality than liberal Protestants. Those counties with higher concentrations of Jewish persons had the highest rates of cancer mortality, whereas areas with high concentrations of Mormons had the lowest mortality rates. The findings suggest that religion has a significant impact on mortality rates for all malignancies combined, even after controlling for demographic, environmental, and regional factors known to affect cancer mortality (Dwyer, Clarke, & Miller, 1990). The above-mentioned research studies indicated the various associations regarding religion and health. Statistically significant associations have been found linking religion and health variables in the areas of cardiovascular disease, hypertension, stroke, and cancer, mortality, and general health. The studies that made comparisons between two or more groups on the basis of religious affiliation had greater health and less morbidity and mortality among adherents of strict religions and denominations (e.g., Seventh-Day Adventists and Mormons) when

compared with other religious groups. Also the studies that used at least ordinal-level measures of religiosity, that had a greater degree of religiousness, indicated the better health and less of whatever illness was being investigated. This is especially true for hypertension (Levin & Vanderpool, 1989) and for the studies examining the effects of frequent religious attendance (Levin & Vanderpool, 1987).

It must be said that even though numerous studies showed positive associations between religion and health outcomes certain methodological issues that pertain to studies of physical disease outcomes need mentioning. First, confounders such as behavioral and genetic differences and variables such as age, sex, socioeconomic status, and health status have an important role in the association of religion and health. Failure to control for these factors can lead to a biased estimation of their association. It has been suggested that use of multivariate methods allow estimation of the magnitude of the association between religious variables and health outcomes while still controlling for the effects of other variables. For instance, various studies assessed the degree of religiousness on health outcomes and showed reductions in morbidity and mortality. However, these cases were selected precisely because they were inclined to adhere to stricter health behaviors that put people at lower risk (Sloan, Bagiella, Powell, 1999).

Life Satisfaction

Life satisfaction refers to an individual's personal judgment of well-being and quality of life based on his or her own chosen criteria (Diener, 1984; Diener, Emmons, Larsen, & Griffin, 1985; Shin & Johnson, 1978). Life satisfaction has long been used as an indicator of well-being (Campbell, Converse, & Rogers, 1976; Neugarten, Havighurst,

& Tobin, 1961). Psychological well-being is an umbrella construct comprising various affective and cognitive dimensions such as positive and negative effect, happiness, and life satisfaction (George & Siegler, 1981). Psychological well-being is a component of subjective well-being, a consensus of personal evaluations of the responses of individuals to their life experiences (Okun, 1995). Religious involvement, assessed in various ways, has shown positive associations or protective effects with respect to the well-being-related outcomes of life satisfaction (Anson, Antonovsky, & Sagy, 1990; Levin, Chatters, & Taylor, 1995).

Religiosity research pertaining to well-being and life satisfaction has become prevalent. There have been reviews documenting the many positive findings on religion from empirical studies conducted by gerontologists and geriatricians (Koenig, 1995; Levin, 1997). Even though there have been numerous studies, key limitations in the methodology therefore limiting the generalizability and persuasiveness of some of the findings (Koenig, 1990; Koenig & Futterman, 1995; Levin, 1989). First, the religious dimensions such as religious attendance, etc. tend to make inferences about "religion" in general even though each domain is separate. Second, much of the empirical research is based on small, nonrandom, unrepresentative samples. Third, only rarely have theoretical models been tested. Finally published findings typically fail to control for the effects of standard sociodemographic correlates of religious involvement, health status, or psychological well-being (Levin & Markides, 1986). These are just a few of the draw-backs when studying the associations between religion and well-being, and specifically life satisfaction.

Religion is considered to benefit well-being in the older adult through prevention of physical morbidity (George & Landerman, 1984). Religious involvement serves to impact health by a combination of encouraging positive health-related behaviors, facilitating receipt of social support, engendering stress-reducing emotional states, fostering health-promoting beliefs, and enhancing an optimistic outlook (Levin & Vanderpool, 1989). It has also been suggested that religion may enhance various aspects of well-being through the establishment of personal relationships with a divine other and through the provision of systems of meaning and existential coherence. Organized religious activity is positively associated with life satisfaction or other indicators of well-being. This positive association is supported because personal religious faith promotes mental health and well-being among older adults by emphasizing interpersonal relations, stressing forgiveness, providing hope for change, promoting a sense of self-control and self-determination, and promising life after death (Koenig, 1994). The above conditions seem to be a consensus as to how religion enhances well-being, and thus life satisfaction in the older adult. The following research studies affirm the association of life satisfaction and religiosity in the older adult.

Hadaway and Roof (1978), found that adults with high levels of religious commitment felt significantly more satisfied with their lives than persons with low levels of commitment. Religious faith (religious meaning) was also a stronger predictor of life satisfaction than number of friends and marital status. Petersen and Roy (1985) controlled for age, education, race, marital status, and perceived health and found that religious salience had a positive effect upon meaning and purpose. Controlling for the

other religiosity variables such as church attendance, orthodoxy, other-worldly orientation, and religious comfort beliefs did not weaken the effect of religious salience.

A study on religious involvement and subject well-being suggested that the beneficent effects of religious attendance and private devotion reported in previous studies are primarily indirect. However, this study signified the positive influence of religious certainty on well-being was direct and substantial noting that individuals with strong religious faith report higher levels of life satisfaction, greater personal happiness, and fewer negative psychosocial consequences of traumatic life events (Ellison, 1991). Further, in models of life satisfaction only, the positive influence of existential is especially pronounced for older persons and persons with lower levels of formal education. Also there are persistent denominational variations in life satisfaction, but not in happiness: nondenominational Protestants, liberal Protestants, and members of nontraditional groups such as Mormons and Jehovah's Witnesses report greater life satisfaction than do their unaffiliated counterparts, even with the effects of other dimensions of religiosity held constant (Ellison, 1991). Another study examined the impact of personal spirituality and religious social activity on the life satisfaction of older widowed women. Fifty-one White, female residents of a retirement community completed measures of personal spirituality, religious social activities, and life satisfaction. The quantitative results suggested only involvement with religious social activities were related to life satisfaction. This study also revealed that religious activities helped these older women overcome hardships, gave them a chance to sustain friendships, and provided a vehicle through which they could contribute to their community (Neill & Kahn, 1999). In concurrence, Armstrong and Goldsteen (1990)

found that friendships contributed to late-life satisfaction of older women, and Adelmann (1993) found that older women's life satisfaction was enhanced by volunteer activities and do-it-yourself tasks. Babb and Glass (1997) found that retired professional women believed in keeping busy and engaging in joyful activities in retirement, plus they attributed their good attitudes to their busy lives. Koenig, Kvale, and Ferrel (1988) found that religious attitudes and behaviors were strong indicators of morale for older women. Also studies on older adults show that women scored higher than men on measures of religious beliefs and women were more likely than men to mention religious coping strategies in interviews (Koenig, George, & Siegler, 1988).

A research study on the "healthy-minded" religion of modern American women examined how religiousness was related to self-reported mental and physical well-being, and to what extent religiousness had changed over the past 5 years. This study random sampled 2,500 females, ranging in ages from 15 to 91 years. The sample represented 23 percent Catholic and 70 percent Protestant. The study indicated that women who were either very religious or anti-religious scored lowest on the unhappiness scale. Those who were only slightly religious reported the most unhappiness (Shaver, Lenauer, & Sadd, 1980). The researchers concluded that slightly religious respondents were less happy and more depressed than either the very religious or the anti-religious. Finally, a study examining how well religion predicts personal well-being, life satisfaction, and world view in the elderly concluded that only one of four religious variables (belief in life after death) was significantly correlated with well-being (Steinitz, 1980).

The numerous studies investigating religion and life satisfaction provide partial support for the notion that religiosity is a significant independent predictor of life

satisfaction. There also seems to be a tendency towards increased religiosity with aging, particularly among the highly religious, which appears to be associated with life satisfaction. Interestingly, a study that investigated life satisfaction of women in a retirement community suggested that involvement with religious social activities were related to life satisfaction. Interviews in the study revealed that church activities provided the women a loving family and a supportive community (Neill & Kahn, 1999). Engaging in social activity seems to be the connection to religion and life satisfaction. This connection would lead one to predict that residents living in a religious-affiliated retirement community would certainly benefit from the environment.

Retirement Community Profile

Residents of age-homogeneous settings, such as retirement communities, experience higher rates of social interaction and higher levels of social integration and morale than older adults living in age-integrated settings (Bultena, 1974; Lawton, 1970; Rosow, 1967). Studies of social ties in retirement communities and other age-segregated housing suggest that friendships flourish for many residents (Adams, 1986; Shea, Thompson, & Blieszner, 1988; Stacey-Konnert & Pynoos, 1992). Age-homogeneous settings seem to exert a greater impact on older women than older men. Women also tend to show a greater increase in social activity and involvement in friendships (Rosow, 1967; Silverman, 1987). This could be likely due to the ratio of women to men in retirement settings, women having a large pool of potential friends. Poulin (1984) noted that some theorize that age-segregated housing does offer more chances to form new friendships because of a larger amount of residents are available. Findings also show that

older persons develop interpersonal networks throughout their lives and close friends usually don't follow each other to the same complex. The conclusion is that age-segregated housing has no significant effect on friendship patterns, although there are opportunities for socialization. Socialization is just one of numerous reasons why older individuals choose to relocate to a retirement setting.

Profile of Retirement Resident

The older adult population is made up of 3 distinct segments: 1) active retirees aged 65-74 who are still married, 2) those aged 75-84 who are slowing down and are often widowed, and 3) those 85 and older who may need help in daily functioning. Each group has different needs. Some characteristics of these older adults are that around 72 percent own their homes and almost 55 percent live with a spouse, while 30 percent live alone. Also, the older adult tends to move less than other people. Retirement communities generally attract the younger (late 60s), active, married older adult. The time spent searching for a retirement community varies. A study by Kichen and Roche (1990) indicated residents in a CCRC moved within two years from the time they first considered searching for a retirement community. A high proportion (45.3%) only visited one facility before making a decision.

Sorce, et al., (1989) found that 82 percent of older consumers would ask the advice of family when considering their next move. Among retirement housing residents in an American Association of Retired Persons (AARP) (1992) study, 40 percent had consulted their spouse about future housing plans and 38 percent had consulted their children and/or grandchildren.

Typology of Residential Mobility

For older individuals to be satisfied with their environment, an appropriate "fit" needs to exist between their level of competence and the demands of their environment (Lawton, 1980; Lawton & Nahemow, 1973). In other words, if the environment is too demanding for an older adult's competence or if the environment puts too few demands on the older adult's competence, there is a poor fit. An elder enjoys a certain range of comfort and display adaptive behavior when their physical and social living environments are compatible with their personal abilities and resources. Too wide a discrepancy between personal competence and the demands of the environment results in personal stress and behavior that impedes life satisfaction in the older adult. At this point, relocation is considered as an option to increase the "fit" for that person. Selecting a new housing option is of the utmost importance. Older persons should avoid moving to a residence that requires too little from them or lacks the stimulation necessary to challenge their existence (Lawton, 1982).

When considering outcomes related to the person-environment fit model, the preferences of the individual and the nature of the environment must be considered. Most likely the older adult's decision to move is prompted by a need for greater physical, psychological, and/or social security (Parmelee & Lawton, 1990). Litwak and Longino (1987) developed a later life typology of residential mobility, identifying three points in life at which residents are likely to perceive their housing needs are not being met. These three points are most likely: at retirement, when chronic disabilities require family assistance, and when disabilities require professional care and institutionalization.

Bogorad (1987) modeled two stages of movement: a move into a house or condominium in early retirement and a second move to a rental retirement center when widowed and in one's 70s.

Retirement may trigger a move because the retiree is no longer constrained by a job. Retirement was also often cited as a reason for moving in the Annual Housing Survey (Speare & Meyer, 1988). The retirement move is more of a desire for amenity locations or back to family and friends. These movers will likely choose independent housing, perhaps in a retirement community.

Other situations that may trigger a move include failing health, death of a spouse, security concerns, lack of social support groups, and inability to maintain the home (Chevan, 1995; Golant, 1984; Gonyea, et al., 1990; Hunt, 1991; Merrill & Hunt, 1990). A study by Silverstein and Zablotsky (1996) found a relationship between slight to moderate disability and movement to retirement housing.

Summary

There has been tremendous growth in the aging population and the projected growth rate is steadily increasing. According to the U.S. Bureau of the Census (1993), persons aged 65 and older will make up 22.9 percent of the population by the year 2050. Furthermore, there is an increased life expectancy for both men and women in the United States reaching as high as 80 years old. These sociological considerations play a major role in the future of the older adult in relation to retirement, health issues, housing arrangements, and life satisfaction. According to a 1981 Gallup Poll, individuals with a high level of religious involvement and spiritual commitment were more likely to be

extremely satisfied with life. Religion has long been considered an important force in shaping social life (Ferraro & Albrecht-Jensen, 1991), and nearly three-fourths of older Americans say that religion is extremely important to them (Moore, 1995). Religion and spirituality provide a strong sense of meaning and purpose to older adults whether they are involved in organizational religiosity or nonorganizational forms of religiosity.

There are various dimensions of religion associated with mental and physical outcomes. These dimensions or domains encompass the concept of religiosity/spirituality and are included in the Brief Multidimensional Measure of Religiousness/Spirituality: 1999. Each of these domains plays a role in the theoretical empirical connection to health outcomes. The potential mechanisms for health outcomes can be behavioral, social, physiological, and psychological in nature.

Behavioral mechanisms refer to an individual's actions or lifestyle choices. Certain religious denominations advocate healthy lifestyles and are less likely to participate in unhealthy behaviors. For instance, Mormons and Seventh-Day Adventists have been found to prescribe to health practices that may include not smoking cigarettes, drinking alcohol, or eating meat (Levin, 1994). Likewise, social mechanisms involved with religion have been associated with positive health outcomes. Epidemiological studies report that religious group membership have reduced mortality in a linear fashion as the number of ties increases (Berkman & Syme, 1979, House, et al., 1988). Participation in organized religious activities may enhance individual perceptions of well-being.

The physiological mechanisms of religiousness/spirituality may provide a cushion against the major and minor stressors that cause chronic illnesses in adults.

Religious/spiritual practices tend to elicit the "relaxation response," an integrated physiological reaction that opposes the "stress response," therefore resulting in reduced muscle tension, lower blood pressure, lower heart rate, and improved oxygenation (John E. Fetzer, Institute Publications, 1999). The epidemiological studies exploring the connection between health and religion could show great importance because of the possible implications concerning chronic diseases in the older adult.

Religion and spirituality have been shown to be associated with well-being and life satisfaction in the older adult. Organized religious activity is positively associated with life satisfaction or other indicators of well-being. This positive association is supported because personal religious faith promotes mental health and well-being among adults by emphasizing interpersonal relations, stressing forgiveness, providing hope for change, promoting a sense of self-control and self-determination, and promising life after death (Koenig, 1994).

Retirement community residents tend to experience a higher rate of social interaction and higher levels of social integration and morale than older adults living in age-integrated settings (Bultena, 1974; Lawton, 1970; Rosow, 1967). Women in these communities also tend to show a greater increase in social activity and involvement in friendships. This socialization factor is one of the reasons why older individuals choose to relocate to a retirement setting. The retirement communities generally attract the younger (late 60s), active, married older adult, or widowed and in one's 70s. Selecting a new housing option such as a retirement community is of the utmost importance to the older adult due to implications surrounding such a move. Investigating the associations of religion, health, and life satisfaction may provide valuable insight to the process.

CHAPTER III

METHODOLOGY

The purpose of this study was to investigate the differences in religious-affiliated retirement and non-religious-affiliated retirement community residents based on perceived measures of religiosity. A second problem under investigation was to investigate if there are any differences in health status measures based on perceived measures or religiosity. A sub-problem under investigation was to investigate the differences in perceived religiosity based on levels of pain and chronic illnesses. The third problem to be investigated is whether life satisfaction differs based on perceived religiosity. The final problem under investigation is whether perceived measures of religiosity differ based on age stratification, income and education.

The procedures in this chapter are categorized into two sections: 1) preliminary procedures and 2) operational procedures. The preliminary procedures include: a) selection of instruments, and b) selection of sites and subjects. The operational procedures include: a) the collection of data, b) research design, and c) statistical analysis.

Before this study was conducted, approval was sought and obtained from Oklahoma State University's Institutional Review Board. All of the following procedures were performed in accordance with their guidelines for ethical treatment of human subjects.

Preliminary Procedures

Selection of Instruments

Three types of questionnaires were used in this study and can be found in Appendix A. They are the Brief Multidimensional Measure of Religiousness/Spirituality: 1999, the Short-Form-36 Health Survey, and the Life Satisfaction Index A.

The Brief Multidimensional Measure of Religiousness/Spirituality: 1999 – Developed by the Fetzer Institute in collaboration with the National Institute on Aging (NIA), part of the National Institutes of Health (NIH). This collaborative effort examined key dimensions of religiousness/spirituality as they relate to physical and mental health outcomes. They identified these key domains of religiousness and spirituality to be included in the instrument. These various domains include: 1) daily spiritual experiences, 2) values/beliefs, 3) forgiveness, 4) private religious practices, 5) religious and spiritual coping, 6) religious support, 7) religious/spiritual history, 8) organizational religiousness, 9) religious preference, and 10) an overall self-ranking.

The Brief Multidimensional Measure of Religiousness/Spirituality: 1999 was embedded in the 1997-1998 General Social Survey (GSS), a random national survey of the National Data Program for the Social Sciences. The basic purpose of the survey was to gather and disseminate data on contemporary American society in order to monitor and explain trends in attitudes and behaviors, and to compare the United States to other societies.

The 1998 version of the GSS also included a topical module on religion. Thus, the NIA/Fetzer measurement instrument benefitted from a unique opportunity to examine how its measures relate to other measures of religion. The GSS data are of the highest quality. In terms of sampling procedure, response rate, validation procedures, data cleaning, and quality control, the GSS meets the most demanding standards of contemporary survey research. The findings from the GSS support the multidimensional approach used in the instrument, thereby indicating the domains were endorsed by substantial numbers of respondents, that the items formed reliable indices within the domain, and that the indices were moderately but not highly correlated with each other (Idler, et al., 1999). The results to date support the theoretical basis of the measure and indicate it has the appropriate reliability and validity to facilitate further research.

Table I includes the descriptive statistics for the NIA/Fetzer Religiousness and Spirituality items. Table II includes the reliability tests for NIA Fetzer Indices. The 36-item short form of the Medical Outcomes Study questionnaire (SF-36) was designed as a generic indicator of health status for use in population surveys and can be used in conjunction with disease-specific measures as an outcome measure in research. The SF-36 includes multi-item scales to measure the following eight dimensions: 1) physical functioning, 2) role limitations due to physical health problems, 3) bodily pain, 4) social functioning, 5) general mental health, covering psychological distress and well-being, 6) role limitations due to emotional problems, 7) vitality, energy or fatigue, and 8) general health perceptions. In addition, question 1 asks for a health status rating, and question 2 covers change in health status over the past year. The various categories are measured on a Likert scale.

TABLE I

DESCRIPTIVE STATISTICS FOR NIA/FETZER RELIGIOUSNESS AND SPIRITUALITY ITEMS

Category	Range	Mean	SD	Female Mean	Male Mean
Public Activity					
Service attendance	0-8	3.63	2.77	3.91	3.28
Other public activities	1-11	3.43	2.71	3.60	3.22
Private Activity					
Private prayer	1-8	5.49	2.50	5.98	4.90
Meditation	1-8	3.39	2.72	3.53	3.23
Bible reading	1-8	2.22	1.42	2.37	2.03
Congregation Support					
Help with illness	1-4	3.17	.94	3.20	3.13
Help with problem	1-4	3.32	.88	3.24	3.29
Makes too many demands	1-4	3.50	.73	3.53	3.46
Critical of R**	1-4	3.67	.67	3.72	3.59
Coping					
Life is a part of larger force	1-4	2.36	1.05	2.50	2.21
Work with God	1-4	2.48	1.04	2.65	2.27
Look to God for strength	1-4	2.94	1.09	3.14	2.71
Feel God is punishing	1-4	3.69	.64	3.71	3.67
Wonder if abandoned	1-4	3.83	.49	3.84	3.83
Make sense w/o God	1-4	2.97	1.02	3.11	2.80
Intensity					
Religious strength	1-4	2.65	.95	2.75	2.52
Spiritual strength	1-4	2.72	.94	2.83	2.59
Forgiveness					
Forgiven self	1-4	3.19	.88	3.28	3.08
Forgiven others	1-4	3.29	.81	3.34	3.23
Know that God forgives	1-4	3.61	.77	3.69	3.52
Spiritual Experience					
Feel God's presence	1-6	3.77	1.67	3.99	3.52
Find comfort in religion	1-6	3.77	1.66	4.02	3.47
Feel inner peace	1-6	3.74	1.40	3.89	3.55
Desire to be closer to God	1-6	3.86	1.62	4.07	3.60
Feel God's love	1-6	3.89	1.59	4.09	3.64
Touched by creation	1-6	4.29	1.51	4.47	4.08
Beliefs and Values					
Carry over beliefs	1-4	2.93	.88	3.04	2.79
God watches over	1-4	3.44	.78	3.56	3.30
Desire to reduce pain	1-4	2.72	.82	2.78	2.66
Belief in afterlife	1-3	2.55	.76	2.57	2.51
Commitment					
Giving amount in ($1000s)	0-60	.88	3.72	.77	1.02
Giving ratio	0-0.10	.01	.03	.01	.01
History					
Religious experience	0-1	.39	.49	.38	.40

Note: **R=Respondent; 1998 General Social Survey, National Opinion Research Center.

TABLE II

RELIABILITY TESTS (r) FOR NIA/FETZER INDICES

Index	Alpha r for domain	Items	Alpha r of items w/in domain
Public Religious Activities	.82	Religious service attendance	.70
		Other public religious activities	.70
Private Religious Activities	.72	Private Prayer	.55
		Meditation	.51
		Bible reading	.56
Congregation Benefits	.86	Congregation helps with illness	.76
		Congregation helps with problems	.76
Congregation Problems	.64	Congregation makes too many demands	.47
		Congregation is critical	.47
Positive Religious Coping	.81	Life is part of a larger force	.58
		Work with God as a partner	.75
		Look to God for support	.65
Negative Religious Coping	.54	Feel that God is punishing	.37
		Wonder if God has abandoned	.37
Religious Intensity	.77	Religious person	.63
		Spiritual person	.63
Forgiveness	.66	Forgiven self	.47
		Forgiven others	.50
		Know that God forgives	.43
Daily Spiritual Experiences	.91	Feel God's presence	.77
		Find comfort in religion	.81
		Feel deep inner peace	.70
		Desire to be closer to God	.79
		Feel God's love	.82
		Touched by beauty of creation	.63
Beliefs and Values	.64	God watches over me	.51
		Respond to reduce pain and suffering	.34
		Life after death	.30
		Carry beliefs to other area of life	.56

Source: 1998 General Social Survey, National Opinion Research Center, University of Chicago.

The Short-Form-36 Health Survey – McHorney, et al., based comprehensive analyses of item response, reliability, and validity on a sample of 3,445 patients with

chronic medical or psychiatric conditions drawn from the MOS study (McHorney, Ware, & Lu, 1992). Alpha internal consistency coefficients for the eight scales have been reported for many studies. Combining results from these studies, the median alpha reliability for all scales exceeds 0.80, except for the two-item social functioning scale (0.76).

Two-week test-retest correlation exceeded 0.8 for physical function, vitality, and general health perceptions; the lowest coefficient was 0.6 for social function. Test-retest correlations for the scales after a delay of six months ranged between 0.60 and 0.90, except for the pain dimensions, with a correlation of 0.43. Table III illustrates the Cronbach Alpha coefficient for SF-36 scales from several studies.

TABLE III

CRONBACH ALPHA COEFFICIENTS FOR SF-36
FROM SEVERAL STUDIES

Scale	Kantz et al.	McHorney et al.	Brazier et al.	Jenkinson et al.
Physical functioning	0.88	0.93	0.93	0.90
Role limitations (physical problems)	0.90	0.84	0.96	0.88
Pain	0.80	0.82	0.85	0.82
Social functioning	0.77	0.85	0.73	0.76
Mental health	0.82	0.90	0.95	0.83
Role limitations (emotional problems)	0.80	0.83	0.96	0.80
Vitality	0.88	0.87	0.96	0.85
General health Perceptions	0.83	0.78	0.95	-----

A SF-36 manual presents criterion validity information on the scales, comparing scale scores to ability to work, symptoms, utilization of care, and to a range of criteria for the mental health scale. Each comparison suggested significant and consistent associations with the validation criteria.

The Life Satisfaction Index A (LSI) – Covers general feelings of well-being among older people to identify "successful"aging (Neugarten, Havighurst, & Tobin, 1961). The Life Satisfaction Index A (LSIA) which is the original version comprises 20 items, of which 12 are positive and eight are negative. An agree/disagree response format is used.

The LSIA was developed empirically by administering a draft questionnaire to two groups of people known to differ in their level of life satisfaction on the basis of the Life Satisfaction Rating Scale. Questions that differentiated successfully between high and low scorers on the Rating Scale were selected for the LSIA, which is self-administered.

The Life Satisfaction Index has been extensively used and has several strengths, including reliability, strong correlation with other scales, and availability of reference standards. The consistency of the validity findings and, in particular, of the factor structure is striking. Table IV illustrates the correlations of the LSIA with other scales.

Convergent validity has been reported as a correlation of 0.55 between the LSIA and the fuller Life Satisfaction Rating Scale for 92 respondents aged 50 to 90 years and of 0.39 with a psychologist's clinical assessment of 51 respondents. A separate study again compared the LSIA and the Rating Scale, reporting a virtually identical correlation of 0.56. The LSIA survey has consistency between replications of factorial studies.

TABLE IV

CORRELATIONS OF THE LSIA WITH OTHER SCALES

	LSIA	LSIB	LSIZ	Kutner	PGC	Global
LSIA	1.00					
LSIB	0.63	1.00				
LSIZ	0.94	0.64	1.00			
Kutner	0.65	0.88	0.67	1.00		
PGC	0.76	0.74	0.79	0.74	1.00	
Global rating	0.41	0.40	0.40	0.40	0.47	1.00

Source: Lohmann, Correlations of life satisfaction, morale and adjustment measures. Journal of Gerontology, 1977; 32:74.

Selection of Sites

Site selection was initiated by contacting an acquaintance that was employed as a representative of a well-known senior resource corporation called Senior Star. This particular corporation is affiliated with various retirement communities and provides numerous services for seniors. The representative provided a list of religious-affiliated and non-religious affiliated retirement communities as well as a contact person for each facility. Phone calls were made to the various facilities and an explanation about the study was provided to each contact person. A natural elimination process occurred when some of the site directors chose not to be involved in the study. The three retirement communities that were selected for this study fit the criteria of religious-affiliated and

nonreligious-affiliated and were quite willing to allow their residents to participate. The retirement communities also had approximately the same number of residents per affiliation.

Selection of Subjects

Subjects were selected from three retirement living communities located in northeastern Oklahoma. The Directors of the communities were contacted by phone and then received a follow-up letter and consent form (Appendix B) confirming the intention of the retirement community to participate in the study. Information announcements were sent to each community to be placed in newsletters announcing the date, time, and meeting place for the initial briefing concerning the study. The briefing was conducted at the retirement communities, two weeks prior to conducting the study.

Subjects were also selected from two religious-affiliated communities, which were referred to as Group I. Group I subjects were selected from a population of 200 female residents. The population of this group ranges from 65-95 years of age and the majority of the residents are Caucasian with a small representation from other races.

Additional Group I subjects were selected from a population of 70 female residents ranging in age from 65-95 years. The majority of residents are Caucasian with a small representation of other races.

Subjects from the non-religious affiliated community (Group II) were selected from a population of 304 senior female adults living at the 300-unit complex. The population of this group ranges from 65-95 years of age. The majority of the residents are Caucasian, although other races are represented.

The final sample included 51 subjects from the religious-affiliated retirement community and 48 subjects from the nonreligious-affiliated retirement community completing the surveys. The final sample (n=99) was stratified into three age categories: 65-74, 75-84, and 85+ years of age.

Operational Procedures

Collection of Data

On a predetermined date, Group II participants were provided a survey packet that included a cover letter, a consent form, and the three instrument questionnaires (Appendix C). The participants voluntarily signed the consent form just prior to administration of the questionnaires. The Brief Multidimensional Measure of Religiousness/Spirituality: 1999, the Short-Form-SF-36 Health Survey, and the Life Satisfaction Index A were retyped in 14 point typeface for easier readability and were administered to each participant by the researcher and a trained staff member. The administration of the questionnaires occured in two sessions. The first session was designed for those subjects who were able to complete the surveys without aid. The second session was designed for those subjects who needed assistance completing the questionnaires. Envelope packets were provided to insure privacy to the participant once the questionnaire was completed. A debriefing session followed to allow participants a chance to ask questions or express any thoughts or concerns that arose from participating in the study. The same procedure was followed for the administration of questionnaires to Group I. The questionnaires were administered to the first religious-affiliated group

and questionnaires were administered to the second religious-affiliated group during the afternoon on the same day. Once the study analysis was completed, follow-up results were shared with the retirement community administrators. An information session was also scheduled for the participants to allow them the opportunity to express their thoughts and opinions about the results.

Research Design

A survey design was used to gather information and assess the measures of religiosity, health status, and life satisfaction. The independent variables in this study were the group assignments based on age, income, education, religiosity, and health status. The dependent variables included the scores from the Brief Multidimensional Measure of Religiousness/Spirituality, the SF-36, and the LSIA.

Statistical Analysis

There were many independent variables that were tested against the dependent variables, therefore several different statistical procedures were utilized in the study. Several t-tests for independent samples were used to test for significant differences between groups in regard to levels of religiosity, life satisfaction, and health status. A Bonferroni adjustment was used to modify the alpha level to account for the multiple t-tests. A 3 x 2 x 2 analysis of variance was used to test for significant differences in perceived religiosity based on pain and chronic illnesses. A Newman-Keuls Multiple Range Test was used to test for significant differences between means. All analyses were tested at the .05 level of significance.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this chapter is to present the results from the surveys and to provide a discussion of the results. This chapter is divided into three sections as follows: 1) Analysis of the overall results, 2) analysis of hypothesis data and 3) discussion of the results. The analysis of overall results will be further subdivided into the following subsections: a) description of the sample, b) chronic illnesses by retirement community affiliation, c) description of the religiosity measurement, c) description of the health status measurement and d) description of the life satisfaction measurement.

Analysis of Overall Results

Description of the Sample

Table V provides the demographics of subjects from the religious-affiliated (n=51) and nonreligious-affiliated (n=48) retirement communities. The return rate of the surveys by participants were much lower than anticipated due to subjects' lack of interest and perceived private content of the surveys. The demographic questions consisted of the following categories: 1) gender, 2) age category, 3) marital status, 4) length of time in retirement community, 5) education level, and 6) present income. A list of these demographic variables were as follows:

TABLE V

DEMOGRAPHICS OF SAMPLE

Variable	Frequency	Religious Affiliated	Nonreligious Affiliated
Gender			
Female	99	51	48
Age Category			
65-74	26	8	18
75-84	50	27	23
85 +	23	16	7
Marital Status			
Single	4	0	4
Married	27	17	10
Divorced	20	3	17
Widowed	48	31	17
Time in Retirement Comm.			
1 yr. or less	18	7	11
1-2 yrs.	31	15	16
3-5 yrs.	28	10	18
4-5 + yrs.	22	19	3
Educational Level			
Grade school	6	6	0
Some high school	18	7	11
High school grad	36	18	18
Some College	27	8	19
Bachelors Degree	6	6	0
Master's or higher	6	6	0
Family Income			
Below $10,000	26	13	13
$10,001-20,000	39	22	17
$20,001-40,000	27	13	14
$40,001-60,000	5	1	4
$60,001+	2	2	0

Chronic Illnesses

A list of chronic illnesses was also specified for selection. These chronic illnesses are shown in Table VI according to type and frequency.

TABLE VI

CHRONIC ILLNESSES

Chronic Illness	Religious-Affiliated Retirement Community (n=51)	Nonreligious-Affiliated Retirement Community (n=48)
Arthritis	30	23
High Blood Pressure	22	23
Cancer	8	5
Hearing Impairment	18	12
Cataracts	21	9
Visual Impairment	17	9
Diabetes	4	2
Heart Disease	13	24

The religious-affiliated group consisted of 51 subjects. The chronic illness mean was 2.60 (SD= 1.3). The nonreligious-affiliated group consisted of 48 subjects. The chronic illness mean was 2.22 (SD = 1.6). Arthritis was the most frequently reported chronic illness (n=30) for the religious-affiliated retirement community and heart disease (n=24) for the nonreligious-affiliated retirement community. Diabetes was the least reported chronic illness for the religious-affiliated (n=4) and nonreligious-affiliated (n=2).

Description of the Religiosity Measurement

The Brief Multidimensional Measure of Religiousness/Spirituality measures thirty-eight variables on various aspects of religiousness/spirituality. The t-tests for independent samples were utilized to determine mean differences between the two groups. The breakdown of scores is as follows:

TABLE VII

RELIGIOSITY MEASUREMENT

Variable Name	Religious Affiliated Mean (n=51)	Nonreligious Affiliated Mean (n=48)	t-Value	2-tailed Probability
1. God's Presence	1.76±0.81	1.95±1.07	-1.02	0.31
2. Strength & Comfort	1.64±0.71	1.93±0.93	-1.74	0.08
3. Inner Peace	2.05±0.83	2.22±1.11	-0.86	0.39
4. Union with God	1.76±0.79	2.16±0.78	-2.54	*0.01
5. God's love	1.62±0.72	1.91±0.79	-1.90	0.06
6. Creation	1.76±0.76	1.81±1.14	-0.25	0.80
7. Belief in God	1.07±0.27	1.12±0.33	-0.76	0.44
8. Pain & Suffering	1.49±0.57	1.64±0.63	-1.28	0.20
9. Forgiveness	1.43±0.50	1.52±0.58	-0.82	0.41
10. Forgiven	1.27±0.45	1.33±0.51	-0.60	0.54
11. Forgives me	1.05±0.23	1.22±0.47	-2.29	*0.02
12. Pray Privately	1.60±1.21	2.08±1.56	-1.69	*0.09
13. Meditate	2.96±2.25	3.39±2.90	-0.84	0.40
14. TV Prog/Radio	3.62±2.06	4.06±2.33	-0.98	0.32
15. Read Bible	2.49±1.46	3.18±2.28	-1.82	0.07
16. Prayer before Meals	1.58±1.06	2.95±1.50	-5.27	**0.00
17. Spiritual Force	1.84±0.94	2.18±1.17	-1.61	0.11
18. God as Partners	1.70±0.80	2.20±0.98	-2.78	**0.00

TABLE VII – Continued

Variable Name	Religious Affiliated Mean (n=51)	Nonreligious Affiliated Mean (n=48)	t-Value	2-tailed Probability
19. Strength	1.15±0.41	1.68±0.87	-3.87	**0.00
20. Punishment	3.60±0.63	3.54±0.87	0.43	0.66
21. Abandoned by God	3.86±0.34	3.79±0.45	0.87	0.38
22. Make Sense of Situation	2.90±1.11	3.04±0.94	-0.67	0.50
23. Stress	1.49±0.70	1.79±0.98	-1.76	0.08
24. Help by Congregation	1.41±0.77	2.18±1.24	-3.73	**0.00
25. Comfort by Congregation	1.37±0.74	2.20±1.18	-4.23	**0.00
26. Demands by Congregation	3.52±0.67	3.64±0.78	-0.79	0.43
27. Congregation Critical	3.78±0.41	3.87±0.44	-1.05	0.29
28. Religious Experience	1.82±0.38	1.66±0.47	1.81	0.07
29. Gain in faith	1.76±0.42	1.77±0.42	-0.07	0.94
30. Age faith gain	35.37±21.8	37.97±16.6	-0.56	0.57
31. Loss in faith	1.13±0.34	1.22±0.42	-1.17	0.24
32. Age faith loss	51.6±29.6	38.7±10.7	1.26	0.23
33. Religious Beliefs	1.39±0.53	1.62±0.64	-1.97	.051
34. Monthly Contribution	164.29±0.25	38.81±52.7	3.33	**.001
35. Hours Church Activities	3.09±3.43	2.43±4.16	0.86	0.39
36. Attend Services	1.86±1.16	3.14±1.98	-3.94	**0.00
37. Other Activities	2.80±1.57	4.83±1.37	-6.81	**0.00
38. Religious Preference	1.01±0.14	0.97±0.56	0.50	0.62
39. Extent of Religiosity	1.70±0.61	2.02±0.81	-2.19	*0.03
40. Extent of Spiritualism	1.78±0.61	2.08±0.84	-2.03	*0.04

Note: *=significant at .05 level ($p \leq .05$); **=significant at .0013 level ($p \leq .0013$ – Bonferroni adjustment).

The t-tests for variable means determined there was a significant mean difference between the two groups. The differences occurred in 13 of the38 variables as indicated by the asterisks. Variables 37 and 38 provides an overall self-ranking of religiosity and

spirituality, respectively. These variables indicated a significant mean difference existed between the two groups.

An additional statistical method called The Bonferroni test was used as a correction method due to the number of comparisons in the religiosity measurement. This method of adjustment set the alpha level at .0013. This reduced the number of significant variables to eight as shown by Table VII with the double asterisk. The last two variables that rated the subjects' extent of religiosity and spirituality were no longer significant, although there was a mean difference. The mean for the religious-affiliated retirement community did indicate a higher rating of perceived religiousness than the nonreligious-affiliated retirement community.

Description of the Health Status Measurement

The Short-Form-36 Health Survey measures 36 variables associated with health. The norm-basing scoring (NBS) of the SF-36 health profile standardizes each scale to a mean of 50 and a standard deviation of 10 for the general population. The t-tests for independent samples were utilized to determine mean differences between the two groups. The breakdown of scores is as shown in Table VIII.

The t-tests for the two groups indicated there was no significant mean difference in health status of subjects. Of the 36 variables measured only one variable indicated significance. The analyses indicated that there is not a distinct difference between the two groups on health status.

TABLE VIII

HEALTH STATUS MEASUREMENT T-TEST

Variable Name	Religious Affiliated Mean (n=51)	Nonreligious Affiliated Mean (n=48)	t-Value	2-tailed Probability
1. Health Rating	2.94±0.92	2.75±1.15	0.91	.365
2. Health/Yr. Ago	3.01±0.81	3.12±0.86	-0.62	.534
3. Limited Activities	1.45±0.61	1.45±0.65	-0.06	.954
4. Health Activities	1.78±0.70	2.16±0.78	-2.57	*.012
5. Lifting	2.00±0.77	2.22±0.75	-1.49	.139
6. Stair Climbing	1.72±0.72	1.97±0.86	-1.59	.115
7. Climbing one flight	1.70±0.70	1.95±0.84	-1.57	.112
8. Bending	1.88±0.76	1.83±0.80	0.31	.757
9. Walking a Mile	1.86±0.77	1.85±0.89	0.05	.959
10. Walking Blocks	2.07±0.82	1.93±0.86	0.83	.406
11. Walk one Block	2.43±0.70	2.33±0.78	0.66	.512
12. Bathing/Dressing	2.60±0.66	2.72±0.61	-0.94	.348
13. Work Activities	1.50±0.50	1.47±0.50	0.30	.763
14. Accomplish Less	1.39±0.49	1.39±0.49	-0.04	.493
15. Limitations	1.39±0.49	1.37±0.48	0.17	.862
16. Difficulty w/work	1.35±0.48	1.33±0.47	0.20	.839
17. Emotional Problems/4 wks.	1.66±0.47	1.62±0.48	0.43	.669
18. Accomplished Less	1.43±0.50	1.54±0.50	-1.09	.277
19. Work as careful	1.56±0.50	1.62±0.48	-0.57	.572
20. Health & emotional	2.13±1.05	2.18±1.40	-0.20	.841
21. Bodily Pain	3.00±1.23	3.16±1.40	-0.62	.534
22. Pain interfere w/work	2.31±1.10	2.60±1.44	-1.13	.261
23. How you feel	3.41±1.25	3.85±1.54	-1.57	.120
24. Nervousness	4.74±1.21	4.75±1.32	-0.02	.985
25. Felt in the dumps	5.43±0.78	5.18±1.19	1.21	.230
26. Calm & Peaceful	2.74±1.42	2.77±1.35	-0.09	.927
27. Energetic	3.58±1.34	3.58±1.56	0.02	.987
28. Downhearted	5.01±0.94	4.83±1.31	0.81	.418
29. Feel worn out	4.25±1.19	3.85±1.23	1.64	.105
30. Happy	2.05±0.94	2.33±1.38	-1.15	.251
31. Feel tired	3.76±1.19	3.62±1.29	0.56	.578
32. Social Activities	4.03±1.07	3.70±1.39	1.32	.189
33. Felt sick	4.09±0.98	4.02±0.97	0.39	.697
34. Healthy	2.33±1.01	2.25±0.91	0.43	.669
35. Health worse	3.25±1.14	3.22±1.24	0.11	.915
36. Health excellent	2.64±1.26	2.70±1.32	-0.24	.814

Note: *=significant at .05 level ($p \leq .05$).

Description of the Life Satisfaction Measurement

The Life Satisfaction Index A (LSIA) measures twenty variables associated with life satisfaction. Twelve of these items are positive and eight were negative. A three-point scale is used for rating: agree, disagree, and undecided. The scoring scale rated a satisfied response as 2, an uncertain response as 1, and a dissatisfied response as 0. The t-tests were calculated for the two groups to determine significance on the life satisfaction index for two groups as shown in Table IX.

TABLE IX

LIFE SATISFACTION MEASUREMENT T-TEST

Variable LSI	Number Of Cases	Mean	SD	t-scores	Percentiles	2-Tail Sig
Group Total	99	25.69	7.82			
Group One	51	28.80	6.11	87.27	99.99	*.000
Group Two	48	22.39	8.13	72.72	98.84	*.000

Note: *=significant at .05 level ($p \leq .05$).

Previous research for reference standards has obtained a mean LSIA score of 12.4 (SD, 4.4). Similar results have been obtained by other users of the LSIA with mean LSIA scores as follows: 11.6, 12.5, and 12.1. The mean score for this study indicated a total group mean of 25.69 (SD, 7.8). The mean for group one was 28.80 (SD, 6.1), while the mean for group two was 22.39 (SD, 8.1). The mean score difference was significant at the .05 level.

Analysis of Hypothesis Data

Five hypotheses were evaluated in this investigation using the .05 level of significance. Each of the hypotheses was examined to determine if significant differences occurred between the two groups.

Hypothesis One

It was hypothesized that there would be no difference in subjects at religious-affiliated and nonreligious-affiliated retirement communities based on measures of religiosity. Several t-tests for independent samples of groups were performed. As indicated in Table VII, significant differences occurred between the groups as specified by the 2-tailed probability by variable. The differences occurred in 13 of the 38 variables as indicated by the asterisks. Variables 37 (Extent of Religiosity) and 38 (Extent of Spiritualism) provided an overall self-ranking of religiosity and spirituality, respectively. These variables indicated a significant mean difference existed between the two groups. The religious-affiliated group had a higher mean which indicated a greater extent of religiousness.

There were significant differences in subjects at religious–affiliated and nonreligious-affiliated retirement communities based on measures of religiosity. These were significant beyond the .05 level. The null hypothesis was rejected.

Hypothesis Two

It was hypothesized that there would be no significant difference in health status based on measures of religiosity. Several t-tests for independent samples of groups were performed. As indicated by Table VIII, no significant differences occurred between the groups on the health status measurement. When comparing the results only one variable out of 36 variables showed a significant difference. This variable asked whether health limited one from engaging in moderate activities such as moving a table, pushing a vacuum cleaner and participating in bowling or golf. This variable showed significance at the .05 level. The other 35 variables showed no significance, therefore indicating there were similarities in health status between the two groups. The null hypothesis was therefore accepted.

Hypothesis Three

It was hypothesized that there would be no significant difference in life satisfaction based on perceived religiosity. As indicated by Table IX, significant differences did occur between the two groups on the life satisfaction index. The t-tests for independent samples indicated there was a significant difference with a mean difference of 6.40, at the .01 level. The mean for the religious-affiliated group was 28.80 (SD, 6.1), while the mean for the nonreligious-affiliated group was 22.39 (SD, 8.1). The mean score difference was significant at the .01 level.

There were significant differences in life satisfaction based on perceived religiosity between the two groups. These were significant beyond the .05 level. The life

satisfaction index was based on the subject's perceived view of positive well-being indicators, therefore indicating the two groups view life satisfaction differently. The religious-affiliated group had a higher mean which indicated a higher level of life satisfaction. The null hypothesis was therefore rejected.

Hypothesis Four

It was hypothesized that there would be no significant difference in perceived religion based on age, education, and income. Ages were stratified into three categories: 65-74, 75-84, and 85+, indicating three levels. Income levels were converted from five categories into two categories: 1) $20,000 and below, and 2) $20,001+ income level. Education levels were converted from six categories into two categories: 1) high school graduate or less, and 2) some college or higher. A 3 x 2 x 2 analysis of variance was performed to analyze the interactions among age and income. Education level was considered a covariate in the analysis. The results are indicated in Table X.

There were significant differences in perceived religion based on age and income. Table X indicated that there was a significant difference in perceived religion based on income. There was also a significant difference in perceived religion based on the interaction of age by income in the religious-affiliated group. These were significant at the .01 level. The null hypothesis was rejected.

TABLE X

ANALYSIS OF VARIANCE PERCEIVED RELIGION
BASED ON AGE, EDUCATION, AND INCOME

	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	F Source Prob.
Educ (covar)	1	1.06	1.06	2.30	0.13
Age	2	0.62	0.31	0.67	0.51
Income	1	4.00	4.00	8.70	*0.00
Age x Income	2	4.12	2.06	4.48	*0.01
Total	98	52.02	0.53		

Note: *=significant at the .05 level ($p \leq .05$).

Hypothesis Five

It was hypothesized that there would be no significant difference in perceived religion based on levels of pain and chronic illnesses. The SF-36 included the pain variable (variable 7) that was extracted for analysis. A separate question addressed ten chronic illnesses shown in Table VI that also was used for the analysis. The extent of religion was used from the religion variable 37 which rates the extent of religiosity. The health status was determined and extracted from the SF-36 variable (variable 1) which rated perceived health. The category was converted from five (excellent, very good, good, fair, poor) to two (very good, excellent and good, fair, poor) categories. A factorial analysis of variance was conducted to determine if there were significant differences in perceived religion based on levels of pain and chronic illnesses. The breakdown of scores is as follows:

TABLE XI

ANALYSIS OF VARIANCE RELIGION
BY CHRONIC ILLNESS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Signif. F
Chronic illness	.777	1	.777	1.586	.211
Group (R & NR)	2.839	1	2.839	5.798	*.018
Chronic X Group	2.270	1	2.270	4.636	.034
Error	46.521	95	.490		
Total	52.020	98	.531		

Note: *=significant at the .05 level ($p \leq .05$).

The analysis of variance determined there was a significant main effect difference in the two groups of religious-affiliated and nonreligious-affiliated groups. Table XII showed the mean differences for the main effects of religion.

TABLE XII

MEANS FOR EXTENT OF RELIGION

	Religious-affiliated	Nonreligious-affiliated	Mean Total
Chronic Illness	1.76	1.84	1.71
Chronic Illness	1.65	2.35	2.02

Due to the main effects being significantly different, a post-hoc test was necessary. The Newman-Keuls Multiple Range test was used for the analysis. The

interpretation of the Newman-Keuls showed that the nonreligious-affiliated group with the lowest chronic illnesses looked like the religious group. Table XIII showed the summary table for the bodily pain by health rating.

TABLE XIII

ANALYSIS OF VARIANCE BODILY PAIN
BY HEALTH RATING

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Signif. F
Health Status	27.062	2	13.531	9.248	*.000
Group (R & NR)	1.060	1	1.060	.725	.397
Health by Group	7.531	2	3.766	2.574	.082
Error	136.074	93	1.463		
Total	171.356	98	1.749		

Note: *=significant at the .05 level ($p \leq .05$).

As shown in Table XIII, there was a significant main effect difference shown by the health group as indicated by the asterisk. Table XIV showed the main effect differences.

TABLE XVI

MEANS FOR BODILY PAIN BY HEALTH

	Religious-affiliated	Nonreligious-affiliated	Mean Total
Health Status			
	3.00	2.50	2.70
	2.60	3.08	2.78
	3.50	4.29	3.87

Due to the main effects being significantly different, a post-hoc test was necessary. The Newman-Keuls Multiple Range test was used for the analysis. The interpretation of the Newman-Keuls showed that health status group of the nonreligious-affiliated group looked similar to the health status group of the religious-affiliated group. Table XV showed the summary table for chronic illness by health rating.

TABLE XV

ANALYSIS OF VARIANCE CHRONIC ILLNESS
BY HEALTH RATING

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Signif. F
Health Status	56.512	2	28.256	16.141	.000
Group (R & NR)	2.232	1	2.232	1.275	.261
Hlth X Group	7.315	2	3.658	2.089	.130
Error	162.808	93	1.751		
Total	230.182	98	2.349		

As shown in Table XV there were significant main effects among subjects based on chronic illness and health ratings. Table XVI showed the main effect differences.

Due to the main effects being significantly different, a post-hoc test was necessary. The Newman-Keuls Multiple Range test was used for the analysis. The interpretation of the Newman-Keuls showed that health status group of the religious-affiliated group looked similar to the nonreligous-affiliated group.

TABLE XVI

MEANS FOR CHRONIC ILLNESS BY HEALTH

	Religious-affiliated	Nonreligious-affiliated	Mean Total
Health Status			
	1.87	1.73	1.78
	2.50	1.42	2.09
	3.44	3.71	3.57
	2.61	2.23	

There were significant differences in perceived religion based on levels of pain and chronic illnesses. These were significant beyond the .05 level. The null hypothesis was therefore rejected.

Discussion of Results

The purpose of this study was to determine if there were any differences in subjects of religious-affiliated and nonreligious-affiliated retirement communities. Based on the literature review it was anticipated that there would be differences in the two communities based on religious affiliation. Since religion and spirituality provide a strong sense of meaning and purpose to older adults, it was imperative to examine the role that religion plays in older adults' lives. In fact, there were significant differences between the two groups therefore confirming the hypothesis. The religious-affiliated group indicated a stronger union with God and depended on God more so as a partner. The religious-affiliated group also believed that God forgave them more often. This

group also prayed more often. This group also prayed more often before mealtime, which was due, in part, because a Chaplain prayed before the served meals at the religious-affiliated community. The religious-affiliated group also indicated that they received more strength and comfort from God and their congregations. This group contributed more money to religious organizations and also attended church and church-related activities more often. This could have been the case because a chapel was on site at the religious-affiliated retirement community. As stated before, there were significant differences between the religious-affiliated and nonreligious-affiliated retirement communities.

It was also believed that there would be differences in health status based on measures of religiosity. The review of literature cited numerous studies that indicated religious involvement has salutary effects on health (Levin, 1996; Koenig, 1997; Idler & Kasl, 1997; Ferraro & Albrecht-Jensen, 1991). The analysis of the data indicated there was not a significant difference in health status between the two groups. This actually was somewhat surprising in that so many studies showed the salutary effects of religion on health. These studies showed a positive relationship between religious affiliation, church attendance, religious feelings, and physical and mental well-being (Levin & Schiller, 1987; Levin & Vanderpool, 1987; Troyer, 1988). Certain religious denominations advocate healthy diets and advise against smoking (Cochran, Beeghley, & Bock, 1988). These various healthy lifestyle choices would tend to make one think that the religious-affiliated group might have fewer chronic illnesses and have a higher health rating. This was not the case in this study. The group means for the question on rating health were similar, yet not significant.

Another significant difference between the two groups was life satisfaction. Hadaway and Roof (1978), found that adults with high levels of religious commitment felt significantly more satisfied with their lives than persons with low levels of commitment. Religious faith (religious meaning) was also a stronger predictor of life satisfaction. The analysis of the data did show that there was a significant difference between the two groups on life satisfaction. The religious-affiliated group had a higher mean than the nonreligious-affiliated group on the life satisfaction index indicating a higher degree of life satisfaction. Several religious-affiliated group residents indicated that they still enjoyed life and found it quite meaningful, as they stayed busy with various activities. The research hypothesis was rejected since there were significant differences between the two groups on life satisfaction.

Another significant difference was in perceived religion based on age and income levels. The socioeconomic variables of age and income tend to be confounding variables because of their associative role in health status based on religiosity, therefore it was important to determine if differences did exist in this study. There were significant differences in religiosity based on income and age; this is indicative of previous research studies.

Finally, there were also significant differences between the two groups based on levels of pain and chronic illnesses. Since four out of every five elders have at least one chronic illness it was important to address this issue. Also, pain is an important factor due to the implications it has on religion. Nonorganizational or private expressions of religiosity, as well as positive subjective religious attitudes or beliefs are promotive of health, especially when formal or public participation is lessened because of declining

health (Levin, 1994). The chronic illnesses reported were also quite similar. The religious-affiliated retirement community reported arthritis as the most prevalent chronic illness and high blood pressure as the second most reported. The nonreligious-affiliated retirement community reported heart disease as the most prevalent and high blood pressure the second most reported. Diabetes was also the least reported for both groups. The chronic illnesses reported in the two groups coincide with the Top Ten Chronic Conditions affecting people age 65 and older. There were significant differences between the two groups based on levels of pain and chronic illnesses thereby rejecting the null hypothesis.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Chapter V provides an overview of this study. This final chapter includes a summary of the study, findings, conclusions, and recommendations. Recommendations are further subdivided into 1) recommendations for retirement communities and 2) recommendations for further study.

Summary

The purpose of this investigation was to investigate differences in religious-affiliated and nonreligious-affiliated residents in retirement communities based on health status, life satisfaction, and the sociodemographic factors of age, education, and income. It was also the purpose of this study to investigate if there were any significant differences in perceived religion based on levels of pain and chronic illnesses.

Ninety-nine subjects participated in this study. Fifty-one subjects resided at a religious-affiliated retirement community and 48 subjects resided at nonreligious-affiliated retirement communities. The subjects filled out a questionnaire containing three inventories, the Lisa Satisfaction Index A (LSIA), the Brief Multidimensional

Measure of Religiousness/Spirituality:1999, and the Short-Form-36 Health survey used to determine differences in religiosity, health status, and life satisfaction.

Findings

The data collected in this study were analyzed at the .05 level of significance. Each of the stated hypotheses was examined to see if a difference occurred between groups in regard to religiosity, health status, and life satisfaction. Also under investigation was whether a difference occurred in the groups based on levels of pain, chronic illnesses, age, income, and education. The data yielded the following findings:

Hypothesis One – There will be no differences on measures of religiosity between persons in religious-affiliated and nonreligious-affiliated retirement communities.

There were significant differences in religious-affiliated and nonreligious-affiliated retirement community residents. Significant differences occurred in eight of the 38 variables on the religiosity measurement. Hypothesis one was rejected.

Hypothesis Two – There will be no significant differences in health status of subjects based on measures of religiosity.

There were no significant differences in health status of subjects based on measures of religiosity. Hypothesis two was accepted because no differences occurred in the mean scores on the health status measurement.

Hypothesis Three – There will be no significant differences in life satisfaction of subjects based on perceived religiosity.

There were significant differences in life satisfaction of subjects based on perceived religiosity. Hypothesis three was rejected because the mean life satisfaction scores showed a significant difference between the religious-affiliated and nonreligious-affiliated retirement communities residents.

Hypothesis Four – There will be no significant differences in subjects' perceived religion based on age, education, and income.

There were significant differences in subjects' perceived religion based on age and income. Hypothesis four was rejected because subjects mean scores differed significantly based on age and income.

Hypothesis Five – There will be no significant difference in subjects' perceived religion based on levels of pain and chronic illnesses.

There were significant differences in subjects' perceived religion based on levels of pain and chronic illnesses. Hypothesis five was rejected because there were significant differences between levels of pain and chronic illnesses based on subjects' perceived religion.

Conclusions

The result of this study indicates that there are significant differences in religious-affiliated retirement communities and nonreligious-affiliated retirement communities

based on measurements of religiosity. The religious-affiliated retirement community reported a higher frequency of the "very religious" rating as well as the "very spiritual" rating. The religious-affiliated retirement community residents also expressed that they looked to God and their congregation for strength and support; more so than reported by the nonreligious-affiliated retirement community residents. The religious-affiliated residents also reported they were more involved with religious-affiliated activities and contributed more money than the nonreligious-affiliated residents. It was apparent that the religious-affiliated facility provided a site for worship and various volunteer-type activities for the residents to become involved in at the main administration building. That particular building was filled with lots of residents, busy in the library, gift shop, restaurant, game room, and chapel. The nonreligious-affiliated retirement community provided no on-site place for worship nor did they provide volunteer-type activities for the residents to become involved in. Perhaps the religious-affiliated retirement community's provision of established religious functions facilitated the continued adjustment of the residents in the aging process. According to Havighurst (1972) a person can age successfully if they can adjust to one's living arrangements. It would appear to be beneficial for a retirement community to provide a place to worship and other meaningful outlets to help older adults achieve their quest for successful aging.

There were no other significant differences in health status based on measures of religiosity in the two groups. This was surprising because the research alluded to the many salutary benefits religion has on health. This would make one think that there would be some significant differences in relation to health outcomes and that perhaps the religious-affiliated residents would indicate better perceived health. Instead both groups

indicated similar chronic illnesses such as arthritis and high blood pressure which is typical of many older adults. Possibly a more detailed health history and a mortality study between the two groups would show the association between religiosity and health outcomes.

Finally, this study showed there were significant differences in life satisfaction between the two groups. The religious-affiliated retirement community indicated a higher degree of life satisfaction. The research presented in this study suggests that religion may enhance various aspects of well-being which are associated with life satisfaction. Religion enhances various aspects of well-being through the establishment of personal relationships with a divine other and through the provision of a system of meaning. Organized religious activity is positively associated with life satisfaction or other indicators of well-being. Koenig (1994) suggests that religious faith promotes mental health and well-being among older adults by emphasizing interpersonal relations, stressing forgiveness, providing hope for change, promoting a sense of self-control and self-determination, and promising life after death. Interviews in the study by Neill & Kahn (1999) revealed that church activities provide women a loving family and a supportive community. Engaging in social activity seems to be the connection to religion and life satisfaction. This connection purports the notion that residents living in a religious-affiliated retirement community would certainly benefit from the environment.

In conclusion, it is worthwhile to further explore the association between religion and the implications to the older adult. If the process of aging involves religion as one of its main components (as reported) then it is certainly befitting to continue our quest for verification of that link. It is fair to state that various aspects of religiosity can be seen as

a resource mechanism employed by aging persons to adjust to aging and therefore must be an included component throughout life. Retirement communities have the opportunity to provide an environment that is meaningful to its residents if they will listen to the voices of wisdom.

The significant relationship between religious activities and life satisfaction suggests that participation in church and church-related activities is an important component of life satisfaction for older adults. These church activities provide residents an opportunity to contribute to their community and glean a sense of community and purpose in life.

Recommendations

Recommendations for Retirement Communities

The review of literature cited in this study present a definitive relationship between religion and well-being in older adults. Findings indicate that older adults demonstrate the highest levels of religious participation of any group. Studies showed a positive relationship between religious affiliation, church attendance, religious feelings, and physical and mental well-being. More frequent religious attendance has even been associated with lower blood pressure, less subsequent disability, and better perceived health (Graham et al., 1978; Idler & Kasl, 1992; Levin & Markides, 1986). These findings indicate various implications to the retirement communities in response to the mounting evidence on the benefits of religion. The following are some recommendations

for retirement communities to further meet the religious/spiritual needs of their residents based on the data:

1. It is important to provide worship opportunities at the retirement communities, especially due to the physical inability of some to attend elsewhere.
2. Chaplaincy services can offer education and counseling services to residents.
3. Various religious based activities such as bible studies and prayer groups provide opportunities for continued spiritual growth and development.
4. Meaningful volunteer activities to provide continued social support and congruence among the residents in the retirement communities.
5. Transportation capabilities to attend services and activities at churches where the residents are currently attending.
6. Attention should be paid to staff and management concerning the need to be sensitized to the spirituality of the residents as well as their own spirituality.
7. Be aware of the ethnic and religious diversity among the residents in the community. Offer activities and recognize holidays that relate to residents of different faiths and denominations.
8. Provide opportunities for churches, congregations, and pastors to minister to the religious/spiritual needs of the community especially in the areas of loss and suffering.

Recommendations for Further Study

Given the findings of this study and the importance of research in the field of aging, the following recommendations are made for further study:

1. A qualitative research method would be able to provide more in-depth information as to the efficacy of the religious belief system. The interview method could further provide information on the religious activities and involvement as well as life satisfaction.
2. This same study design could be used in religious-affiliated and non-religious affiliated assisted living communities. This might give further insight into the health status indicators because that population usually has more diminished health.
3. A correlational study involving chronic illness, depression, and "organizational" religiosity might explain why older adults differ in their church attendance and activities.

According to researchers such as Koenig and associates (Koenig, Smiley, & Gonzales, 1988), there is a need for longitudinal studies that follow middle-aged persons over time into the later years as it relates to religion and well-being. Unfortunately there have been few studies that have researched well-being and religion over a long period of time due to obvious constraints. However, it does seem this type of research would provide valuable information in the field of aging and religiosity.

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APPENDIXES

APPENDIX A

SURVEY INSTRUMENTS

Brief Multidimensional Measure of Religiousness/Spirituality: 1999

For more information about this measure, see **Introduction: How to Use This Report.**

Daily Spiritual Experiences

The following questions deal with possible spiritual experiences. To what extent can you say you experience the following:

1. I feel God's presence.
   1 - Many times a day
   2 - Every day
   3 - Most days
   4 - Some days
   5 - Once in a while
   6 - Never or almost never

2. I find strength and comfort in my religion.
   1 - Many times a day
   2 - Every day
   3 - Most days
   4 - Some days
   5 - Once in a while
   6 - Never or almost never

3. I feel deep inner peace or harmony.
   1 - Many times a day
   2 - Every day
   3 - Most days
   4 - Some days
   5 - Once in a while
   6 - Never or almost never

4. I desire to be closer to or in union with God.
   1 - Many times a day
   2 - Every day
   3 - Most days
   4 - Some days
   5 - Once in a while
   6 - Never or almost never

5. I feel God's love for me, directly or through others.
   1 - Many times a day
   2 - Every day
   3 - Most days
   4 - Some days
   5 - Once in a while
   6 - Never or almost never

6. I am spiritually touched by the beauty of creation.
   1 - Many times a day
   2 - Every day
   3 - Most days
   4 - Some days
   5 - Once in a while
   6 - Never or almost never

Meaning

See Appendix at the end of this section.

Values/Beliefs

7. I believe in a God who watches over me.
   1 - Strongly agree
   2 - Agree
   3 - Disagree
   4 - Strongly disagree

8. I feel a deep sense of responsibility for reducing pain and suffering in the world
   1 - Strongly agree
   2 - Agree
   3 - Disagree
   4 - Strongly disagree

Forgiveness

Because of my religious or spiritual beliefs:

9. I have forgiven myself for things that I have done wrong.
   1 - Always or almost always
   2 - Often
   3 - Seldom
   4 - Never

10. I have forgiven those who hurt me.
   1 - Always or almost always
   2 - Often
   3 - Seldom
   4 - Never

11. I know that God forgives me.
   1 - Always or almost always
   2 - Often
   3 - Seldom
   4 - Never

Private Religious Practices

12. How often do you pray privately in places other than at church or synagogue?
   1 - More than once a day
   2 - Once a day
   3 - A few times a week
   4 - Once a week
   5 - A few times a month
   6 - Once a month
   7 - Less than once a month
   8 - Never

13. Within your religious or spiritual tradition, how often do you meditate?
   1 - More than once a day
   2 - Once a day
   3 - A few times a week
   4 - Once a week
   5 - A few times a month
   6 - Once a month
   7 - Less than once a month
   8 - Never

14. How often do you watch or listen to religious programs on TV or radio?
   1 - More than once a day
   2 - Once a day
   3 - A few times a week
   4 - Once a week
   5 - A few times a month
   6 - Once a month
   7 - Less than once a month
   8 - Never

15. How often do you read the Bible or other religious literature?
   1 - More than once a day
   2 - Once a day
   3 - A few times a week
   4 - Once a week
   5 - A few times a month
   6 - Once a month
   7 - Less than once a month
   8 - Never

16. How often are prayers or grace said before or after meals in your home?
   1 - At all meals
   2 - Once a day
   3 - At least once a week
   4 - Only on special occasions
   5 - Never

Religious and Spiritual Coping

Think about how you try to understand and deal with major problems in your life. To what extent is each of the following involved in the way you cope?

17. I think about how my life is part of a larger spiritual force.
   1 - A great deal
   2 - Quite a bit
   3 - Somewhat
   4 - Not at all

18. I work together with God as partners.
   1 - A great deal
   2 - Quite a bit
   3 - Somewhat
   4 - Not at all

19. I look to God for strength, support, and guidance.
    1 - A great deal
    2 - Quite a bit
    3 - Somewhat
    4 - Not at all

20. I feel God is punishing me for my sins or lack of spirituality.
    1 - A great deal
    2 - Quite a bit
    3 - Somewhat
    4 - Not at all

21. I wonder whether God has abandoned me.
    1 - A great deal
    2 - Quite a bit
    3 - Somewhat
    4 - Not at all

22. I try to make sense of the situation and decide what to do without relying on God.
    1 - A great deal
    2 - Quite a bit
    3 - Somewhat
    4 - Not at all

23. To what extent is your religion involved in understanding or dealing with stressful situations in any way?
    1 - Very involved
    2 - Somewhat involved
    3 - Not very involved
    4 - Not involved at all

Religious Support

These questions are designed to find out how much help the people in your congregation would provide if you need it in the future.

24. If you were ill, how much would the people in your congregation help you out?
    1 - A great deal
    2 - Some
    3 - A little
    4 - None

25. If you had a problem or were faced with a difficult situation, how much comfort would the people in your congregation be willing to give you?
    1 - A great deal
    2 - Some
    3 - A little
    4 - None

Sometimes the contact we have with others is not always pleasant.

26. How often do the people in your congregation make too many demands on you?
    1 - Very often
    2 - Fairly often
    3 - Once in a while
    4 - Never

27. How often are the people in your congregation critical of you and the things you do?
    1 - Very often
    2 - Fairly often
    3 - Once in a while
    4 - Never

Religious/Spiritual History

28. Did you ever have a religious or spiritual experience that changed your life?
    No
    Yes

IF YES: How old were you when this experience occurred?

29. Have you ever had a significant gain in your faith?
    No
    Yes

IF YES: How old were you when this occurred?

30. Have you ever had a significant loss in your faith?
    No
    Yes

IF YES: How old were you when this occurred?

Commitment

31. I try hard to carry my religious beliefs over into all my other dealings in life.
    1 - Strongly agree
    2 - Agree
    3 - Disagree
    4 - Strongly disagree

32. During the last year about how much was the average monthly contribution of your household to your congregation or to religious causes?

    $_____ OR $_____
    Contribution per year / Contribution per month

33. In an average week, how many hours do you spend in activities on behalf of your church or activities that you do for religious or spiritual reasons?

    _____

Organizational Religiousness

34. How often do you go to religious services?
    1 - More than once a week
    2 - Every week or more often
    3 - Once or twice a month
    4 - Every month or so
    5 - Once or twice a year
    6 - Never

35. Besides religious services, how often do you take part in other activities at a place of worship?
    1 - More than once a week
    2 - Every week or more often
    3 - Once or twice a month
    4 - Every month or so
    5 - Once or twice a year
    6 - Never

Religious Preference

36. What is your current religious preference?

IF PROTESTANT ASK:
Which specific denomination is that?

_____

(List of religious preference categories attached for advisory purposes. See Religious Preference section.)

Overall Self-Ranking

37. To what extent do you consider yourself a religious person?
    1 - Very religious
    2 - Moderately religious
    3 - Slightly religious
    4 - Not religious at all

38. To what extent do you consider yourself a spiritual person?
    1 - Very spiritual
    2 - Moderately spiritual
    3 - Slightly spiritual
    4 - Not spiritual at all

Appendix-Meaning

The working group did not feel it was appropriate at this time to include any "religious meaning" items in this measure, as no final decisions have been made regarding this domain. The following items are being considered for a Short Form.

1. The events in my life unfold according to a divine or greater plan.
    1 - Strongly agree
    2 - Agree
    3 - Disagree
    4 - Strongly disagree

2. I have a sense of mission or calling in my own life.
    1 - Strongly agree
    2 - Agree
    3 - Disagree
    4 - Strongly disagree

SF-36 Health Survey Norm-Based Scoring (NBS) Demo

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This survey asks for your views about your health. This information will help you keep track of how you feel & how well you are able to do your usual activities.

Answer every question. If you're unsure about how to answer a question, give the best answer you can.

1. In general, would you say your health is:

Excellent	Very good	Good	Fair	Poor
○	○	○	○	○

2. *Compared to one year ago,* how would you rate your health in general *now?*

Much better now	Somewhat better now	About the same	Somewhat worse now	Much worse now
○	○	○	○	○

3. The following questions are about activities you might do during a typical day. Does your health *now* limit you in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	○	○	○
Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	○	○	○
Lifting or carrying groceries	○	○	○
Climbing **several** flights of stairs	○	○	○
Climbing **one** flight of stairs	○	○	○
Bending, kneeling, or stooping	○	○	○
Walking **more than a mile**	○	○	○
Walking **several blocks**	○	○	○
Walking **one block**	○	○	○
Bathing or dressing yourself	○	○	○

4. During the *past 4 weeks*, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	Yes	No
Cut down on the **amount of time** you spent on work or other activities	C	C
Accomplished less than you would like	C	C
Were limited in the **kind** of work or other activities	C	C
Had **difficulty** performing the work or other activities (for example, it took extra effort)	C	C

5. During the *past 4 weeks*, have you had any of the following problems with your work or other regular daily activities *as a result of any emotional problems* (such as feeling depressed or anxious)?

	Yes	No
Cut down on the **amount of time** you spent on work or other activities	C	C
Accomplished less than you would like	C	C
Didn't do work or other activities as **carefully** as usual	C	C

6. During the *past 4 weeks*, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

Not at all	Slightly	Moderately	Quite a bit	Extremely
C	C	C	C	C

7. How much *bodily* pain have you had during the *past 4 weeks*?

None	Very mild	Mild	Moderate	Severe	Very severe
C	C	C	C	C	C

8. During the *past 4 weeks*, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
C	C	C	C	C

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the *past 4 weeks*...

All of the	Most of the time	A Good Bit of	Some of the time	A little of the time	None of the time

Did you feel full of pep?	○	○	○	○	○	○
Have you been a very nervous person?	○	○	○	○	○	○
Have you felt so down in the dumps that nothing could cheer you up?	○	○	○	○	○	○
Have you felt calm and peaceful?	○	○	○	○	○	○
Did you have a lot of energy?	○	○	○	○	○	○
Have you felt downhearted and blue?	○	○	○	○	○	○
Did you feel worn out?	○	○	○	○	○	○
Have you been a happy person?	○	○	○	○	○	○
Did you feel tired?	○	○	○	○	○	○

10. During the *past 4 weeks*, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
○	○	○	○	○

11. How TRUE or FALSE is *each* of the following statements for you?

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
I seem to get sick a little easier than other people	○	○	○	○	○
I am as healthy as anybody I know	○	○	○	○	○
I expect my health to get worse	○	○	○	○	○
My health is excellent	○	○	○	○	○

Exhibit 5.9 The Life Satisfaction Index A

Here are some statements about life in general that people feel differently about. Would you read each statement in the list, and if you agree with it, put a check mark in the space under "AGREE." If you do not agree with a statement, put a check mark in the space under "DISAGREE." If you are not sure one way or the other, put a check mark in the space under "?"
Please be sure to answer every question on the list.

	Agree	Disagree	?
1. As I grow older, things seem better than I thought they would be.	2	0	1
2. I have gotten more of the breaks in life than most of the people I know.	2	0	1
3. This is the dreariest time of my life.	0	2	1
4. I am just as happy as when I was younger.	2	0	1
5. My life could be happier than it is now.	0	2	1
6. These are the best years of my life.	2	0	1
7. Most of the things I do are boring or monotonous.	0	2	1
8. I expect some interesting and pleasant things to happen to me in the future.	2	0	1
9. The things I do are as interesting to me as they ever were.	2	0	1
10. I feel old and somewhat tired.	0	2	1
11. I feel my age, but it does not bother me.	2	0	1
12. As I look back on my life, I am fairly well satisfied.	2	0	1
13. I would not change my past life even if I could.	2	0	1
14. Compared to other people my age, I've made a lot of foolish decisions in my life.	0	2	1
15. Compared to other people my age, I make a good appearance.	2	0	1
16. I have made plans for things I'll be doing a month or a year from now.	2	0	1
17. When I think back over my life, I didn't get most of the important things I wanted.	0	2	1
18. Compared to other people, I get down in the dumps too often.	0	2	1
19. I've gotten pretty much what I expected out of life.	2	0	1
20. In spite of what people say, the lot of the average man is getting worse, not better.	0	2	1

Reproduced from Neugarten BL, Havighurst RJ, Tobin SS. The measurement of life satisfaction. J Gerontol 1961;16:141. With permission. Scoring system based on Wood V, Wylie ML, Sheafor B. An analysis of a short self-report measure of life satisfaction correlation with rater judgments. J Gerontol 1969;24:467.

and it is of interest to study whether or not it also reflects objective circumstances. Neugarten and Havighurst showed that replies to the LSIA did not correlate with sex, socioeconomic status, age, or geographical location, concluding that the scale is not merely an indicator of objective environmental circumstances (1, 11). Other studies have not replicated this finding, however: Cutler obtained significant correlations with socioeconomic status (12). Harris found positive correlations with income, employment, and education (4). Using multiple regression analysis, Edwards showed

APPENDIX B

INFORMED CONSENT LETTER

CONSENT FORM FOR ADMINISTRATORS

I, _____ hereby authorize Debra A. Cook to distribute and administer her dissertation questionnaires to the volunteer participants.

This study is done as part of an investigation entitled "Religiosity, Health, and Life Satisfaction in Retirement Communities."

The purpose of the study is to gain information concerning religious-affiliated and non-religious affiliated retirement communities as it relates to religiosity and life satisfaction of residents.

I understand the questionnaires will require approximately 15-30 minutes to complete and it is completely voluntary on the part of the resident.

I understand that the retirement community proper name will not be used and no resident's names will be used or published.

Human subjects' approval was given by the Oklahoma State University Institutional Review Board and all rules and regulations pertaining to such will be followed.

I may contact Debra A. Cook at the following telephone number and or address: Debra Cook, 114 W. Husband Ct., Stillwater, OK 74075; (405) 743-4217 or (405) 744-3307.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to my retirement community.

Date:_____ Time:_____(a.m./p.m.)

Signed:_____
Signature of Representative

I certify that I have personally explained all elements of this form to the retirement community representative before requesting that he/she sign it.

Signed:_____
Signature of Researcher

APPENDIX C

SURVEY PACKET

CONSENT FORM FOR RETIREMENT COMMUNITY RESIDENT

I, _____, hereby voluntarily consent to participating in the dissertation study conducted by Debra A. Cook, doctoral student at Oklahoma State University. The study research title is "Religiosity, Health, and Life Satisfaction in Retirement Communities." The purpose of this research is to gain more information on health status and life satisfaction as it relates to religiosity.

I understand that the questionnaire will take approximately 15-30 minutes to complete and by filling out and returning the enclosed questionnaires, I am agreeing to participate in the study.

I understand these questionnaires will be kept confidential in that they are not marked with your name or any other identifying mark. Your participation is voluntary and you may refuse to complete the questionnaires.

Thank you for your participation in this study. The information is valuable and pertinent to the Study of Aging.

Date:_____ Time:_____(a.m./p.m.)

Signed:_____
Signature of Participant

I certify that I have personally explained all elements of this form to the subject or her representatives before requesting the subject sign it.

Signed:_____
Researcher

If you have any questions or would like further information please contact Sharon Bacher, 203 Whitehurst, 405-744-5700; Oklahoma State Univ.; Stillwater, OK 74078

COVER LETTER FOR QUESTIONNAIRE

Dear Retirement Center Resident,

Residents of your retirement center are being asked to fill out the enclosed questionnaire as part of my dissertation study at Oklahoma State University. The information from these questionnaires is completely confidential. No names or identifying numbers will be used.

The purpose of this study is to learn more about the religiosity, health status, and life satisfaction of residents in retirement communities. Your input is valuable in the future improvement of the quality of life in retirement settings.

You are not required to complete the form, but I would appreciate if you would take your time and complete the entire questionnaire as thoroughly as possible.

If you have any questions, a debriefing session will occur after the questionnaires are completed. For more information, etc. you may call me at home, (405) 743-4217 or work, (405) 744-3307 or contact Dr. Joe Weber, Professor at OSU (405) 744-8350. You may also contact University Research Services, Sharon Bacher, 203 Whitehurst, Oklahoma State University, OK 74078; phone (405) 744-5700.

Thank you for your participation in this study.

Sincerely,

Debra A. Cook
Graduate Student

SURVEY OF RESIDENTS

Note: Please do not sign your name. This form is intended to be anonymous. Please try to answer every question. Put a check mark in front of the response that best applies to you!

PLEASE MAKE SURE YOU DO NOT SKIP ANY PAGES. Thanks.

1. Gender:

   _____Male _____Female

2. What is your current marital status?

   _____Single _____Married _____Divorced _____Widowed

3. Which is your age category?

   _____below 65 _____65-74 _____75-84 _____85 or above

4. How long have you lived in this retirement community?

   _____6 mo. or less _____1-2 years _____3-5 years _____5 or more

5. What is the highest level of education you have completed?

   _____Grade School

   _____Some High School

   _____High School Graduate

   _____Some College

   _____Bachelors Degree (4-yr. Degree)

   _____Masters Degree or Higher

6. What is your current family income before taxes?

_____Below $10,000

_____$10,001-$20,000

_____$20,001-$40,000

_____$40,001-$60,000

_____Over $60,001

The following questions deal with possible spiritual experiences. Check the one which most applies to your experience:

1. I feel God's presence.

_____1 – Many times a day

_____2 – Every day

_____3 – Most Days

_____4 – Some days

_____5 – Once in a awhile

_____6 – Never or almost never

2. I find strength and comfort in my religion.

_____1 – Many times a day

_____2 – Every day

_____3 – Most days

_____4 – Some days

_____5 – Once in a while

_____6 – Never or almost never

3. I feel deep inner peace or harmony.

_____1 – Many times a day

_____2 – Every day

_____3 – Most days

_____4 – Some days

_____5 – Once in a while

_____6 – Never or almost never

4. I desire to be closer to or in union with God.

_____1 – Many times a day

_____2 – Every day

_____3 – Most days

_____4 – Some days

_____5 – Once in a while

_____6 – Never or almost never

5. I feel God's love for me, directly or through others.

_____1 – Many times a day

_____2 – Every day

_____3 – Most days

_____4 – Some days

_____5 – Once in a while

_____6 – Never or almost never.

6. I am spiritually touched by the beauty of creation.

_____1 – Many times a day

_____2 – Every day

_____3 – Most days

_____4 – Some days

_____5 – Once in a while

_____6 – Never or almost never

7. I believe in a God who watches over me.

_____1 – Strongly agree

_____2 – Agree

_____3 – Disagree

_____4 – Strongly Disagree

8. I feel a deep sense of responsibility for reducing pain and suffering in the world.

_____1 – Strongly agree

_____2 – Agree

_____3 – Disagree

_____4 – Strongly disagree

Because of my religious or spiritual beliefs:

9. I have forgiven myself for things that I have done wrong.

_____1 – Always or almost always

_____2 – Often

_____3 – Seldom

_____4 – Never

10. I have forgiven those who hurt me.

_____1 – Always or almost always

_____2 – Often

_____3 – Seldom

_____4 – Never

11. I know that God forgives me.

_____1 – Always or almost always

_____2 – Often

_____3 – Seldom

_____4 – Never

12. How often do you pray privately in places other than at church or synagogue?

_____1 – More than once a day

_____2 – Once a day

_____3 – A few times a week

_____4 – Once a week

_____5 – A few times a month

_____6 – Once a month

_____7 – Less than once a month

_____8 – Never

13. Within your religious or spiritual tradition, how often do you meditate?

_____1 – More than once a day

_____2 – Once a day

_____3 – A few times a week

_____4 – Once a week

_____5 – A few times a month

_____6 – Once a month

_____7 – Less than once a month

_____8 – Never

14. How often do you watch or listen to religious programs on TV or radio?

_____1 – More than once a day

_____2 – Once a day

_____3 – A few times a week

_____4 – Once a week

_____5 – A few times a month

_____6 – Once a month

_____7 – Less than once a month

_____8 – Never

15. How often do you read the Bible or other religious literature?

_____1 – More than once a day

_____2 – Once a day

_____3 – A few times a week

_____4 – Once a week

_____5 – A few times a month

_____6 – Once a month

_____7 – Less than once a month

_____8 – Never

16. How often are prayers or grace said before or after meals in your home?

_____1 – At all meals

_____2 – Once a day

_____3 – At least once a week

_____4 – Only on special occasions

_____5 – Never

17. I think about how my life is a part of a larger spiritual force.

_____1 – A great deal

_____2 – Quite a bit

_____3 – Somewhat

_____4 – Not at all

18. I work together with God as partners.

_____1 – A great deal

_____2 – Quite a bit

_____3 – Somewhat

_____4 – Not at all

19. I look to God for strength, support, and guidance.

_____1 – A great deal

_____2 – Quite a bit

_____3 – Somewhat

_____4 – Not at all

20. I feel God is punishing me for my sins or lack of spirituality.

_____1 – A great deal

_____2 – Quite a bit

_____3 – Somewhat

_____4 – Not at all

21. I wonder whether God has abandoned me.

_____1 – A great deal

_____2 – Quite a bit

_____3 – Somewhat

_____4 – Not at all

22. I try to make sense of the situation and decide what to do without relying on God.

_____1 – A great deal

_____2 – Quite a bit

_____3 – Somewhat

_____4 – Not at all

23. To what extent is your religion involved in understanding or dealing with stressful situations in any way?

_____1 – Very involved

_____2 – Somewhat involved

_____3 – Somewhat

_____4 – Not involved at all

24. If you were ill, how much would the people in your congregation help you out?

_____1 – A great deal

_____2 – Some

_____3 – A little

_____4 – None

25. If you had a problem or were faced with a difficult situation, how much comfort would the people in your congregation be willing to give you?

_____1 – A great deal

_____2 – Some

_____3 – A little

_____4 – None

Sometimes the contact we have with others is not always pleasant.

26. How often do the people in your congregation make too many demands on you?

_____1 – Very often

_____2 – Fairly often

_____3 – Once in a while

_____4 – Never

27. How often are the people in your congregation critical of you and the things you do?

_____1 – Very often

_____2 – Fairly often

_____3 – Once in a while

_____4 – Never

28. Did you ever have a religious or spiritual experience that changed your life?

_____No _____Yes

29. Have you ever had a significant gain in your faith?

_____No _____Yes

If yes: How old were you when this occurred?_____

30. Have you ever had a significant loss in your faith?

_____No _____Yes

If yes: How old were you when this occurred?_____

31. I try to carry my religious beliefs over into all my other dealings in life.

_____1 – Strongly agree

_____2 – Agree

_____3 – Disagree

_____4 – Strongly Disagree

32. During the last year about how much was the average monthly contribution of your household to your congregation or to religious causes?

$_____per year OR $_____per month

33. In an average week, how many hours do you spend in activities on

behalf of your church or activities that you do for religious or spiritual reasons?

_____hours

34. How often do you go to religious services?

_____1 – More than once a week

_____2 – Every week or more often

_____3 – Once or twice a month

_____4 – Every month or so

_____5 – Once or twice a year

_____6 – Never

35. Besides religious services, how often do you take part in other activities at a place of worship?

_____1 – More than once a week

_____2 – Every week or more often

_____3 – Once or twice a month

_____4 – Every month or so

_____5 – Once or twice a year

_____6 – Never

36. What is your current religious preference? _____

IF PROTESTANT, which specific denomination?_____

See denomination Religious Preference List for selections.

37. To what extent do you consider yourself a religious person?

_____1 – Very religious

_____2 – Moderately religious

_____3 – Slightly religious

_____4 – Not religious at all

38. To what extend do you consider yourself a spiritual person?

_____1 – Very spiritual

_____2 – Moderately spiritual

_____3 – Slightly spiritual

_____4 – Not spiritual at all

This section asks for your views about your health. Answer every question. If you're unsure about how to answer a question give the best answer you can. Place a check mark on the lines below the response.

1. In general, would you say your health is:

Excellent	Very Good	Good	Fair	Poor
_____	_____	_____	_____	_____

2. Compared to 1 year ago, how would you rate your health in general now?

Much better now	Somewhat better now	About the same	Somewhat worse now	Much worse now
_____	_____	_____	_____	_____

3. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
Vigorous activities, such as running, Lifting heavy objects, participating In strenuous sports	_____	_____	_____
Moderate activities, such as moving A table, pushing a vacuum cleaner, bowling, or playing golf.	_____	_____	_____
Lifting or carrying groceries	_____	_____	_____
Climbing several flights of stairs	_____	_____	_____
Climbing one flight of stairs	_____	_____	_____
Bending, kneeling, or stooping	_____	_____	_____
Walking more than a mile	_____	_____	_____
Walking several blocks	_____	_____	_____
Walking one block	_____	_____	_____
Bathing or dressing yourself	_____	_____	_____

4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	Yes	No
Cut down on the amount of time you spent on work or other activities	____	____

	Yes	No
Accomplished less than you would like	____	____
Were limited in the kind of work or other activities	____	____
Had difficulty performing the work or other Activities (for example, it took extra effort)	____	____

5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	Yes	No
Cut down on the amount of time you spent on work or other activities	____	____
Accomplished less than you would like	____	____
Didn't do work or other activities as carefully as usual	____	____

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

Not at all	Slightly	Moderately	Quite a bit	Extremely
_____	_____	_____	_____	_____

7. How much bodily pain have you had during the past 4 weeks?

None	Very Mild	Mild	Moderate	Severe	Very Severe
____	_____	____	____	____	____

8. During the past 4 weeks, how much did pain interfere with your normal work (Including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
_____	_____	_____	_____	_____

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks…..

	All the time	Most of the time	A Good bit of the time	Some of the time	A little of the time	None of the time
Did you feel full of pep?	____	____	____	____	____	____
Have you been a very nervous person	____	____	____	____	____	____
Have you felt so down in the dumps that nothing could cheer you up?	____	____	____	____	____	____
Have you felt calm and peaceful?	____	____	____	____	____	____
Did you have a lot of energy	____	____	____	____	____	____
Have you felt downhearted and blue?	____	____	____	____	____	____
Did you feel worn out?	____	____	____	____	____	____

Have you been a happy person?	____	____	____	____	____	____
Did you feel tired?	____	____	____	____	____	____

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
____	____	____	____	____

11. How TRUE or FALSE is each of the following statements for you?

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
I seem to get sick a little easier than other people.	____	____	____	____	____
I am as healthy as anybody I know.	____	____	____	____	____
I expect my health to get worse	____	____	____	____	____
My health is excellent	____	____	____	____	____

Here are some statements about life in general that people feel differently about. Would you read each statement in the list, and put a check mark in the space under "AGREE," if you do not agree, put a check mark in the space under "DISAGREE." If you are not sure, put a check mark in the space under the "?".

	Agree	Disagree	?
1. As I grow older, things seem better than I thought they would be.	____	_____	___
2. I have gotten more of the breaks in life than most of the people I know.	_____	_____	___
3. This is the dreariest time of my life.	_____	_____	___
4. I am just as happy as when I was younger.	_____	_____	___
5. My life could be happier than it is now.	_____	_____	___
6. These are the best years of my life.	_____	_____	___
7. Most of the things I do are boring or monotonous.	_____	_____	___
8. I expect some interesting and pleasant things to happen to me in the future.	_____	_____	___
9. The things I do are as interesting to me as they ever were.	_____	_____	___
10. I feel old and somewhat tired.	_____	_____	___
11. I feel my age, but it does not bother me.	_____	_____	___
12. As I look back on my life, I am fairly well satisfied.	_____	_____	___

13. I would not change my past life even if I could. ____ _____ ___

14. Compared to other people my age, I've made a lot of foolish decisions in my life. _____ _____ ___

15. Compared to other people my age, I make a good appearance. _____ _____ ___

16. I have made plans for things I'll be doing a month or a year from now. _____ _____ ___

17. When I think back over my life, I didn't get most of the important things I wanted. _____ _____ ___

18. Compared to other people, I get down in the dumps too often. _____ _____ ___

19. I've gotten pretty much what I expected out of life. _____ _____ ___

20. In spite of what people say, the lot of the average man is getting worse, not better. _____ _____ ___

21. Please circle any chronic condition that you have been diagnosed with:

Arthritis	Hypertension	Cancer	Hearing Impairment
Cataracts	Visual Impairment	Diabetes	Heart Disease

APPENDIX D

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

Oklahoma State University
Institutional Review Board

Protocol Expires: 10/2/01

Date : Tuesday, October 03, 2000 IRB Application No ED0127

Proposal Title: RELIGIOSITY, HEALTH, AND LIFE SATISFACTION IN RETIREMENT COMMUNITIES

Principal
Investigator(s) :

Debra Cook
114 W. Husband
Stillwater, OK 74075

Steven Edwards
432 Willard
Stillwater, OK 74078

Reviewed and
Processed as: Expedited

Approval Status Recommended by Reviewer(s) : Approved

Signature : Carol Olson

Carol Olson, Director of University Research Compliance

Tuesday, October 03, 2000
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

VITA

Debra A. Cook

Candidate for the Degree of

Doctor of Education

Thesis: RELIGIOSITY, HEALTH, AND LIFE SATISFACTION IN RETIREMENT COMMUNITIES

Major Field: Applied Educational Studies

Biographical:

Education: Received Associates degree in General Studies from Seminole Jr. College, Seminole, Oklahoma in May 1977; received Bachelor of Science degree with a major in Physical Education and Master of Science with a major in Health and Wellness from Oklahoma State University, Stillwater, Oklahoma in May, 1980 and May 1984, respectively. Completed the requirements for the Doctor of Education degree with a major in Health Promotion at Oklahoma State University in December 2000.

Employment: Lecturer, Health & Human Performance Department, Oklahoma State University, 2000; Exercise Specialist, Stillwater Medical Center Lite Weigh Program, Stillwater, Oklahoma 1999-2000; Graduate Teaching Assistant, Health Promotion, Oklahoma State University 1998-2000; Director, The Renaissance Assisted Living Residence, Stillwater, Oklahoma, 1997-1998; Manager, ICON Health & Fitness, Oklahoma City, Oklahoma, 1995-1997; Wellness Director, The Forum Senior Living Community, The Woodlands, Texas; 1994-1995; Research Assistant II, University of Texas Health Science Center, Project HeartBeat Cardiovascular Study, The Woodlands, Texas, 1992-1994; Graduate Teaching Assistant, Health Promotion, Oklahoma State University, 1989-1992.

Professional Organizations: American Alliance of Health, Physical Education, Recreation & Dance; Oklahoma Association of Health, Physical Education, Recreation & Dance; Sigma Phi Omega (Nat'l Gerontology

Honor and Professional Society); American Society on Aging; Southwest Society on Aging; Phi Epsilon Kappa.

Publications: Jacobson, B., Cook, D., Moser, B., & Aldana, S. (1992). *Adolescent suicide ideation.* Journal of Health Education, 23(5), 282-285. Jacobson, B., Cook, D., Moser, B., & Aldana, S. (1992). *Adolescent suicide behavior in Oklahoma.* Research Quarterly in Exercise and Sports, 24(5), 790.

Awards and Honors: Lew Wentz Academic Scholarship; Senior Academic Scholarship; AAHPERD Southern District Student Leadership Award; President's Honor Roll; Dean's Honor Roll; Phi Epsilon Kappa Health & Physical Education Honor Society; Sigma Phi Omega Gerontology Honor Society; Phi Kappa Phi Honor Society (Top 10%); President's Scholarship.