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Religiosity and Prayer In Relation to Health and Life Satisfaction In Older Adults

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Literature Review

Technological and medical advances have helped increase human life expectancy. In 2014, life expectancy reached 78.8 years in the United States, which is an all-time high for the country (Centers for Disease Control and Prevention, 2012). In addition, the United States is facing a rapidly growing elderly population. The population aged 65 and older was estimated to be 43.1 million in 2012 and this is projected to increase to 83.7 million by 2050. This drastic increase is in large part due to the baby boom generation, which began turning 65 in 2011 (Ortman, Velkoff, & Hogan, 2014). These data provide solid evidence that understanding the aging experience will become essential as we move into the 21st century.

One element of aging that seems to be critical is the person's religious experience. Adults over 65 exhibit the highest levels of religious participation (McFadden, 1995). In addition, individual religiosity and prayer tend to increase as we age. Hayward and Krause (2013) examined this trend through a seven-year longitudinal study of Christian older adults. They found a linear increase in total prayer frequency and prayers that place trust in God over expecting immediate reward. The frequency of prayer increased for all types of prayer content, including prayers for others, for God's will, in thanksgiving, for guidance, for health, and for material goods. With this increased participation, it raises questions about what psychological impacts may stem from this religious activity, as well as what defines religion for each individual.

William James, a prominent psychologist and a pioneer in the examination of psychology of religion, recognized the difficulty and complexity of creating a single definition of religion, and it was not his purpose to find one. However, for his purposes, he

defined religion as “the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine” (James, 1902, p. 29-30). Throughout his lectures, he comes to various conclusions regarding religious life in general. Ultimately, he concluded that the physical world in which we live gains its significance from its relationship with a spiritual universe, and this universe is our ultimate end. Prayer and spiritual communion are effective means of connecting with this world and produce psychological and material effects (James, 1902). For individuals who identify with religion, James found that they tend to have a zest for life, as well a certainty of peace, security, and affection (James, 1902). “Happiness! Happiness! Religion is only one of the ways in which men gain that gift. Easily, permanently, and successfully, it often transforms the most intolerable misery into the profoundest and most enduring happiness” (James, 1902, p. 163).

In Leo Tolstoy’s autobiographical novel, “A Confession,” we observe the initial struggle with, and the ultimate triumph of, his faith. During his childhood, Tolstoy was steadfast in his belief in God, but as the years passed, his questioning, intellectual mind led him to a world void of God. Depression and thoughts of suicide began to overtake him and he started to question, “What is the meaning of life?” He began to look for answers in science. Science can easily tell us “about the chemical constituents of the stars, about the movement of the sun towards the constellation Hercules, about the origin of species and of man, about the forms of infinitely minute imponderable particles of ether,” but science fails us when it comes to explaining our purpose and the meaning of this life (Tolstoy, 1882, p. 53). He looked toward philosophy for answers, but was also met with dissatisfaction when he only found his question reciprocated in a more complex form. As intelligent as he was,

Tolstoy could not help but question, "But what if there is something that I do not yet know?" (Tolstoy, 1882, p. 39) This question ultimately served as the bridge between his despair and his joy. Instead of searching for answers within his circle of acquaintances, he sought out answers in the peasant people. They had a seemingly effortless grasp on the meaning of life. Rather than embracing the pleasures of life, they embraced their suffering and hardships. However, despite these trials, they were happier than any of those Tolstoy had ever encountered. He struggled to accept faith and meaning in life without having concrete evidence of its existence, but the faith and the happiness he found in the peasant people triumphed over the disbelief and depression that dominated his life for so long.

The Brother's Karamazov, a novel by Fyodor Dostoevsky, provides a contrast of two brothers who exemplify the differences between a person of faith and a person of disbelief. Alyosha is deeply rooted in his faith and his love of God results in an undeniable, contagious happiness. Even when doubts naturally arise, the goodness he sees in the world serves as a renewal of his faith and triumphs over the evil to which his brother's faith succumbs. Ivan's analytical mind, akin to Tolstoy, leads him into a constant struggle in his search for the meaning of life. It is unfathomable to him that a God could exist in a world so pervasive with suffering and poverty. This inner conflict consumes him and renders him utterly dissatisfied with life.

The happiness that James, Tolstoy, and Alyosha all found through religion is not uncommon. Ayele, Gheorghiu, and Reyes (1999) observed a form of this happiness when they examined the correlation between religious activity and life satisfaction of physicians and older patients. They found that 75% of the physicians used religion as a coping resource, and there was a positive correlation between intrinsic religious activity, such as

prayer and bible reading, and life satisfaction. For the older patients in this study, 86% used religion as a coping resource and intrinsic religious activity was positively associated with life satisfaction. The relationship remained after controlling for age, gender, health, and marital status.

Similarly, Ghufran (2011) studied the relationship between collective religious practices, life satisfaction, and psychological well-being among 200 Muslim subjects ranging from 65 to 75 years old. He compared 100 Muslims who performed religious prayers in the mosque collectively five times a day and 100 Muslims who did not attend collective prayers regularly. The results indicate significantly greater life satisfaction and well-being for those who attended the collective religious prayers regularly versus those who did not attend regularly. This study concluded that collective religious practices may be related to life satisfaction and feeling of well-being for older adults.

In a longitudinal study, Markides (1983) assessed the relationship between aging, church attendance, self-rated religiosity, and private prayer among 245 Mexican-Americans and 91 Caucasian Americans. The results indicated that church attendance and participation in private prayer remained relatively stable over the course of four years, but self-rated religiosity increased somewhat. Church attendance was the only measure that showed a significant relationship with life satisfaction for both populations and at both points of observation. This relationship was particularly strong among the Caucasian sample. Another longitudinal study found that individuals who become more religious over time have long-term gains in life satisfaction and those who become less religious have long-term losses (Headey, Schupp, Tucci, & Wagner, 2010).

This positive trend appears to cross over into the relationship between religion, prayer, and health. Baetz, Larson, Marcoux, Bowen, and Griffin (2002) studied the effects of religious beliefs and practices on the mental health of psychiatric inpatients. They only included subjects with a Beck Depression score of 12 or more. They concluded that higher frequency in worship attendance correlated with less severe depressive symptoms, shorter current length of stay, higher life satisfaction, and lower rates of current and lifetime alcohol abuse, as compared to those with less frequent or no worship attendance. Prayer frequency did not yield any significant effects.

Poloma and Pendleton (1991) created a model that outlines different aspects of private prayer. This model includes prayer experience (being inspired or led by God), frequency of prayer, prayer with others, as well as four prayer types: colloquial prayer (asking for guidance), petitional prayer (asking for material things), ritual prayer (reading and reciting prayers), and meditative prayer (“feeling” God). They found a positive relationship between colloquial prayer and happiness, as well as a positive relationship between meditative prayer and well-being. Poloma and Pendleton (1991) also found that petitionary prayer is associated with more mental health problems.

Maltby, Freeman, Cruise, and Breslin (2010) examined the correlation between religion and health. They found that meditative prayer, prayer experience, and strong intrinsic religiosity results in better physical health scores, while meditative prayer and strong intrinsic religiosity results in better mental health scores. They found no relationship between petitionary prayer and mental health. Winkeljohn Black, Pössel, Jeppsen, Bjerg, and Wooldridge (2014) examined the effects of prayer types on mental

health. They found a negative relationship between petitionary prayer and mental health, while they found a positive relationship between ritual prayer and mental health.

Krause (2003) studied whether praying for other people softens the effects of financial strain on the physical health of the individual who offers the prayer. He found that the detrimental effects of chronic financial problems on physical health are significantly reduced for older adults who pray for others more often. However, he found that praying for material things fails to offset the negative effects of economic strain on health.

Similarly, Mesisenhelder and Chandler (2001) examined the relationship between frequency of prayer and health among active Presbyterian pastors. They obtained data from a national, randomly mailed survey. They found high frequency of prayer was significantly related to higher scores in vitality, general health, and mental health. However, the frequency of prayer was extremely skewed towards high frequency responses, since all of the subjects were Presbyterian pastors. In addition, lack of religiousness has been associated with poor breast cancer survival among women (Van Ness, Kasl, & Jones 2003) and strong religiosity may have a protective effect on the physiological effects of stress among women with fibromyalgia (Dedert, Studts, Weissbecker, Salmon, Banis, & Sephton 2004).

Koenig and Titus (2004) found that the religious activities, attitudes, and spiritual experiences of older hospitalized patients are associated with greater social support and better physical health. Benjamins (2004) concluded that more frequent religious attendance is associated with fewer functional limitations among the elderly. In another study, intrinsic religiosity and spiritual well-being was found to be associated with hope and positive mood states in elderly people coping with cancer (Fehring, Miller, & Shaw

1997). In a particularly large study, Deaton (2009) studied the relationships between religiosity, age, and gender, as well as how religiosity correlates with a variety of health measures and behaviors. He obtained more than 300,000 observations and data from over 140 countries using the Gallup World Poll. The results revealed that, universally, the elderly and women tend to be more religious. For the majority of countries, religious people report better health, more energy, and less pain. They have healthier social lives and personal behaviors, and are less likely to smoke; they are more likely to be married, have supportive friends, be treated with respect, and have greater confidence in the healthcare and medical system. All of these positive outcomes tended to be stronger for men than for women.

Intrinsic and Extrinsic Religiosity

The current study also investigates the influence of intrinsic and extrinsic religiosity on health and life satisfaction in older adults. For intrinsically religious individuals, religion is the primary motivation in their life. They embrace and internalize it, and they are essentially living their religion (Allport & Ross, 1967). Ayele, Gheorghiu, and Reyes (1999) found a positive correlation between intrinsic religious activity and life satisfaction. Maltby, Freeman, Cruise, and Breslin (2010) found intrinsic religiosity accounted for unique variance in physical and mental health scores. For extrinsically religious individuals, religion is a source for social gain. Many studies have found extrinsic religiosity to be positively associated with various types of psychopathology, including schizotypal personality traits, hostility, anxiety, and depression (Hackney & Sanders, 2003; Leach et al., 2008; Maltby & Day, 2002; Salsman & Carlson, 2005; Tix & Frazier, 1998). Therefore, this leads to the following hypotheses:

- 1. I hypothesize that intrinsic religiosity is positively correlated with life satisfaction.**
- 2. I hypothesize that intrinsic religiosity is positively correlated with perceived health.**

Intrinsic religiosity means that the individual finds religion to be their main motive in life. The basic tenets of most religions are positive influences, such as forgiveness, love, dedication, and reflection. If these aspects are at the center of one's life, life would likely be very satisfying and fulfilling. Additionally, these individuals likely engage in healthier behaviors that allow them to focus more wholly on their religion.

Prayer Types

The current study aims to expand upon the research regarding how life satisfaction and health vary between particular prayer behaviors. The study by Maltby, Freeman, Cruise, and Breslin (2010) found that meditative prayer had the most significant impact on physical and mental health. Winkeljohn Black, Pössel, Jeppsen, Bjerg, and Wooldridge (2014) found a negative relationship between petitionary prayer and mental health and a positive relationship between ritual prayer and mental health. Poloma and Pendleton (1991) found a positive relationship between colloquial prayer and happiness, as well as a positive relationship between meditative prayer and well-being. Krause (2003) found that praying for material things (petitional prayer) failed to offset the harmful effects of financial strain on an individual's health. Therefore, this leads to the following hypotheses:

- 3. I hypothesize that a combination of colloquial prayer, ritual prayer, and meditative prayer will be more predictive of perceived health.**

4. I hypothesize that a combination of colloquial prayer, ritual prayer, and meditative prayer will be more predictive of life satisfaction.

These three prayer types emphasize growing in one's relationship with God. The focus is on the reflection and conversation with God, where requests for material gains do not exist, but rather there are only requests for guidance, forgiveness, and blessings.

Petitional prayer emphasizes the extrinsic motivation of religion, rather than an intrinsic one. This type of prayer is used to gain materialistic, worldly items, rather than to genuinely deepen religious commitment.

Gender

Deaton (2009) found that women tend to be more religious than men. However, men tend to experience more positive outcomes from having high levels of religiosity than women do. Despite the positive health outcomes for men, women are still likely to be healthier overall. Therefore, this leads to the following hypotheses:

5. I hypothesize that men will have higher life satisfaction scores than women.

6. I hypothesize that women will have higher perceived health scores than men.

7. I hypothesize that women will have higher intrinsic religiosity than men.

Religious Vocation/Non-Religious Vocation

In addition, a portion of the participants were individuals in a religious vocation (e.g., priest, minister, sister, brother, etc.), so I compared the intrinsic religiosity, health and life satisfaction of those in a religious vocation versus those who are in a non-religious vocation. In the study of active Presbyterian pastors, they found high frequency of prayer was significantly related to higher scores in vitality, general health, and mental health (Meisenhelder & Chandler, 2001). Although other studies found this same positive

correlation involving individuals in non-religious vocations, it would be interesting to see if the deeper commitment of religious vocation results in higher health and life satisfaction scores. Therefore, this leads to the following hypotheses:

- 8. I hypothesize that the positive correlation between intrinsic religiosity and perceived health will be significantly stronger for those individuals in a religious vocation versus those in a non-religious vocation.**
- 9. I hypothesize that the positive correlation between intrinsic religiosity and life satisfaction will be significantly stronger for those individuals in a religious vocation versus those in a non-religious vocation.**

Method

Participants

I surveyed older adults ($N = 222$), 142 females and 79 males, using convenience sampling. There was one participant who did not answer the question about gender. All participants were between 65 to 84 years old. I chose this “young-to-middle old” age group because I thought that they may be more capable of completing the survey electronically and less likely to experience survey fatigue. Participants were from local community centers and senior living facilities, churches, the monastery at Saint John’s University, and the monastery at the College of Saint Benedict.

Procedure

In this cross-sectional design, participants came from from local community centers, retirement and nursing facilities, through friends and family, and through various organizations for aging, such as Gray Panthers and The Vital Aging Network. I did this either through email, telephone, or in-person discussions. If recruiting from a

nursing/retirement home, the director of the facility had to complete an IRB form before I could conduct research there. Participants filled out electronic surveys if physically and cognitively capable. There were also paper and pencil versions of the surveys available if the participant could not fill out an electronic survey. In the case of paper and pencil surveys, the researcher was physically present to distribute the survey. In some cases, the researcher completed the survey with the participant through an interview, where the survey was read word-for-word to the participant. This was because some facilities wanted to increase person-to-person interaction with their residents. The participant signed an informed consent form before beginning the surveys. There were four surveys and a demographic questionnaire that each participant completed. Each of the scales was scored using the appropriate scoring procedures and reverse-keyed the appropriate items. I collected and prepared all of the data for analysis.

Materials

Materials included four self-report electronic surveys or, when necessary, paper and pencil surveys. A demographic questionnaire also inquired about the participant's gender, age, ethnicity, religion (type and practicing/non-practicing), frequency of church attendance, and whether they are in a religious or non-religious vocation. The participant either filled in the blank or circled the most representative answer.

Religious orientation scale. The ROS (Allport & Ross, 1967) measures an individual's intrinsic and extrinsic religiosity. Internal consistencies reported for the ROS Intrinsic scale are typically in the mid .80s for Cronbach's alpha. Internal consistencies reported for the ROS Extrinsic scale are typically in the low .70s for Cronbach's alpha. The two-week test-retest reliability was .84 for the intrinsic scale and .78 for the extrinsic scale

(Hill & Hood, 1999). Also, the research is generally supportive of the validity of the extrinsic and intrinsic orientation scales (Hill & Hood, 1999).

The optimum SF-12v2 health survey. The Optum SF-12v2 (Maruish, 2012) is a shorter version of the MOS SF-36v2. It is a survey that consists of 12 questions that measure functional health and well-being within the past 4 weeks. The reliability estimates for the SF-12v2 Standard (4-week recall) Form had a Cronbach's Alpha of .92 for the Physical Component Summary and a Cronbach's Alpha of .88 for the Mental Component Summary.

The satisfaction with life scale. The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a five-item measure that reflects overall life satisfaction. Participants rated statements on a 7-point scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with high scores reflecting high life satisfaction. Past research has shown that the internal consistency of the SWLS is excellent (Cronbach's $\alpha=0.83-0.92$). Diener et al. (1985) reported a 2-month test-retest correlation coefficient of .82 and an alpha correlation of .87. The SWLS has been found to be positively associated with other measures of subjective well-being and negatively associated with measures of psychopathology (Diener et al., 1985).

Varieties of prayer survey. The Varieties of Prayer survey (Poloma & Gallup, 1991) measures frequency of prayer, prayer experience, prayer with others, and four prayer behaviors: colloquial prayer, petitional prayer, ritual prayer, and meditative prayer. Internal reliability statistics for the subscales of prayer are: Colloquial Prayer, $\alpha=.85$; Petitional Prayer, $\alpha=.78$; Ritual Prayer, $\alpha=.59$; Meditative Prayer, $\alpha=.81$; and Prayer experience, $\alpha=.87$.

Results

In this study, our reliability levels mostly supported those found in past research. However, our reliability level for the Religious Orientation Scale was lower than what was reported by the scale creators (Allport & Ross, 1967). Their research has shown the typical reliability levels for this scale to be between .70 and .80. The results are presented in Table 1.

Table 1

Cronbach's Alpha Reliability Assessment of the Survey Instruments

Instrument	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of items
Satisfaction With Life Scale	.866	.883	5
Optum SF-12v2 Religious Orientation Scale	.778	.799	12
Varieties of Prayer Survey	.600	.613	20
	.961	.961	23

I hypothesized that there would be a positive correlation between intrinsic religiosity and life satisfaction. Statistical analysis using a Pearson's correlation revealed a significant linear relationship between intrinsic religiosity and life satisfaction, $r(193) = .175, p < .05$. This supports the research hypothesis. I hypothesized that there would be a positive correlation between intrinsic religiosity and perceived health. Statistical analysis using Pearson's correlation did not reveal a significant linear relationship between intrinsic religiosity and perceived health, $r(188) = .080, p > .05$. This did not support the research hypothesis.

I hypothesized that women will have higher intrinsic religiosity than men. An independent-samples t-test was conducted to compare intrinsic religiosity and gender. There was not a significant difference in the scores for males ($M = 29.22$, $SD = 6.65$) and females ($M = 29.37$, $SD = 6.30$); $t(192) = -.156$, $p = 0.798$. This does not support the research hypothesis. I hypothesized that men would have higher life satisfaction scores than women. An independent-samples t-test was conducted to compare life satisfaction with gender. There was not a significant difference in the scores for males ($M = 29.44$, $SD = 4.33$) and females ($M = 28.39$, $SD = 5.64$); $t(217) = 1.44$, $p = 0.150$. This does not support the research hypothesis. I hypothesized that women will have higher perceived health scores than men. An independent-samples t-test was conducted to compare health with gender. There was not a significant difference in the scores for males ($M = 45.28$, $SD = 5.62$) and females ($M = 43.91$, $SD = 6.08$); $t(208) = 1.60$, $p = 0.110$. This does not support the research hypothesis.

I hypothesized that a combination of colloquial prayer, ritual prayer, and meditative prayer will be more predictive of life satisfaction. A multiple regression analysis was conducted to evaluate how well the prayer measures predicted life satisfaction. The predictors were the three types of prayer, while the criterion variable was life satisfaction. The linear combination of prayer measures was not significantly related to life satisfaction, $F(7, 161) = 1.208$, $p > .05$, $R^2 = .05$. See Table 2 for beta weights. This did not support the research hypothesis. I hypothesized that a combination of colloquial prayer, ritual prayer, and meditative prayer will be more predictive of perceived health. A multiple regression analysis was conducted to evaluate how well the prayer measures *predicted* health. The predictors were the three types of prayer, while the criterion variable was perceived

health. The linear combination of prayer measures was not significantly related to perceived health, $F(7, 159) = .948, p > .05, R^2 = .04$. See Table 3 for beta weights. This did not support the research hypothesis.

I hypothesized that individuals in a religious vocation will have a significantly stronger correlation between intrinsic religiosity and life satisfaction compared to individuals in a non-religious vocation. A hierarchical multiple regression analysis consisting of religious vocation, intrinsic religiosity, and an interaction variable were predictive of life satisfaction, $F(3, 179) = 4.597, p < .05, R^2 = .072$. See Table 4 for beta weights. However, out of those variables, religious vocation was the only variable that contributed. I hypothesized that individuals in a religious vocation will have a significantly stronger correlation between intrinsic religiosity and perceived health compared to individuals in a non-religious vocation. A hierarchical multiple regression analysis revealed that individuals in a religious vocation did not have a significantly stronger correlation between intrinsic religiosity and perceived health compared to individuals in a non-religious vocation, $F(3, 174) = 1.627, p > .05, R^2 = .027$. See Table 5 for beta weights. This did not support the research hypothesis.

Although not originally hypothesized, there were some interesting results that are worth noting. Statistical analysis using Pearson's correlation revealed a significant linear relationship between life satisfaction and perceived health, $r(209) = .373, p < .01$. Statistical analysis using Pearson's correlation revealed a significant linear relationship between prayer experience and perceived health, $r(199) = .151, p < .05$. Statistical analysis using Pearson's correlation revealed a significant linear relationship between meditative prayer and perceived health, $r(196) = .174, p < .05$. Statistical analysis using Pearson's

correlation revealed a significant linear relationship between intrinsic religiosity and prayer experience, $r(190) = .659, p < .01$.

Discussion

The overall purpose of this study was to investigate prayer and religion in relation to perceived health and life satisfaction in adults between the ages of 65 and 84. One aspect of the study looked at various prayer behaviors and their relationship to health and life satisfaction. I hypothesized that a combination of colloquial prayer, ritual prayer, and meditative prayer would account for more variance in perceived health. I hypothesized that a combination of colloquial prayer, ritual prayer, and meditative prayer would account for more variance in life satisfaction. This was not supported.

Although there were no significant results using multiple regression, there was a positive correlation between meditative prayer and perceived health, as well as a positive correlation between prayer experience and perceived health. Meditative prayer involves things such as “feeling” God, thinking quietly about God, spending time worshipping God, reflecting on the Bible, and listening to God for his answer to prayers, whereas prayer experience is slightly more of an involved relationship with God. It entails being inspired or led by God, receiving a deeper insight into spiritual or biblical truth, receiving a definitive answer to a prayer request, feeling a strong presence of God, and experiencing a deep sense of peace and well-being. While meditative prayer is something that is relatively within the control of the individual, it seems that prayer experience, in a sense, is something that is bestowed upon an individual. Given that the individual is likely very religious and prays frequently, the “experiences” that come from those prayers could not simply be evoked on their own if an individual so desires them. Perhaps this relative lack of control is important

to the relationship of health and prayer experience. An individual who prays frequently and has these experiences may experience a greater sense of psychological and physical well-being because they truly feel a reciprocal relationship with God—a reciprocity not necessarily felt by all praying individuals.

In fact, prayer experience is reminiscent of self-actualization, the highest level of Maslow's Hierarchy of Needs. An aspect of self-actualization involves the idea of peak experiences. Peak experiences are often described as transcendent moments of pure joy and elation that "is characterized by such intensity of perception, depth of feeling, or sense of profound significance as to cause it to stand out" (Leach, 1962, p. 11). When individuals have a prayer experience, they feel a deep sense of peace and well-being, feel led or inspired by God, or feel his unique presence. In many cases, it seems that this type of experience would involve the strong intensity of perception, depth of feeling, and profound significance that is characteristic of peak experiences. The second level of Maslow's Hierarchy of Needs involves security of health. Therefore, self-actualization cannot be achieved in an individual who must focus on their health before they are able to move on to higher needs. This leads to another possible explanation for the relationship between prayer experience and health. If prayer experience is akin to self-actualization, then these individuals are secure in their health and are able to focus on their prayer and their relationship with God that leads to these powerful peak experiences.

William James (1902) once wrote, "As regards prayer for the sick, if any medical fact can be considered to stand firm, it is that in certain environments prayer may contribute to recovery, and should be encouraged as a therapeutic measure" (p. 463). This leads to the idea that meditative prayer and prayer experience could be a beneficial way for older

adults to cope with stressors that tend to appear in older age, such as deteriorating health and the idea of death. It could prove to be an important tool in the longevity, as well as the overall enjoyment, of their lives.

This study also looked at the relationship between intrinsic and extrinsic religiosity and the individual's health and life satisfaction. I hypothesized that intrinsic religiosity would be positively correlated with perceived health. This was not supported. I hypothesized that intrinsic religiosity would be positively correlated with life satisfaction. This was supported. Those who are intrinsically motivated towards religion, "find their master motive in religion. Other needs, strong as they may be, are regarded as of less ultimate significance, and they are, so far as possible, brought into harmony with the religious beliefs and prescriptions. Having embraced a creed, the individual endeavors to internalize it and follow it fully. It is in this sense that he lives his religion" (Allport & Ross, 1967, p. 434). It would seem that these individuals have found their purpose in religion and this purpose drives every aspect of their lives. If one centers their entire life on the one thing that is most important to them, it seems logical that life would be more satisfying and fulfilling. Perhaps this may have implications that extend beyond religion; if our main intrinsic motive in life was family or success, perhaps we would be just as satisfied with life as those individuals intrinsically motivated by religion, since we are centering our lives on the one thing that is most important to us. However, it seems that there may be something particular about religion that could lead to a more satisfying life. Whereas family and success can be positive forces in our lives, key features of many religions are reflection, prayer, forgiveness, love, and understanding. Therefore, for intrinsically religious

individuals, these positive features are at the center of every decision and aspect of their lives.

In Viktor Frankl's book *Man's Search for Meaning*, he discusses the finite component of life and the importance this finiteness plays in our evaluation of the meaning of life. He believes the three most distinct human qualities are spirituality, freedom, and responsibility. Instead of spirituality having a religious foundation, he refers to it as our uniqueness of spirit, philosophy, and mind (Frankl, 2006). Individuals must ask themselves what they want from life and what the meaning of their life may be. Research shows that religion plays an important role in increasing individual's exploration of the meaning of life (Krause, 2008, 2009). Therefore, intrinsically religious individuals likely find the meaning of life through their religion, since it is their main motivating force in life. This sense of meaning in life could help explain the relationship between intrinsic religiosity and life satisfaction. Research has shown that having a sense of meaning in life provides individuals with clearer guidelines for living their life and enhances motivation to take care of oneself and achieve personal goals. It has also been linked to a higher level of psychological well-being and physical health (Park, 2012).

The activity theory states that successful aging occurs when adults are active and involved (Havighurst, 1961). They have found that when adults are active, energetic, and productive, they age better and they are more satisfied with life than those who are more disengaged (Neugarten, Havighurst, & Tobin, 1968). This is another potential reason for the relationship between intrinsic religiosity and life satisfaction. Those who are intrinsically religious may spend more time doing service projects, engaging the community, and practicing their religion. They may be more actively pursuing these engagements because

their entire lives are centered on their religion. For those not intrinsically religious, they may stray from being active religiously because other aspects of their life dominate their time.

Additionally, this study offers insight into the motives behind religious activity and how those various motivating forces can influence our lives. This could have important implications for religious individuals, especially religious individuals experiencing physical or psychological health problems. The positive relationship between intrinsic religiosity and life satisfaction provides an opportunity for an introspective analysis of one's true religious motivation and how it may influence one's well-being. Power and McKinney (2004) recognize that these findings would hold particular importance for practitioners. They could gain a deeper understanding of their clients by examining each individual's religiosity. If religiosity, particularly intrinsically, proves to be a prominent element in the client's life, examining this further and making religiosity an integral part of therapy could yield significant improvements in the life of the patient. This integration of religiosity in treatment has been found to be beneficial to the patient, especially when the treatment aligns with the individual values of the patient involved (Weisman, Tuchman, & Duarte, 2010).

Some individuals have an extrinsic motivation for practicing their religion, rather than an intrinsic motivation. Extrinsic religiosity is used as an aid in achieving mundane goals, such as feeling comfort or protection or acquiring social status and approval (Allport & Ross, 1967). There was no relationship between extrinsic religiosity, health, and life satisfaction. This finding was contrary to prior research that has found extrinsic religiosity associated with negative health and life satisfaction outcomes (Hackney & Sanders 2003;

Leach et al., 2008; Maltby & Day, 2002; Salsman & Carlson, 2005; Tix & Frazier, 1998).

If one's motivation for religion is tied up with their self-esteem and social status, an individual's own happiness is dependent upon others, rather than on themselves. If they do not receive the external goals that they are hoping to achieve through religion, this could lead to overall dissatisfaction with life, lack of self-esteem, and unhealthy behaviors.

Religion is not about obtaining external goals, such as the approval of others or an increased social status. When individuals use religion in this way, they are missing the true message behind the religion that they are practicing. If these individuals find their comfort and protection in these external goals, they are not truly finding that comfort and protection in God. Perhaps this is why there is a correlation between intrinsic religiosity and health, but no correlation between extrinsic religiosity and health. When approval and social status are the main motivations in life, perhaps these individuals would engage in behaviors that are not as beneficial to their overall well-being. If they practice their religion to achieve these mundane goals, they may be more likely to do other things to win the approval of others, whether that be engaging in risky behaviors or even just not being true to one's self. When our comfort and protection depends on others, we are setting ourselves up for an unhealthier life than those who find comfort and protection intrinsically.

Interestingly, a large number of participants stated that their church attendance is "seldom" ($N = 131$). However, a large number ($N = 172$) still actively practice their religion. This lack of church attendance is likely due to the age of the participants and the health issues or living situations (retirement homes, nursing homes, etc.) that may prevent many of them attending services. It is interesting to note that church attendance is not necessarily an important factor in the religiosity or prayerfulness of an individual. Many

individuals still maintain and practice their religion very actively, despite not being able to attend service. This also shows a need for increased accessibility to religious services.

Although nursing homes and retirement facilities often provide religious services, prayer groups, etc., perhaps there is a greater need that is not being fulfilled. While completing paper survey interviews, many participants expressed their desire to attend actual church services, but they simply are no longer able to attend due to health reasons, lack of transportation, etc. Additional services could be provided through television broadcast, weekly services for all religions at retirement and nursing homes, or even provided transportation for those individuals who are no longer capable of driving themselves to services.

Limitations

During the creation of the survey, an important question regarding frequency of prayer was mistakenly left out. Therefore, it was not possible to test any hypotheses that involved frequency of prayer. Frequency of prayer was originally a major component of this research. Unfortunately, no conclusions were possible regarding frequency of prayer without asking a direct question about how often one prays. In future research, this issue will certainly be amended.

In the demographic questionnaire and the Religious Orientation Scale, a small number of items ask about "church." (E.g., "What is your frequency of church attendance?" or "The church is most important as a place to formulate good social relationships"). If someone is not Christian, this may not be the term used to refer to his or her place of worship. After realizing the error, I informed all individuals who had not yet taken the survey that if any of them did not identify with the word "church" (or in one item "bible")

that it was meant to refer to any place of worship (or holy book). This could have influenced the way that non-Christians responded to these questions.

Non-Christians composed a small portion of the sample ($N = 26$), while Christians composed a majority of the sample ($N = 196$). The lack of variation in religious preference or faiths makes the results less generalizable to other religions. It would have been interesting to compare intrinsic/extrinsic religiosity across religions. Perhaps there would be some religions in which people are more intrinsically or extrinsically motivated than others. Perhaps in Buddhism, which is more prominent in collectivistic cultures, we would see more people that are extrinsically motivated by their religion. This extrinsic motivation could be less for social gain, but rather more for the community aspect of religion, such as performing rituals together.

Additionally, more participants would have allowed for a more powerful assessment. There were barriers to recruiting participants in this age group. They tend to be less connected to technology, so recruiting involved a significant amount of phone calls and personal meetings. As technology becomes more prominent in the lives of older individuals, I suspect that this will not always be a major issue. Additionally, for individuals living in a nursing or retirement home, there was no way to contact individuals directly without first having the directors of the facilities fill out the proper IRB form.

In the demographic questionnaire, the participants were asked to select their religion from the affiliation options of: Christian, Jewish, Muslim, Hindu, Non-Religious, or Other. For the purposes of the study, I interpreted “non-religious” to mean that the individual does not practice their religion, believe in a religion, attend church, or pray. Therefore, I assumed the Religious Orientation Scale and the Varieties of Prayer Survey

would not be applicable to the participants who marked “non-religious” and put a note in the demographic questionnaire stating, “If you marked non-religious, you may now proceed to filling out only the health and life satisfaction survey.” However, many participants that identified as non-religious proceeded to fill out the Religious Orientation Scale and the Varieties of Prayer Survey. Their responses to these two surveys indicated that my interpretation of non-religious was not the same as others’ interpretations. Many individuals stated separately that they were spiritual, but not religious. Many stated that they found the surveys difficult to complete since they marked themselves “non-religious,” but considered themselves to be very spiritual, thoughtful, and philosophical. One participant mentioned that they decided to define religion/God/prayer in their own humanistic/pantheistic/philosophical way, but still found it difficult to accurately represent their beliefs through the survey.

On the electronic survey, the option to fill in a religion under “Other” was somehow hidden from the choices when participants were taking the survey. I corrected this error, but not until a majority of the surveys had been completed. This impacted the number of people willing to take the survey because some individuals did not feel that they were represented by the religion choices that were provided on the survey. As mentioned previously, many did not consider themselves to be non-religious because they considered spirituality to be a religion. Therefore, many felt they were not accurately represented in the survey, since the option to list an alternative religion was mistakenly unavailable.

Future Research

Future research should investigate prayer experience on a deeper level. It would be beneficial to examine the potential relationship between prayer experience and self-

actualization. This could help researchers to gain a better understanding of the impact of these prayer experiences and how they benefit the individual. Additionally, a more in-depth look at the individuals who do have prayer experiences may prove interesting. For example, an examination of their personality traits and level of religious commitment may help us to gain a more thorough understanding of what kinds of individuals are more likely to have these experiences.

Additionally, further research on religiosity in collectivistic versus individualistic cultures would allow for a more global understanding of religiosity, health, and life satisfaction in older adults. The United States is an individualistic culture, where the individual is highly valued. When these individuals are extrinsically motivated towards their religion, it is for their own social gain. In a collectivistic culture, extrinsic religiosity may be more about worshipping with the community and building relationships with others. It would be valuable to examine these potential differences further.

This research demonstrates the relationship between religiosity and prayer in the health and life satisfaction of older adults. Since this population exhibits the highest levels of religious participation, it is particularly important to study how this religiosity relates to their well-being. It shows that positive outcomes are associated with intrinsic religiosity, meditative prayer, prayer experience, and religious vocation. These positive relationships represent the necessity for us to better understand the older adult experience, especially as we confront the largest elderly population in history.

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Table 2

*Multiple Regression of Life Satisfaction*Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		95.0% Confidence Interval for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	24.293	3.410		7.124	.000	17.559	31.028
	ExtrinsicReligiosity	.015	.067	.019	.230	.818	-.117	.148
	IntrinsicReligiosity	.162	.106	.195	1.534	.127	-.047	.371
	ColloquialPrayer	-.108	.133	-.120	-.810	.419	-.370	.155
	PetitionalPrayer	-.279	.252	-.136	-1.104	.271	-.777	.220
	MeditativePrayer	.184	.170	.194	1.086	.279	-.151	.519
	RitualPrayer	.146	.259	.049	.565	.573	-.365	.657
	PrayerExperience	-.020	.116	-.023	-.170	.865	-.249	.209

a. Dependent Variable: LifeSatisfaction

Table 3

*Multiple Regression of Health*Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		95.0% Confidence Interval for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	41.691	3.930		10.610	.000	33.930	49.452
	ExtrinsicReligiosity	.063	.076	.067	.827	.410	-.087	.213
	IntrinsicReligiosity	-.109	.124	-.113	-.878	.381	-.354	.136
	ColloquialPrayer	.024	.157	.023	.154	.878	-.286	.334
	PetitionalPrayer	-.005	.294	-.002	-.017	.987	-.585	.576
	MeditativePrayer	.271	.199	.249	1.363	.175	-.122	.663
	RitualPrayer	.172	.301	.049	.571	.569	-.422	.766
	PrayerExperience	-.039	.140	-.038	-.276	.783	-.316	.238

a. Dependent Variable: Health

Table 4

Multiple Regression of Life Satisfaction and Religious Vocation

Model		Unstandardized Coefficients		Standardized	t	Sig.	95.0% Confidence Interval	
		B	Std. Error	Coefficients Beta			Lower Bound	Upper Bound
1	(Constant)	35.689	2.241		15.922	.000	31.266	40.111
	Religious Vocation	-3.736	1.172	-.231	-3.187	.002	-6.050	-1.423
2	(Constant)	31.354	3.201		9.796	.000	25.038	37.669
	Religious Vocation	-3.301	1.187	-.204	-2.781	.006	-5.643	-.959
	Intrinsic Religiosity	.118	.063	.138	1.885	.061	-.006	.242
3	(Constant)	29.170	19.655		1.484	.140	-9.615	67.954
	Religious Vocation	-2.186	9.968	-.135	-.219	.827	-21.856	17.484
	Intrinsic Religiosity	.184	.592	.216	.311	.756	-.983	1.352
	Interaction	-.034	.301	-.093	-.113	.910	-.628	.560

Table 5

Multiple Regression of Perceived Health and Religious Vocation

Model		Unstandardized Coefficients		Standardized	t	Sig.	95.0% Confidence Interval	
		B	Std. Error	Coefficients Beta			Lower Bound	Upper Bound
1	(Constant)	41.329	2.793		14.798	.000	35.817	46.841
	Religious Vocation	1.619	1.456	.084	1.112	.268	-1.255	4.492
2	(Constant)	37.579	3.992		9.414	.000	29.701	45.458
	Religious Vocation	2.028	1.486	.105	1.365	.174	-.905	4.961
	Intrinsic Religiosity	.100	.076	.101	1.312	.191	-.050	.249
3	(Constant)	74.496	27.063		2.753	.007	21.081	127.910
	Religious Vocation	-16.726	13.680	-.863	-1.223	.223	-43.726	10.273
	Intrinsic Religiosity	-1.004	.804	-1.014	-1.249	.213	-2.590	.582
	Interaction	.562	.407	1.317	1.379	.170	-.242	1.366

Appendices

Operational Definitions of Key Variables

Colloquial Prayer: Talking to God in own words, asking for guidance, blessings, forgiveness, lessening world suffering, and telling God how much he is loved.

Petitional Prayer: Asking for material things for oneself and for friends or relatives.

Ritual Prayer: Frequency of reading a book of prayer and reciting prayers that the individual has memorized.

Meditative Prayer: "Feeling" God, thinking quietly about God, spending time worshipping God, reflecting on the Bible, and listening to God for his answer to prayers.

Prayer Experience: Being inspired or led by God, receiving a deeper insight into spiritual or biblical truth, receiving a definitive answer to a prayer request, feeling a strong presence of God, and experiencing a deep sense of peace and well-being.

Intrinsic Religiosity: The degree of personal religious commitment or motivation.

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

Extrinsic Religiosity: Religion is used as an aid in achieving mundane goals, such as feeling comfort or protection or acquiring social status and approval (Allport & Ross, 1967).

Life Satisfaction: An individual's self-reported quality of life, as measured by The Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985)

Health: An individual's physical, mental, and emotional health, as measured by the MOS 36-item short-form health survey (SF-36).

Religious Vocation: Individuals who have taken religious vows within the Catholic faith.

Non-Religious Vocation: Individuals who have not taken religious vows within the Catholic faith.

Demographic Questionnaire

1. **Age** _____

2. **Ethnicity** _____

3. **Gender** Male Female

4. **What is your religion?**

Christian Jewish Muslim Hindu Non-Religious Other _____

5. **Are you practicing or non-practicing?** Practicing Non-Practicing

6. **What is your frequency of church attendance?**

Attend Weekly or More Attend Monthly or Less Attend a few times per year

Attend Yearly Seldom Never

7. **Are you in a religious vocation?** Yes No

The Satisfaction With Life Scale

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 - Strongly agree
- 6 - Agree
- 5 - Slightly agree
- 4 - Neither agree nor disagree
- 3 - Slightly disagree
- 2 - Disagree
- 1 - Strongly disagree

___ In most ways my life is close to my ideal.

___ The conditions of my life are excellent.

___ I am satisfied with my life.

___ So far I have gotten the important things I want in life.

___ If I could live my life over, I would change almost nothing.

- 31 - 35 Extremely satisfied
- 26 - 30 Satisfied
- 21 - 25 Slightly satisfied
- 20 Neutral
- 15 - 19 Slightly dissatisfied
- 10 - 14 Dissatisfied
- 5 - 9 Extremely dissatisfied

Religious Orientation Scale (Allport & Ross, 1967)

1. Although I believe in my religion, I feel there are many more important things in my life.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

2. It is important for me to spend periods of time in private religious thought and meditation.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

3. The primary purpose of prayer is to gain relief and protection.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

4. The church is most important as a place to formulate good social relationships.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

5. If not prevented by unavoidable circumstances, I attend church.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

6. I try hard to carry my religion over into all my other dealings in life.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

7. It doesn't matter so much what I believe so long as I lead a moral life.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

8. One reason for my being a church member is that such membership helps to establish a person in the community.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

9. My religious beliefs are really what lie behind my whole approach to life.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

10. The purpose of prayer is to secure a happy and peaceful life.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

11. I pray chiefly because I have been taught to pray.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

12. Quite often I have been keenly aware of the presence of God or the Diving Being.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

13. If I were to join a church group I would prefer to join a Bible study group rather than a social fellowship.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

14. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

15. I read literature about my faith (or church).

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

16. Although I am a religious person I refuse to let religious considerations influence my everyday affairs.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

17. A primary reason for my interest in religion is that my church is a congenial social activity.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

18. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

19. Religion helps to keep my life balanced and steady in exactly the same way as my citizenship, friendships, and other memberships do

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

20. What religion offers me most is comfort when sorrows and misfortune strike.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

Varieties of Prayer

When you pray, how often do you do the following? (Response choices: Never, Rarely, Some of the Time, Most of the Time, All of the Time)

- Ask God to provide guidance in decision making

Never	Rarely	Some of the Time	Most of the Time	All of the Time
-------	--------	------------------	------------------	-----------------
- Thank God for God's blessing

Never	Rarely	Some of the Time	Most of the Time	All of the Time
-------	--------	------------------	------------------	-----------------
- Ask God for things you may need

Never	Rarely	Some of the Time	Most of the Time	All of the Time
-------	--------	------------------	------------------	-----------------
- Pray for the needs of others

Never	Rarely	Some of the Time	Most of the Time	All of the Time
-------	--------	------------------	------------------	-----------------
- Worship and adore God

Never	Rarely	Some of the Time	Most of the Time	All of the Time
-------	--------	------------------	------------------	-----------------
- Spend time quietly being in the presence of God

Never	Rarely	Some of the Time	Most of the Time	All of the Time
-------	--------	------------------	------------------	-----------------

How often have you had the following religious experiences? (Response choices: Never, once in a while, some days, most days, every day, more than once a day)

- Everything seeming to disappear except the consciousness of God

Never	Once in a while	Some days	Most days	Every day	More than once a day
-------	-----------------	-----------	-----------	-----------	----------------------
- An experience of God that no words could possibly express

Never	Once in a while	Some days	Most days	Every day	More than once a day
-------	-----------------	-----------	-----------	-----------	----------------------
- Feeling God's love as the greatest power in the universe

Never Once in a while Some days Most days Every day More than once a day

- Feeling the unmistakable presence of God during prayer

Never Once in a while Some days Most days Every day More than once a day

- Receiving a definite answer to a specific prayer request

Never Once in a while Some days Most days Every day More than once a day

- Sensing a divine call to perform a specific act

Never Once in a while Some days Most days Every day More than once a day

When you pray are you likely to

- Read from a book of prayers

Never Rarely Some of the Time Most of the Time All of the Time

- Recite prayers you have memorized

Never Rarely Some of the Time Most of the Time All of the Time

- Ask God for material things you may need

Never Rarely Some of the Time Most of the Time All of the Time

- Talk with God in your own words

Never Rarely Some of the Time Most of the Time All of the Time

- Ask God to forgive your sins

Never Rarely Some of the Time Most of the Time All of the Time

- Ask God to provide guidance in making decisions

Never Rarely Some of the Time Most of the Time All of the Time

- Thank God for his blessings

Never Rarely Some of the Time Most of the Time All of the Time

- Spend time quietly thinking about God

Never Rarely Some of the Time Most of the Time All of the Time

- Spend time just “feeling” the presence of God

Never Rarely Some of the Time Most of the Time All of the Time

- Spend time worshiping and adoring God

Never Rarely Some of the Time Most of the Time All of the Time

- Try to listen to God speak to you

Never Rarely Some of the Time Most of the Time All of the Time

SF-12 Health Survey

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

For each of the following questions, please circle the one that best describes your answer.

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

Excellent Very Good Good Fair Poor

- 2. 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?**

- a) Moderate activities such as moving a table, pushing a vacuum cleaner, bowling, or playing golf

Yes, limited a lot Yes, limited a little No, not limited at all

- b) Climbing several flights of stairs

Yes, limited a lot Yes, limited a little No, not limited at all

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

- a) Accomplished less than you would like

All of 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

b) Were limited in the kind of work or other activities

All of 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

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

a) Accomplished less than you would like

All of 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

b) Did work or activities less carefully than usual

YES NO

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

Not at all A little bit Moderately Quite a bit Extremely

6. These questions are about how you have been feeling during the past 4 weeks. For each question, please give the answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

a) Have you felt calm and peaceful?

All of 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

b) Did you have a lot of energy?

All of 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

c) Have you felt downhearted and depressed?

All of 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

7. 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 A good bit of the time
Some of the time A little of the time None of the time