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AN EXPERIMENTAL STUDY OF THE RELATIONS BETWEEN WELL-BEING AND GRATITUDE IN COMMUNITY DWELLING OLDER ADULTS

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AN EXPERIMENTAL STUDY OF THE RELATIONS BETWEEN WELL-BEING AND GRATITUDE IN COMMUNITY DWELLING OLDER ADULTS

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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Dedication

I would like to dedicate this work to my niece, Madi. You can do anything that you set your mind and heart to. Thank you for inspiring me and for being the light that kept me going through this project.

Also in remembrance of my brother, Corey Dale Larson

Rest in peace brother 7/7/77 – 6/29/12

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Abstract

This study examined the effects of maintaining gratitude journals on the well-being of a population of community dwelling older adults. Well-being was measured by pre- and post-test administrations of self-report questionnaires designed to gauge satisfaction of life, hope, happiness, depressive symptoms, health status, health depression, and internal health control. An experimental group maintained daily gratitude journals, recording what they were thankful for, while a control group maintained journals in which they recorded their daily events. Each participant maintained their randomly assigned journal for two weeks before completing post-test questionnaires. The hypothesis that well-being would improve over the two week time period received little support. While participants in the gratitude condition reported increased satisfaction of life, none of the other measures of well-being showed statistically significant change from pre- to post-test.

Introduction

Over the last several years, there have been significant advances in the understanding and treatment of psychological distress. Further examination of psychological issues suggests treatment necessitates not only focus on fixing problems but also cultivating human strengths, prevention, and "nurturing what is best within ourselves" (Seligman, 1998). The study of positive psychology, human strengths, and what buffers people from experiencing mental illness are vital areas to be focused on within psychological research. While studying how to treat and manage negative characteristics and symptoms is valuable, it also seems intuitive to examine factors that might strengthen and maintain a resilient and satisfying life. Donald Clifton asked a related and poignant question, "What would happen if we studied what is right with people?" (Lopez & Snyder, 2003, p. xv). Further, as older adults become a significantly larger segment of the population, it seems logical to bring focus on their psychological well-being, specifically prevention of psychological distress.

Positive psychology has grown substantially in the past decade, and it has shed light on many neglected issues. Positive psychology has focused on a multitude of different constructs. One of the more overlooked topics within positive psychology and a potential key to human flourishing is gratitude.

According to the literature on gratitude, a single definition has yet to be formed. This is in part due to gratitude's multifaceted nature. Gratitude has been commonly labeled as a virtue, an emotion, a mood, an attitude, a personality trait, a habit, a moral affect, and a coping response. It appears all of these labels are appropriate and fitting in different circumstances. As an emotion, gratitude is an attribution-dependent state

(Weiner, 1985) and results from a two-step cognitive process. An individual must first recognize they have obtained a positive outcome, and then the individual must acknowledge there is an external source for this positive outcome (Emmons & McCullough, 2004). Moreover, an individual must recognize they have been the beneficiary of a gift, acknowledge that the benefactor has intentionally provided a benefit, and value the benefit given by the beneficiary. The benefit may be material or nonmaterial. A gift can also be a spiritual gift from God (Emmons, 2007). Emmons and McCullough (2004), major researchers of gratitude, have thoroughly investigated and conceptualized gratitude at the level of an affective trait. Gratitude as an affective trait has been most widely examined within the scientific community and is often labeled interchangeably as a grateful disposition.

Research within positive psychology has revealed strong relationships between gratitude and several other variables. For example, research indicates that people who are dispositionally grateful are more likely to experience positive affect and well-being. Gratitude has been found to correlate positively with traits such as vitality, hope, life satisfaction, subjective happiness, optimism, and positive affectivity (McCullough, Emmons, & Tsang, 2002). Furthermore, individuals who report high levels of gratitude often report high degrees of spirituality and/or religious participation. (McCullough, Emmons, & Tsang, 2002; Piedmont, 1999).

According to Park, Peterson, and Seligman (2004), gratitude has one of the highest correlations with well-being of almost any personality characteristic. Gratitude has also been theorized to be causal to well-being and happiness, and research has shown that more grateful individuals report higher levels of satisfaction with their lives

(Emmons & McCullough, 2004). Additionally, according to research by Emmons and McCullough (2003), individuals who reported higher levels of gratitude score lower on inventories designed to measure depression and anxiety type symptoms. Responding to life events with gratitude may be an adaptive psychological strategy and an important process by which people positively interpret everyday experiences. The ability to recognize, appreciate, and enjoy the elements of one's life have been viewed as a key determinant of well-being (Bryant, 1989). Grateful people tend to be content with what they have and so are less inclined to experience emotions such as disappointment, regret, and frustration. They also tend to be less prone to emotions such as anger, bitterness, envy, and resentment (Emmons & McCullough, 2004). Wood, Joseph, and Linley (2007) concluded that gratitude is associated with generally more positive coping and correlated with strategies that involve approach rather than the propensity to withdraw as a means to cope with problems in life.

Additionally, gratitude appears to build friendships and strengthen social bonds. Research indicates that encouraging people to focus on the benefits they have received from others leads them to feel loved and cared for (Emmons & McCullough, 2003; Reynolds, 1983). Research has also indicated that grateful people tend to reciprocate favors and act more generous and supportive of people in their lives (McCullough, 2002). Polka and McCullough (2006) hypothesized that grateful people not only perceive themselves as having more social support, they really have more support because they create large reservoirs of social support through expressions of gratitude.

Experimental Work with Gratitude

Emmons and McCullough (2003) conducted a series of three studies in which gratitude was manipulated experimentally. The three studies were published in a single journal article and appear to be the only published research involving the experimental examination of gratitude. These particular studies are of great value not only because of their novelty but also because of their rich results. Results revealed that participants in the gratitude condition (maintaining a journal and writing statements of gratitude) felt better about their lives, experienced higher levels of optimism for events in the coming week, reported fewer physical complaints, and reported spending more time exercising (nearly 1.5 hours more each week than participants in the control groups). Participants in the gratitude condition also reported getting more hours and better quality of sleep at night and reported higher levels of life satisfaction. They also reported higher positive affect (i.e., optimism, connection with others, and overall well-being) and lower negative affect (i.e., depression and anxiety) compared to the control condition.

Physical Health

An attitude of gratitude has also been linked to physical health benefits. A study by Dew and Harris (1996) revealed that thankfulness was predictive of greater compliance with diet, medications, and overall medical regimen. Further, research by Hener, Raz, and Weisenberg (1998) suggested that positive emotions produce less sensitivity to pain and greater pain tolerance. They speculated that positive emotions may have analgesic effects, stimulating the release of the morphine-like substances. It is possible positive emotions like gratitude produce conditions in the body that enable it to perform at a more optimal level of functioning. This may be especially impactful for

individuals who experience more than average somatic issues and may be especially noteworthy for aging individuals.

Gender Differences

There is scant research on gender and cultural differences and gratitude. Evidence suggests gratitude may be associated with stereotypically feminine gender-role traits (Brody, 1993). It has also been argued that conventional males may be averse to experiences and expressions of gratefulness because they may imply dependency, vulnerability, and indebtedness (Solomon, 1995). Recent research by Kashdan, Mishar, Breen, and Froh (2009) revealed that men reacted differently when presented with gifts than did women. In their study, men reported more burden and obligation when presented with gifts, and women evaluated gift giving as less complex, conflicting, and uncertain, and more exciting and interesting. Their authors concluded that men express gratitude less, are more critical of gratitude, and benefit less from gratitude than women.

Research by Sommers and Kosmitzki (1988) found that American men were less likely to evaluate gratitude positively than were German men, and that they viewed it as less constructive and useful than German men. Clearly there is a need for additional research in this area to understand the influence of factors such as gender and culture.

Broaden-and-Build Theory

The *Broaden-and-Build Theory* of positive emotions by Fredrickson (2001) suggests that experiencing positive emotions broadens people's momentary thought-action repertoires and builds their enduring personal resources. Thus, the individual builds their personal and social resources or coping mechanisms when experiencing

positive emotions. Fredrickson (2003) posited that because gratitude is a positive emotion, frequent experiences of gratitude will likely build enduring cognitive resources. However, there has been limited research supporting whether intentional experiences that increase grateful mood and thinking can increase cognitive resources and increase positive coping abilities. Further, there appears to be no such research utilizing participants who are community dwelling older adults. Most research has utilized traditionally aged undergraduate college students as participants.

According to Fredrickson, Mancuso, Branigan, and Tugade (2000), experiencing positive emotions not only has the potential to increase cognitive resources but also undermine enduring negative emotions. Persistent negative emotions are believed to often occur in individuals who experience depressive symptoms. If this theory and preliminary empirical research are accurate, it would seem consistent that a strong positive emotion such as gratitude would also decrease negative emotions like depression. Further, positive emotions like gratitude have been thought to increase psychological resilience and trigger upward spirals toward enhanced emotional well-being.

Wood, Joseph, and Linley (2007) concluded that gratitude is associated with generally more positive coping and correlated with strategies that involve approach rather than the propensity to withdraw as a means to cope with problems in life. For example, people who display a disposition of gratitude were more likely to seek out emotional and instrumental social support as a means of coping. They also utilized more positive coping strategies in general and seemed to approach their problems with active coping and planning rather than avoiding their problems by disengaging, self-blame,

substance use, and denial. Their research also suggested that gratitude was not correlated with any negative coping strategies.

Despite many of these interesting and noteworthy studies, research on gratitude is embryonic and sparse. Further, most of the research is correlational in nature and little of it has been experimental which could help to discern causal relationships between the induction of gratitude and well-being. Additionally, most research has utilized undergraduate college students as participants, and while this provides valuable information within that particular developmental phase, the impacts of a grateful mood on individuals at other life phases is unclear. Understanding the impact of positive emotions like gratitude seems especially useful with populations that are at risk for experiencing depressive symptoms, frequent physical ailments, and other complexities that are often experienced by older adults.

The Psychology of Aging

The world is experiencing a significant increase in the number of individuals who are approaching or are already in an older age range. In fact, this increase in the number of aging individuals represents the largest population shift in recent history. It is estimated that more than 600 million individuals in the world are over the age of 60 years. This is representative of about 10% of the human population. Additionally, longevity predictions suggest many individuals can expect to live into their 80s and 90s. Furthermore, in 2005 there were 83 men for every 100 women over the age of 60 worldwide, supporting the impression that older women outnumber older men. It is expected that by the year 2050, 21% of the world's population, i.e., one in five individuals will be 60 years of age or older. (Blackburn & Dulmus, 2007). Due to this

significant increase in the aging population and because many individuals experience emotional distress as they age, focus on prevention seems not only pertinent but essential.

The study of positive psychology and the aging is yet another neglected topic within psychological research. Much psychological research on the aging has been devoted to treatment of psychological distress, especially depression, rather than focusing on nurturing strengths.

Depression

There are numerous studies specifically targeted on depression and the aging, and many studies have suggested that depression is one of the most prevalent psychiatric conditions of later life. A multitude of research studies have estimated that up to 35% of the general population aged 60 and older experience clinically significant depression (Blackburn & Dulmus, 2007). Within the population of older adults, depressive disorders such as major depression and dysthymia are associated with several negative outcomes, such as increased disability, shortened life span, and decreased quality of life (Penninx, Geerlings, Deeg, VanEijk, Tilling, & Beekman, 2001). In some studies, depression has also been shown to be associated with cognitive decline and dementia (Kohler, Boxtel, Os, Thomas, O'Brien, Jolles, Verhey, & Allardyce, 2010). Furthermore, older adults who experience depression often exhibit poorer outcomes with regards to other medical conditions such as heart disease. Depression also increases risk of overall mortality, even when controlling for other health factors such as demographics and lifestyle choices (Adamson, Price, Breeze, Bulpitt, & Fletcher, 2005). Additionally, depression is a leading risk factor for suicide

in late life individuals. Despite the troublesome knowledge that depression can have deleterious effects on quality of life, depression in older adults is often undetected and poorly treated. Time and again people misperceive depression as a part of normal aging. Depression is not considered a part of natural aging and it is unacceptable to deem it so (Blackburn & Dulmus, 2007; Hasche & Morrow-Howell, 2007).The study of the aging, specifically prevention of psychological distress, appears to be a much needed avenue for growth, especially due to the prevalence of commonly reported psychiatric conditions, particularly depression.

One area of prevention that has been researched includes focus on the role of positive affect, particularly its protective benefits against poor health outcomes (Fredrickson, 2003). Individuals with high positive affect are more likely to engage in social relationships (Ryff & Singer, 1996), cope successfully with stressful situations (Folkman, 1997), and feel more in control of their lives as a whole (Hilleras et al., 1998; Ostir, Ottenbacher, & Markides, 2004). Therefore, it would seem that individuals who focus more energy toward what they are grateful for would increase positive affect and lead to an improved ability to cope with stress and in turn counter depressive symptoms. This seems an especially important concept with populations at highest risk for developing depressive symptoms, like the aging population.

Happiness

Research within the field of positive psychology and the aging has also revealed that individuals who report higher levels of happiness have better coping skills, lower morbidity, and lower mortality (Fredrickson, 2001). Argyle and Crossland (1987) identified three main components of happiness.

Happiness is a relatively new topic within the field of psychological research. However, it has blossomed quickly within research as well as popular psychology and self-help material. Western culture looks to the pursuit of happiness as one of its major goals, both on an individual and societal level (Veenhoven, 1994). The secret to happiness has been of great interest to many, including politicians, philosophers, and authors of popular psychology. Happiness is a multi-faceted construct concerning both emotional and cognitive elements. It is often referred to more broadly in the literature as subjective well-being. However, it should be noted that well-being is more over-arching and includes not only happiness but also contentment, health, prosperity, and wellness (Lyubomirsky & Lepper, 1999).

Argyle and Crossland (1987) identified three main components of happiness. These components are frequent positive affect or joy, a high and consistent average level of satisfaction, and the absence of negative feelings such as depression and anxiety.

A multitude of happiness predictors have been identified within the recent literature. However, most researchers of happiness have utilized young adults (typically undergraduate college students) as participants, and most have used the Oxford Happiness Inventory as a measure. Nevertheless, optimism, contentment, extroversion, self-esteem, and positive relationship with parents have all been linked to happiness (Cheng & Furnham, 2001; Cheng & Furnham, 2003; Furnham & Cheng, 2000). A study conducted by Webster (1998) found that among community living older adults, secure attachment style (having a positive model of both self and others) and dismissive attachment style (having a positive model of self but a negative model of others) were

both predictors of happiness. The Memorial University of Newfoundland Scale of Happiness (MUNSH) was utilized to measure happiness within this study, which has been established as a valid and reliable measure of happiness within the older adult population.

Other research has suggested happiness can boost the immune system and help one achieve or maintain their physical health (Cohen, 2002). Other research suggested happiness can decrease mental illness (Furnham & Cheng, 1999) as well as reduce the risk for suicide (Honkanen, Honkanen, Koskenvuo, & Kaprio, 2003).

A number of other robust factors have been identified, both on a societal and individual level that promote happiness. Individual factors shown to increase happiness include genetic dispositions, personality traits, health conditions, social relations, financial resources, living conditions, religion, and level of activity (Delhey, 2010). Happiness has been linked to better coping, lower morbidity, and lower mortality. Thus, happiness research is a particularly important concept among the aging population (Fredrickson, 2001).

Hope

Hope is another construct that has been found to be strongly and positively correlated with higher levels of gratitude. Hope also seems worthy of further examination, especially within the aging population (McCullough, Emmons, & Tsang, 2002). Wrobleski and Snyder (2005) reported hope is very similar to gratitude in that they both direct awareness of how one's life is held together through benevolent actions of others.

Hope has been defined by Wrobleski and Snyder (2005) as "goal-directed thinking in which a person has the perceived capacity to produce routes to desired goals (called pathways thinking), along with the motivation to initiate and sustain the use of those routes" (called agency thinking) (p. 218). Agency can be sustained through physiological factors such as healthy eating habits, exercise, and getting enough sleep (Snyder, Irving, & Anderson, 1991).

Individuals reporting higher levels of hope tend to set more appropriate and clearer goals, find pathways to meet their goals, and maintain requisite levels of agency. They are adept at adjusting their pathways and goals in perceived obstacles. Furthermore, individuals who maintain higher levels of hope tend to have abilities to capitalize on intrinsic and extrinsic motivation to maintain their agency through the pursuit of completing their goals (Snyder, 1998; 2001). Individuals with high levels of hope also tend to attribute more meaning to their life events (Snyder, 2000).

Hope has been shown to be a likely and powerful agent in the aging process and overall life satisfaction (Snyder, 2000). Older adults who maintain higher levels of hopeful thinking are more likely to set different social goals for themselves than younger adults. Spending more time with family and friends seems to be more important within the population of older adults (Wrobleski & Snyder, 2005).

The socioemotional selectivity theory described by Carstensen (1992) may assist in understanding hope in the elderly. This theory reasons that older adults are more aware of their limited time to live; thus they move away from the information-seeking goals that characterize younger adult social interaction to social goals that focus on meaningful long-term relationships.

According to Wrobleski and Snyder (2005) hope appears to be a stable disposition throughout the lifespan and is not expected to change much with age. However, hope appears to become more significant for well-being in the aging person, despite more significant obstacles typically seen in individuals of older age (i.e., biological and interpersonal losses). Furthermore, older adults who exhibit high levels of hope tend to display more adaptive coping strategies (Jackson, Taylor, Palmatier, Elliott, & Elliott, 1998), and the induction of hope has been shown to decrease depression in older adults (Klausner et al., 1998).

According to a study by Wrobleski and Snyder (2005) higher hope was associated with greater life satisfaction and better perceived physical health in community-dwelling older adults. Individuals with higher levels of hope were also more confident of reaching their goals, and felt they were further along in their goal pursuits than those who exhibited low levels of hope. Wrobleski and Snyder (2005) contended that the ability to maintain hope is an important part of successful aging.

Purpose of Study

The purpose of the current study was to examine whether the induction of a grateful mood would improve self-reported well-being, decrease depressive symptoms, and impact physical health. The present study contributed to research within positive psychology and the psychology of aging in four significant ways. First, this study added to the growing body of research examining gratitude and psychological well-being. Prior to this study, there appeared to be no research on how the induction of a grateful could impact community-dwelling older adults. Therefore, this research expanded the understanding of the literature on gratitude and how older adults may be able to live

more satisfying and fulfilling lives. Second, this study examined whether inducing gratitude in community-dwelling older adults decreased depressive symptoms. Considering the prevalence of clinically significant depression within adults over the age of 60, it seems important to find ways to help reduce this all too common problem. Third, this study increased knowledge about the constructs of hope, happiness, and satisfaction with life by assisting in understanding how the induction of gratitude alters these variables within the selected sample of participants. Fourth, this study examined whether increasing gratitude within a sample of older adults impacted their self-report of physical symptoms. Previous research has demonstrated this impact with traditionally aged undergraduate college students (Emmons & McCullough, 2003). Tactics to reduce self-reported physical symptoms seems especially relevant and important to gain more understanding with aging individuals.

Method

Participants

The initial sample consisted of 69 participants but 3 were dropped from the analysis due to incorrect responses on the revised Mini Mental Status Examination form. Fifty-four percent of participants completed the entire study (pre-test questionnaires, journal, and post-test questionnaire) for a total of 36 participants at completion. At completion, twenty participants were in the randomly assigned experimental gratitude condition while 16 were in the control group.

The sample consisted of 95.5% (n = 63) women. The mean age was 73.6, the range was 60 to 93, and the standard deviation was 7.6. The sample was predominately African American, representing 62.1% of participants, followed by 34.8% Caucasian,

and 3.0% American Indian or Alaskan Native. The majority of respondents were widowed (39.4%; 27.3% were divorced, 19.7% were married or partnered, and 12.1% were single and never married). The range of income was diverse with 19.7% of participants' household income under 10,000 dollars annually; 19.7% was 10,000 to 19,999; 15.2% was within 20,000 – 29,000; 13.6% was within 30,000 – 39,000; 16.7% was within 40,000 – 49,999; and 1.5% at 75,000 or above. The sample consisted of participants who were mostly retired (72.7%; while 10.6% were disabled and 6.1% were unemployed). Most participants' highest level of education was reported to be in the "some college" range at 25.8%, while 22.7% reported a high school or GED equivalent; 13.6% reported "some high school"; and 6.1% reported elementary school. In terms of religious identification, most participants self-identified as Christian (86.4%) while the remaining participants marked "other." The mean degree of religious participation (i.e. attending church, reading religious scripture, or attending synagogue) on a Likert scale of 1 to 10 (1 indicating not religious and 10 indicating very religious) was 8.2 with a standard deviation of 1.8. Participants were also asked to self-identify their degree of spirituality as described by an inner sense of something or someone greater than oneself. This was also measured using a Likert scale with 1 representing not spiritual and 10 representing very spiritual. The mean reported degree of spirituality was 9.1 with a standard deviation of 1.9. The entire list of demographic statistics can be found in Table 1. The table includes demographics for those who only completed the pre-test questionnaires as well as those participants who completed the entire study.

Measures

In addition to a demographic questionnaire, the following instruments were used in this study: Gratitude Questionnaire – 6, Geriatric Depression Scale, Memorial University of Newfoundland Scale of Happiness, The Satisfaction with Life Scale, Trait Hope Scale, and The Multidimensional Health Questionnaire using three of its subscales: Health Status, Health Depression, and Internal Health Control. A revised version of the Mini-Mental Status Exam was also used to help screen participants who may have been experiencing cognitive difficulties.

Gratitude Questionnaire-6. The Gratitude Questionnaire-6 (GQ-6), developed by McCullough, Emmons, and Tsang (2001), is a six-item self-report questionnaire designed to assess individual differences in the proneness to experience gratitude in daily life. Participants were asked to write a number beside each statement to indicate how much they agreed with it. This was designed with a Likert response format ranging from 1 (strongly disagree) to 7 (strongly agree). Scores range from 7 – 49 with higher scores indicating higher levels of perceived gratitude. Example questions include, "I have so much in my life to be thankful for" and "Long amounts of time can go by before I feel grateful to something or someone." Cronbach's α estimates for this measure have ranged from .76 to .84. The current study's Cronbach's α was .63 (questionable) for pre-test and .72 (acceptable) for post-test. The test-retest reliability correlation was .39.

Geriatric Depression Scale. Current levels of depression were measured using the Geriatric Depression Scale (GDS) which was developed by Yesavage et al. (1982). The GDS is a 15-item self-reported scale and utilizes a forced choice (yes/no) response

format. An item example includes, “Do you feel that your life is empty? Yes / No” (Spreen and Strauss, 1998). The GDS has been shown to be a valid and reliable measure of depressive symptoms with the elderly population. However, several studies (i.e. Burke, Houston, Boust, & Roccaforte, 1989) have remarked it is not valid for use with individuals who are significantly cognitively impaired. Scores ranged from 0 – 15 with higher scores indicating higher levels of depression. According to Yesavage et al., scores above 5 likely indicate clinically significant levels of depression. Cronbach’s α estimates have ranged from .89 to .92. The Cronbach’s α for the current study was acceptable at .71 for pre-test and .79 for post-test. The test-retest reliability correlation was .72.

Memorial University of Newfoundland Scale of Happiness. The MUNSH is a 24 item, self-report instrument developed by Kozma and Stones (1980). The instrument has a yes/no/I don’t know response format. The MUNSH was specifically designed to measure psychological well-being and happiness among the elderly (normed with ages 65-95 living in rural, urban, and institutional environments). An example question includes, “In the past months have you been feeling… Generally satisfied with the way your life has turned out? Yes/No/I don’t know.” Scores range from 0 points (low happiness) to 48 (highest happiness). The MUNSH has been carefully validated and shows good reliability. Coefficient α has been reported at .85 or above. The Cronbach’s α for the current study was good at .87 for the pre-test and .88 for post-test. The test-retest correlation reliability was .68.

The Satisfaction with Life Scale. The Satisfaction with Life Scale was developed by Pavot et al. (1991). The scale is a self-report measure and asks

participants to rate on a five-point Likert scale how strongly they agreed with five statements. An example includes, “If I could live my life over, I would change almost nothing.” The questionnaire has shown to be a valid and reliable measure and is suitable for use with a wide range of age groups. The Cronbach’s α for the current study was excellent at .90 for pre-test and .90 for post-test. The test-retest reliability correlation was .75.

Trait Hope Scale. The Trait Hope Scale (THS) was developed by Cheavens, Gum, and Snyder (2000) and is a 12-item, self-report scale that measures the degree to which an individual endorses the agency and pathway components of the cognitive construct of hope. The scale is divided into two subscales, pathways and agency. Each subscale represents four items (plus four fillers total) that are rated on an 8-point Likert scale. The total range on the hope scale is 8 to 64 with higher scores indicating higher levels of hope. The Cronbach’s α has been shown to be good at .74 to .84. Convergent and discriminate validity of the hope scale has also been supported. The Cronbach’s α for the current study was acceptable at .74 for pre-test and .76 for post-test. The test-retest reliability correlation was .54.

Multidimensional Health Questionnaire. The Multidimensional Health Questionnaire (MHQ) developed by Snell & Johnson (2006) consists of 20 health-oriented subscales, each containing five items. The 5 items assigned to each subscale are summed so that higher scores correspond to greater amounts of each respective health-related tendency. Three of the 20 health-oriented subscales were chosen for the current study. They include: Health Status, Health Depression, and Internal Health Control. Cronbach’s α have been shown to range from a low of .65 to a high of .90.

Health Status. The items on the Health Status (HS) subscale concerns people's assessment of the physical status of their body. More specifically, these items were designed to measure the extent to which people assess their body as being in excellent and robust health. People who endorse these items believe that they are in excellent physical health. An example from this subscale includes, "I am in good physical health." Each subscale represents five items that are rated on a 5-point Likert scale. The Cronbach's α for the current study was .56 (poor) for pre-test and .61 (questionable) for post-test. The test-retest reliability correlation was .43.

Health Depression. Health Depression (HD) is defined as a tendency to evaluate the health-related aspects of one's life in a negative fashion and to feel depressed about the status of one's physical health. Examples from this subscale include, "I am depressed about my current physical health". The HD Cronbach's α for the current study was .79 (acceptable) for pre-test and .56 (poor) for post-test. The test-retest reliability correlation was .40.

Internal Health Control. The items on the Internal Health Control (IHC) subscale refer to people's belief that their health status is determined by their own personal control. More specifically, these items were designed to measure people's expectation that they themselves can exert an influence on their health. People who endorse these items are those who believe that they can determine whether their physical health is positive or negative. An example from this subscale includes, "I feel like my physical health is something that I myself am in charge of". The Cronbach's α for the current study was .78 (acceptable) for pre-test and .84 (good) for post-test. The test-retest reliability correlation was .40.

Revised Mini-Mental Status Examination. The Mini Mental State Examination (MMSE) is a tool that can be used to systematically assess mental status. It is an 11-question measure that tests five areas of cognitive function: orientation, registration, attention and calculation, recall, and language. The MMSE is effective as a screening tool for cognitive impairment with older, community dwelling, hospitalized and institutionalized adults. For purposes of this study, the examiner utilized five of the original questions to test orientation and registration. This examination was used as a screening tool to eliminate participants who may be experiencing significant cognitive impairment. Three individuals were removed from analysis for missing one or more items from this examination.

Procedure

The avenues of recruitment were at four senior centers within the mid-south United States region. The directors of the senior centers provided verbal and written permission for the examiner to post research flyers for purposes of recruitment. Flyers provided information about the study, incentive to participate, and included a designated date and time to receive informed consent and begin participation. All meetings were located in a private room within the designated senior center. Groups of participants were randomly divided in half each meeting to produce the control and experimental condition groups. An assistant typically accompanied the examiner to ensure efficiency and was adequately trained to assist the examiner. After informed consent was obtained, exclusion requirements discussed, and detailed directions provided, participants were asked to complete the pre-test packet of questionnaires, including the mini-mental status examination. Participants then returned the packets to

examiner and the participant was provided their designated journal (experimental gratitude journal or control journal). They were asked to return to the same location in two weeks to return their completed journal as well as to complete the post-test set of questionnaires.

Data collection was anonymous in that no identifying information was obtained from participants. The time necessary to complete the pre and post-test questionnaires was approximately 30 minutes each. Participants were asked to write in their journal once daily for two weeks. The directions for participants in the experimental condition were given verbally but were also written as follows: Please write 5 things you are thankful for each day for two weeks. There are many things in our lives, both large and small, that we might be grateful about. Think back over the past day and write down in your provided journal 5 things in your life that you are grateful or thankful for. Please reflect and write things that are meaningful and true for you. The directions for participants in the control condition were as follows: Once daily for the next 2 weeks please write 5 events or circumstances that have happened to you over the past day. Examples may include such things as cleaned out shoe closet or talked to doctor today.

Participants who completed the pre-test, journal, and post-test questionnaires were offered an opportunity to be entered into a drawing for one of eight $25 gift cards. The drawing required participants to enter identifying information (name and phone number) on a raffle form, which was kept in a separate database and was not connected to survey responses in order to maintain confidentiality. The drawing occurred after data collection was terminated, the winner notified by phone, and participants were able

to collect their gift card at their designated senior center from their senior center director.

Results

A 2 (treatment and control) x2 (pre- and post-test) repeated-measures analysis of variance (ANOVA) was conducted to examine the effects of gratitude journaling on six dependent variables (gratitude, satisfaction of life, happiness, hope, depression, and internal health control). The analysis examined the self-reported differences on measures of gratitude, satisfaction of life, happiness, hope, depression, and internal health control on participants who maintained gratitude journals versus those who maintained control journals over a two-week time period.

The variables health status and health depression were removed from analysis after it was revealed the Cronbach's α for both variables were within unacceptable ranges. The Cronbach's α for all other measures were within good to excellent ranges (.63 to .90). The means, standard deviations, and Cronbach's α for all measures used in analysis are presented in Table 2.

As predicted, the 2 x 2 repeated-measures ANOVA revealed a significant difference between the gratitude group and control group on self-reported satisfaction of life $F(1,31) = 4.12$, $p = .05$. Moreover, participants who maintained the gratitude journal showed a self-reported increase in satisfaction of life across pre-intervention to post-intervention, while participants in the control group showed relatively stable scores on satisfaction of life across the two week intervention. Further, an inspection of the satisfaction of life mean scores, showed that participants in the experimental group reported higher levels of satisfaction of life after treatment ($\Delta = 3.47$, $SD = 7.88$) than

participants in the control group following the two-week intervention (Δ = - 0.19, *SD* = 7.39). For an illustration of the satisfaction of life mean scores across pre-intervention to post-intervention, see Figure 1. This figure visually highlights the increase of self-reported satisfaction of life, while the means scores of the control group remained relatively stable over time. It should also be noted that due to a low number of participants, power was low and estimated at .50 at the .05 level (two-tailed) for satisfaction of life.

Not as predicted, the 2 x 2 repeated-measures ANOVA revealed that the experimental and control groups showed no statistically significant differences in scores on the remaining dependent variables: gratitude, happiness, hope, depression, and internal health control. Moreover, participants who maintained the gratitude journals did not self-report increased levels of gratitude, hope, happiness, or internal health control when comparing pre-intervention to post-intervention. The gratitude condition also did not self-report lower levels of depression when comparing pre-intervention to post-intervention. More specifically, there was no significant effect on self-reported gratitude $F(1,31) = 4.12$, $p = .05$ or on self-reported levels of happiness $F(1,30) = 1.59$, $p = .22$. There was also no significant effect on self-reported hope $F(1,22) = .14$, $p = .71$ or self-reported depression $F(1,31) = .08$, $p = .78$. Further, there was no significant effect on self-reported internal health control $F(1,31) = .23$, $p = .64$. For additional examination of the 2 x 2 repeated- measures ANOVA for these dependent variables, please see Table 3.

A Chi-square test for independence was completed to assess differences on demographic variables between participants who completed the study versus those who

dropped out prematurely. The results revealed no significant association between demographic variables and the pre-test and post-test groups other than gender ($p < .05$). However, it should be noted that only one male completed the post-test questionnaire, thus not providing adequate information to make an accurate assessment of differences for this variable. The Chi-square results are presented in Table 1 alongside the corresponding demographic variable.

Finally, Table 4 shows the correlations for the study variables. Hope was positively correlated with satisfaction of life, gratitude, and negatively correlated with happiness at pre-test. At post-test hope was positively correlated with satisfaction of life. Depression was negatively correlated with satisfaction of life, hope, and gratitude at post-test.

Journal Content Analysis

The researcher chose ten random gratitude journals to analyze the content, gather a deeper understanding of participant responses, and discover themes and patterns of journal entries. Only ten were chosen in order to spend time analyzing the journals depth. Each of the selected journals was read, coded, and frequencies of responses were tabulated. After review, six major categories were established and rank ordered. They included: Health, God, Family, Friends, Nature, and Miscellaneous. Seven sub-categories were formed to provide a more comprehensive understanding of the three major categories of Health, Family, and Friends. Health formed into three sub-categories which included: Independence, Being Alive, and Medication/Doctors, respectively. The breakdown of the category, God, included two sub-categories: Church

and Bible. The breakdown of the category, Family, included two sub-categories: Children and Grandchildren.

Most participants seemed to put forth a great deal of time, effort, and thought when maintaining their journals. This was evidenced by entries being uniquely created and fully completed. Many participants also appeared quite reflective as indicated by some of their responses. Additionally, most of the participants wrote more than five grateful responses per day, despite the directions only asking for five responses. The journals kept by participants in the control group were not analyzed in this manner but were read by the researcher. The majority of journals maintained by those in the control condition were also kept with thoroughness, some participants provided detailed entries, and participants reported a wide range of activities.

During collection of the journals, several participants in the gratitude condition group verbally told the researcher that keeping their gratitude journal "helped" them and many reported wanting to continue to maintain the journal despite the conclusion of the study. One participant noted she had been experiencing sadness following loss of some of her independence after injuring her arm as well as experiencing a conflict with a friend. She stated that keeping the gratitude journal helped her "put things back in perspective" and attributed her maintenance of the journal to an improvement in her mood. None of the participants in the control condition made positive or negative comments about the helpfulness of maintaining their journal.

Below is a written analysis of each of the six major categorical themes in order of their frequency within the journals. Quotes have been used to help encapsulate

respondents written remarks. Please see Figure 2 below for a visual representation of category frequencies.

Health

Health was the most frequently discussed category and was mentioned in nine of the 10 analyzed journals. It also comprised 25% of the content of the 10 analyzed journals. Most participants discussed specific aspects of their health. Most frequently mentioned were examples of feeling grateful for their physical functioning and their ability to be independent. For example, one participant wrote, “Thankful my blood pressure was ok today. Thankful that the swelling is getting better in my feet. I was able to dress myself and go where I want.” Another participant stated, “I am grateful to be able to see, and to have the activity of my limbs, and have a stable mind to reason, and think.” Many participants simply made comments about feeling gratitude for being alive another day.

God

Nine of the ten analyzed journals and 18% of the content included themes including both thanks to God, religious activities like attending church and reading the Bible. They also frequently noted appreciation for something they believed God allowed them to experience that day. For example, one respondent wrote, “The Lord let me wake up.” Another wrote, “Prayers are very important today. Thanking God for all my emotional and physical being.” A different participant wrote, “I am thankful. I am 88 years old. The Lord let me wake up and get out of bed with no help.” Participants also frequently mentioned feeling grateful for their “church family” as well as gratitude toward specific verses from the Bible which were sometimes quoted. Many participants

referenced their health in relation to God, but particular thanks for their medication were often noted. One participant remarked, “Thankful for the medicine I take every day and I am thankful for God making the medicine work.”

Family

Nine of the ten journals repeatedly noted interactions with their family, particularly their children and grandchildren. Sixteen percent of the journal content discussed family. One participant stated, “I am grateful for my sons, who seem to care for me especially when I am not feeling well.” Several participants mentioned feeling grateful for visits and telephone interactions from children, grandchildren, and great-grandchildren. While less common, a few discussed their parents. One participant noted, “I love my mother’s blanket, now on my bed and today I repaired the binding. It must be 60+ years old.” Another wrote, “Grateful that things are as well as they are and thanks in part to the strong principles and values and tolerance learned from my late parents.”

Several participants wrote about adverse circumstances occurring in their lives, such as family and/or friends who were ill or who died while the participant maintained their journal. Despite these challenges, participants reframed their experiences into grateful responses. In reference to her friend who died one participant wrote, “Glad there is no more pain for her, no more suffering.” A different participant wrote about the grief she had been experiencing. She wrote, “Grateful I don’t have to be in the presence of anyone I know today. I need a day of rest from hiding my grief and pain.”

Friends

Not only were family members frequently discussed but friendships, social activities with friends, and interactions with neighbors were common themes and mentioned within 8 of the 10 analyzed journals and 14% of the content. One participant wrote, “Bridge club. 52 years of friendship.” Another wrote, “Grateful for wine. A glass of wine with good friends.” Several references were also mentioned regarding neighbors as well as friendships made through their church and the senior center. Several noted feeling gratitude for the social interactions, particularly “serving others” and “volunteering,” particularly at their senior center.

Nature

Four of the 10 analyzed journals noted gratitude for aspects of nature including the sunshine, rain, their vegetable gardens, flowers, their ability to hike, mowing the grass, etc. While the other three major categories were most notable, nature was also a universally discussed category and comprised 4% of journal content.

Miscellaneous

Most respondents exhibited a few unique individual themes within their journals and this comprised the final 23% of journal content. For example, a couple participants discussed thankfulness for their free time and ability to maintain unstructured schedules. One participant wrote, “Grateful for retirement - - - No alarms to awaken me… only the demands on my time that I put there.” Some participants discussed gratitude for lessons they have learned in life. For example, one participant wrote, “Grateful for the knowledge that nothing stays the same – change will come.”

Discussion

As previously noted, research within the area of gratitude is relatively embryonic and sparse, and most experimental research with gratitude utilizes participants who are undergraduate college students. This research sheds light on the impact of gratitude with community dwelling older adults and provides further understanding of the induction of gratitude on well-being. This research provides a different perspective because the population consisted of older adults in a mid-south United States region.

Results indicated that participants who maintained a gratitude journal significantly improved self-reported satisfaction of life when compared to those who maintained a journal in which daily life events were recorded. This finding is consistent with research that experimentally examined gratitude while utilizing undergraduate college age participants (Emmons & McCullough, 2003). This finding supports the research question hypothesized in this study, i.e., participants who maintained the two week gratitude journal would show an increase in their satisfaction of life. However, in this study, scores from the other variables, gratitude, happiness, hope, depression, and internal health control were not found to be significantly affected for individuals in the experimental gratitude condition versus the control condition. Therefore, the remaining research questions were not supported. This was an unexpected finding. It seems particularly noteworthy that the gratitude variable showed no significant differences from pre- to post-test among the gratitude group. This means that individuals who maintained the gratitude journals did not report a significant change in gratitude after maintaining their journal for two weeks. It is possible that two weeks was not a long

enough intervention to invoke a noticeable increase in scores. It is also possible that because mean scores on the gratitude measure were already somewhat high at pre-test, significant increases in scores were not noticeable.

A qualitative aspect to this study was added in order to include examination of the content of the gratitude journals maintained by study participants. This analysis revealed interesting results and appears congruent with known research regarding goals of the typical older adult. For example, according to Snyder (2000) the most common primary goal of older individuals includes maintaining autonomy and health status. These primary goals may help others manage secondary goals such as their relationships in life, as it appears that having connections to others is what makes life worthwhile and meaningful to many. Results from the journal content analysis of this study indicated that the majority of respondents wrote about feeling thankful for their health, particularly their independence and autonomy. The second largest theme encompassed discussion regarding God, including their spirituality, church attendance, reading the Bible, etc. This also seems logical considering that most participants rated themselves very high on their degree of religious participation and spirituality. Further, this is consistent with the general population of older adults who live in the Mid-South United States region. Interestingly, gratitude for money or finances was rarely mentioned. Two participants made intermittent references to money such as, “grateful for my social security check.” However, these were not frequent nor made in the majority of respondent’s journals.

Due to some of the unexpected findings in this study a better understanding of the limitations is warranted. This discussion may shed light on more thoroughly understanding the findings.

Limitations of the study

While the data in this study provides interesting conclusions, several limitations should be noted. First, because of a low participant number, the power for this study was statistically low. As a result of the low power, results should be interpreted with caution. It should be noted that despite the low power, similarly designed and published experimental studies with community dwelling older adults have yielded similar sample sizes and power. Further, literature has indicated that the minimum number of participants for a similarly designed study was met, despite the caveat that results should be interpreted with caution and a higher number of participants would likely be more robust (Wilson-Van Voorhis & Morgan, 2007). Further, Cronbach'a α for two of the dependent variables (Health Depression and Health Status) were within unacceptable ranges. It should be noted that participants complained most about this particular measure (Multiaxial Health Questionnaire), often citing difficulty with reading comprehension. Several participants commented that the questions on this measure were confusing and difficult to answer. This feedback may explain the low Cronbach's α and because of this, these two variables were dropped from analysis. Other Cronbach's α were within acceptable to excellent ranges.

Another limitation of this study was the high attrition rate. Fifty-four-percent of participants fully completed the study while 46% dropped out after only completing the pre-test questionnaires. While a Chi-square analysis determined no statistically

significant differences between self-reported demographic variables and the participants who dropped out versus those who completed the study, a large percentage of participants dropped out of the study prematurely. With such a significant proportion of participants not finishing the study it leaves the researcher to wonder what other factors attributed to drop out. It is suspected that attrition was at least partially due to the length of the study (two weeks), intensity of study (requiring participants to make daily journal responses), aging factors such as memory loss, and reliable access to transportation when needed for participants to return their journal. Several participants called the researcher using the number listed on the IRB consent form and asked the researcher to meet them at a different time or on a different day to return their journal. The researcher complied as could be arranged. Participants commonly noted vacation, personal illness, forgetfulness, and transportation issues as primary reasons for missing the designated date and time to return their journal. It is possible these same factors also impacted those who dropped out of the study and did not return.

Another confounding variable was that 97% of the sample consisted of women. One reason for the imbalance was that all of the research was collected at senior centers and the majority of members were female. However, it should also be noted that men who were present at the centers were much less likely to approach the researcher with interest in the study.

Another factor to consider is generalizability to other groups of community dwelling older adults. Members of senior centers are likely more social, interactive, and a higher functioning group, as compared to those who chose not to attend such

organizations. Because of this, it is possible that findings may not generalize to those who are less active and are not members of such organizations.

Other issues of generalizability exist. For example, the ethnicity of the sample size was mostly representative of the region (62% African American and 34% Caucasian) but this is not the case for many other regions. It can only be speculated how different ethnic groups in other regions may respond. Additionally, the majority of the participants not only self-identified as Christian but also tended to rate themselves as very religious and spiritual. While again, this diversity can be generalized to the Mid-South region, it may not be diversity seen in other areas of the country. Likewise, research has shown that individuals who report themselves high on religious and spiritual measures also tend to rate themselves high on measures of gratitude (Emmons & McCullough, 2003). Again, it can only be speculated to how a more religiously and spiritually diverse sample may respond. Further, individuals in this study were all members of local senior centers and appeared active and engaged. It is possible these participants are not generalizable to others who are not members of such centers and those who are less active and isolated members of the community.

Additionally, during administration of questionnaires it became apparent that many participants had a very low reading level. As requested by four participants, the researcher read the questionnaire items to them. As noted in Table 1, four participants reported they had elementary school or lower education levels and a total of 13 participants had not completed high school. Participant difficulties with reading may have interfered with the style in which they chose to answer items and may have interfered with some participant’s ability to complete the study. Interestingly, the easiest

to read, shortest measure, and first administered measure of the assessment battery (The Satisfaction with Life Scale) was the only variable that showed statistical significance. The measures were all administered in the same order for each administration and each participant as opposed to random order, so there may have been an order effect. It is also possible that a social desirability effect was seen, particularly with participants who had questionnaires read to them by the researcher.

Further, multiple participants commented that the researcher had included too many measures and several reported the process of completing the measures was too labor and time intensive. Multiple participants remarked that the last questionnaire which included the variables of Health Status, Health Depression, and Internal Health Control were too complicated to understand and many commented that they were unsure if they were answering the items in the manner they were intending to. Results for these variables in particular should be viewed with caution.

These finding were able to provide additional knowledge about the impact of inducing gratitude, but it seems clear much more research needs to be conducted in order to provide a more thorough understanding of the complexities involved, especially with a population of older adults.

Areas for future research

Due to the lack of research on gratitude, particularly experimental studies involving the induction of gratitude, this study should be looked upon as an exploratory study and groundwork for future research.

Future studies will need to be designed to examine the longer-term effects of maintaining gratitude journals. A two week self-guided gratitude exercise may not be

long enough to produce a significant impact on a person's well-being. This may be particularly true for older adults, who likely have a more ingrained sense of self and may experience complicated and chronic physical and emotional health issues. It may be more difficult to interrupt and change levels of hope, happiness, and health due to the complex dynamics older adults often experience.

Further, future research in this area may benefit from more focus on a particular issue. For example, utilizing older individuals who participate in group therapy, a population of clinically depressed older adults, or individuals who have a particular medical condition may provide a better concentration for the research. Study of a more focused construct, such as depression, anxiety, or satisfaction with life may also provide a deeper and more critical understanding of the potential benefits of a grateful mood. Because participants in this study self-reported few depressive symptoms and high levels of gratitude at pre-test, there was little room for noticeable change. A more focused group, such as a group of clinically depressed individuals at pre-test, may evidence more robust findings.

Further, more research on men and gratitude is needed. Not only did this research fail to collect an adequate number of male participants but so has all other research studies involving the experimental use of gratitude. It is possible men and women experience gratitude differently and it would be helpful to obtain a better understanding of those dynamics.

Table 1

Participant Demographic Characteristics

	Total Participants Pre - Test		Participants at Completion Post-test		Chi-squared	*p*
	N = 66	%	*N* = 36	%		
Mean Age = 73.6						
Gender					.27	.03
Female	63	95.5	35	97.2		
Male	3	4.5	1	2.8		
Ethnicity					.18	.35
African American/Black	41	62.1	20	55.6		
Non-Hispanic White	23	34.8	15	44.4		
American Indian	2	3.0	0	0		
Marital Status					.13	.74
Widowed	26	39.4	16	44.4		
Divorced	18	27.3	11	30.6		
Married or Partnered	13	19.7	5	13.9		
Single, Never Married	8	12.1	4	11.1		
Education					.34	.37
Elementary School	4	6.1	3	8.3		
Some High School	9	13.6	3	8.3		
High School or GED	15	22.7	8	22.2		
Some College	17	25.8	10	27.8		
Associate's Degree	4	12.1	2	5.6		
Bachelor's Degree	8	12.1	5	13.9		
Graduate or Prof Degree	8	12.1	4	11.1		
Other	1	1.5	1	2.8		
Employment Status					.28	.28
Retired	48	72.7	31	86.1		
Disabled	7	10.6	2	5.6		
Unemployed	4	6.1	1	2.8		
Part-time Employed	3	4.5	1	2.8		
Income					.39	.11
Under 10,000	13	19.7	5	13.9		
10,000 – 19,999	13	19.7	5	13.9		
20,000 – 29,999	10	15.2	7	19.4		
30,000 – 39,999	9	13.6	7	19.4		
40,000 – 49,999	11	16.7	7	19.4		
75,000 +	1	1.5	0	0		
Religious Preference					.20	.65
Christian	57	86.4	30	83.3		
Other	4	6.1	3	8.3		

Table 2

Descriptive Statistics for the Variables of Interest

	Control Group *N* = 17		Experimental Group *N* = 20		Cronbach's α
	M	*SD*	*M*	*SD*	
GQ-6					
Pre	36.69	5.93	38.22	3.08	.63
Post	36.61	6.64	37.78	5.58	.72
SWLS					
Pre	25.25	7.25	23.41	8.77	.90
Post	25.06	7.53	26.88	6.99	.90
THS					
Pre	51.31	7.07	49.00	5.92	.74
Post	48.56	9.07	49.38	6.99	.76
GDS					
Pre	2.13	2.92	1.72	1.84	.71
Post	2.27	3.37	1.67	1.91	.78
MUNSH					
Pre	36.77	11.02	39.27	6.34	.87
Post	36.15	11.63	39.82	5.04	.88
MHQ					
HS					
Pre	18.14	3.93	16.79	4.31	.56
Post	18.29	3.43	17.74	4.43	.61
HD					
Pre	9.21	4.51	9.89	5.13	.79
Post	9.07	3.77	8.78	3.46	.56
IHC					
Pre	20.07	5.23	21.00	4.00	.78
Post	19.93	3.37	20.00	5.88	.84

Note. GQ-6 = Gratitude Scale – 6; SWLS = Satisfaction with Life Scale; THS = The Hope Scale; GDS = Geriatric Depression Scale; MUNSH = Memorial Newfoundland Subjective Happiness; MHQ = Multiaxial Health Questionnaire; HS = Health Status; HD = Health Depression; IHC = Internal Health Control

Table 3

2 x 2 Repeated Measures ANOVA

	Source	***SS***	***Df***	***MS***	***F***	***p***
GQ-6	Between:					
	Txt	38.12	1	38.12	.95	.34
	Error	1278.00	32	39.94		
	Within:					
	TGQ6	2.84	1	2.84	.15	.70
	TGQ6 by Txt	.02	1	.02	<.01	.97
	Error	601.10	32	18.78		
SWLS	Between:					
	Txt	<.01	1	<.01	<.01	.99
	Error	3236.48	31	104.40		
	Within:					
	TSWLS	44.42	1	44.42	3.32	.08
	TSWLS by Txt	55.15	1	55.15	4.12	.05*
	Error	415.34	31	12.40		
THS	Between:					
	Txt	9.00	1	9.00	.11	.75
	Error	2504.75	30	83.49		
	Within:					
	TTHS	22.56	1	22.56	.92	.34
	TTHS by Txt	39.06	1	39.06	1.59	.22
	Error	736.38	30	24.55		
MUN	Between:					
	Txt	113.33	1	113.33	.80	.38
	Error	3112.92	22	141.50		
	Within:					
	TMUN	.01	1	<.01	<.01	.98
	TMUN by Txt	4.01	1	4.01	.14	.71
	Error	622.90	22	28.31		
GDS	Between:					
	Txt	4.18	1	4.18	.38	.54
	Error	341.94	31	11.03		
	Within:					
	TGDS	.02	1	.02	<.01	.91
	TGDS by Txt	.15	1	.15	.08	.78
	Error	56.34	31	1.82		
MHQ - IHC	Between:					
	Txt	4.09	1	4.09	.13	.72
	Error	983.00	31	31.71		
	Within:					
	TIHC	5.25	1	5.25	.39	.54
	TIHC by Txt	3.07	1	3.07	.23	.64
	Error	418.87	31	13.51		

Note. GQ-6 = Gratitude Questionnaire – 6; TGQ6 = Total Gratitude Questionnaire – 6; SWLS = Satisfaction with Life Scale; TSWLS = Total Satisfaction with Life Scale; Txt = Treatment; THS = Total Hope Scale; TTHS = Total Trait Hope Scale; MUN = Memorial University of Newfoundland Scale of Happiness; TMUN = Total Memorial University of Newfoundland Scale of Happiness TGDS = Total Geriatric Depression Scale; Txt = Treatment; MHQ – IHC = Multiaxial Health Questionnaire – Internal Health Control; TIHC = Total Internal Health Control.
* p < .05.

Table 4

Correlations for the Study Variables

Variable	SWLS	THS	GQ-6	GDS	MUNSH	MHQ-IHC
Pre-Test						
SWLS	---					
THS	.53**	---				
GQ-6	.25	.56**	---			
GDS	-.31	-.30	-.04	---		
MUNSH	-.12	-.44*	-.24	.16	---	
MHQ - IHC	-.28	.06	.13	-.04	-.28	---
Post-Test						
SWLS	---					
THS	.60**	---				
GQ-6	.11	.30	---			
GDS	-.39*	-.48**	-.36*	---		
MUNSH	-.22	-.13	.09	.17	---	
MHQ-IHC	-.15	.14	.16	.10	-.05	---

Note. GQ-6 = Gratitude Scale – 6; SWLS = Satisfaction with Life Scale; THS = The Hope Scale; GDS = Geriatric Depression Scale; MUNSH = Memorial Newfoundland Subjective Happiness; MHQ = Multidimensional Health Questionnaire; IHC = Internal Health Control

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

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

Figure 1

The Satisfaction with Life Scale Pre and Post-Test Mean Plot

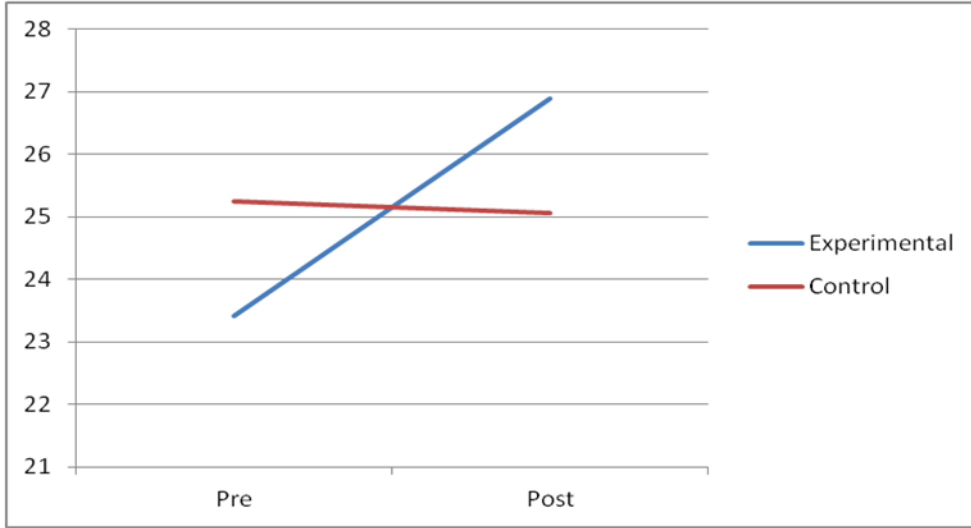
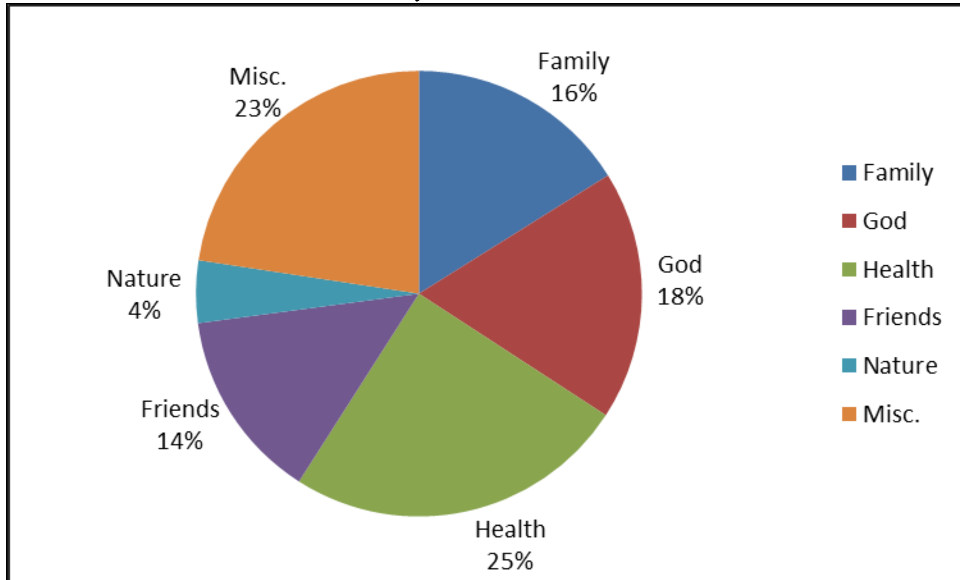


Figure 2

Gratitude Journal Content Analysis



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APPENDIX A: University of Oklahoma and University of Memphis IRB Approval Letters

Institutional Review Board for the Protection of Human Subjects

Approval of Initial Submission – Board Review – AP01

Date: May 16, 2012

Principal Investigator: Tosha Lynn Larson

IRB#: 0557
Study Title: An Experimental Study of the Relations Between Well-Being and Gratitude in Community Dwelling Older Adults

IRB Meeting Date: 04/05/2012
IRB Approval Date: 05/16/2012 **IRB Expiration Date: 04/04/2013**

Collection/Use of PHI: Yes

The review and approval of this submission is based on the determination that the study will be conducted in a manner consistent with the requirements of 45 CFR 46.

To view the approved documents for this submission, open this study from the My Studies option, go to Submission History, go to Completed Submissions tab and then click the Details icon.

You will receive notification approximately 60 days prior to the expiration date noted above. You are responsible for submitting continuing review documents in a timely fashion in order to maintain continued IRB approval.

You are also responsible for:
- Ensuring this research is conducted as approved by the IRB.
- Obtaining consent using the currently approved, stamped consent form and retaining all original, signed consent forms, if applicable.
- Informing the IRB of any/all modifications prior to implementing those changes.
- Reporting any serious, unanticipated harms as per Policy 407 and/or any additional information that may change the risk, benefit, or desire for participants to continue in the study.
- Submitting a final closure report at the completion of the project.
- Keeping and maintaining accurate study records as your study is subject to quality improvement evaluation.

If you have questions about this notification or using iRIS, contact the IRB @ 405-325-8110 or irb@ou.edu.

Cordially,

Aimee Franklin, Ph.D.
Chair, Institutional Review Board

THE UNIVERSITY OF MEMPHIS

Institutional Review Board

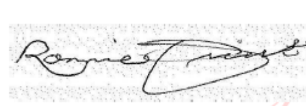
To:	Tosha Larson Career and Psychological Counseling Center
From:	Chair, Institutional Review Board For the Protection of Human Subjects irb@memphis.edu
Subject:	An Experimental Study of the Relations Between Well-Being and Gratitude in Community Dwelling Older Adults (#2179)
Approval Date:	May 16, 2012

This is to notify you of the board approval of the above referenced protocol. This project was reviewed in accordance with all applicable statuses and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. At the end of one year from the approval date, an approved renewal must be in effect to continue the project. If approval is not obtained, the human consent form is no longer valid and accrual of new subjects must stop.
2. When the project is finished or terminated, the attached form must be completed and sent to the board.
3. No change may be made in the approved protocol without board approval, except where necessary to eliminate apparent immediate hazards or threats to subjects. Such changes must be reported promptly to the board to obtain approval.
4. The stamped, approved human subjects consent form must be used unless your consent is electronic. Electronic consents may not be used after the approval expires. Photocopies of the form may be made.

This approval expires one year from the date above, and must be renewed prior to that date if the study is ongoing.



Digitally signed by Dr. Ronnie Priest
DN: cn=Dr. Ronnie Priest, o=The University of Memphis, ou=Institutional Review Board, email=rpriest@memphis.edu, c=US
Date: 2012.05.16 15:27:11 -05'00'

Chair, Institutional Review Board
The University of Memphis

Cc: Dr. Jody Newman

APPENDIX B: Informed Consent Form

University of Oklahoma
Institutional Review Board
Informed Consent to Participate in Research Study

Principal Investigator: Tosha Larson
Department: Educational Psychology, Counseling Psychology

You are being asked to volunteer for this research study. This study is being conducted at various senior and community centers around Memphis, TN. You were selected as a possible participant because you responded to a flyer or advertisement about the study.

Please read this form and ask any questions that you may have before agreeing to take part in this study.

Purpose of the Research Study
The purpose of this study is to gather information about satisfaction of life with older adults.

Number of Participants
About 200 participants will participate in this study.

Procedures
If you agree to be in this study, you will be asked to: Attend first meeting (today) and complete a series of questionnaires. You will be provided a journal and be asked to make daily entries for 14 consecutive days. Finally, you will be asked to attend a follow up meeting after writing in the journal and again complete questionnaires.

Length of Participation
The total participation length will be two weeks. The first and last meeting will take approximately 30 minutes each. Daily Journal entries will take about 5 minutes per day.

Risks of being in the study are
None

Benefits of being in the study are
None

Compensation
By completing the study you will be entered into a raffle for one of eight 25 dollar gift cards of your choice between Kroger, Target, or Wal-Mart. Your first name and phone number will be collected at the last meeting date to be entered into raffle. You will be called if you are one of the selected winners.

Confidentiality
In published reports, there will be no information included that will make it possible to identify you. Research records will be stored securely and only approved researchers will have access to the records.

There are organizations that may inspect and/or copy your research records for quality assurance and data analysis. These organizations include the OU Institutional Review Board.

If the researcher has reasonable cause to suspect you are suffering abuse, neglect, or exploitation, the researcher is mandated by Tennessee state law to make a report of the suspected abuse to the Tennessee Department of Human Services.

Voluntary Nature of the Study
Participation in this study is voluntary. If you withdraw or decline participation, you will not be penalized or lose benefits or services unrelated to the study. If you decide to participate, you may decline to answer any question and may choose to withdraw at any time. Your name will not be linked with your responses.

Contacts and Questions
If you have concerns or complaints about the research, the researcher (Tosha Larson) conducting this study can be contacted at 901-678-2068 or tlarson@ou.edu. Ms. Larson's advisor (Dr. Jody Newman) may also be contacted at 405-325-8418 or jlnewman@ou.edu.

Contact the researcher if you have questions or if you have experienced a research related injury.

If you have any questions about your rights as a research participant, concerns, or complaints about the research and wish to talk to someone other than individuals on the research team or if you cannot reach the research team, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405-325-8110 or irb@ou.edu.

You will be given a copy of this information to keep for your records. If you are not given a copy of this consent form, please request one.

Statement of Consent

I have read the above information. I have asked questions and have received satisfactory answers. I consent to participate in the study.

____

Participant Signature Print Name Date

____

Signature of Person Obtaining Consent Date

____

Print Name of Person Obtaining Consent

APPENDIX C: Flyer

Volunteers Wanted for Research Study

Purpose of Study: To gather information about satisfaction of life within older adults.

Who Can Participate:

1. Must be 60 years of age or older
2. Cannot receive any regular home health care
3. Must live independently in community and not in a nursing home or assisted living center
4. Must not have been diagnosed with Alzheimer's or similar disorder of mental impairment

Benefits: Participants will be entered into drawing to receive one of eight 25 dollar Visa gift cards.

To Participate: If you would like to participate and/or learn more about the research study, please choose one date and time to attend. Dates, times, and location are listed at the bottom of the flyer.

Length of Study: Participants will be asked to attend one initial meeting lasting approximately 30 minutes and then keep a journal over the course of two weeks with daily entries. Daily journal entry will take about 5 minutes per day to complete. After completing journal, participants will be asked to meet once more and then complete another set of surveys, taking about 20 minutes to complete.

This study has been approved by the Institutional Review Board at the University of Oklahoma. To learn more about this research contact Principal Investigator, Tosha Larson, at 901-678-2068 or tlarson@ou.edu

This research is conducted under the direction of Dr. Jody Newman, at the University of Oklahoma, Jeannine Rainbolt College of Education, Department of Educational Psychology. You may also contact Dr. Newman with questions or concerns at 405-325-2871 or jlnewman@ou.edu

Research Dates, Times, and Location. Please Choose ONE if interested in learning more.

_____________________________ _____________________________

APPENDIX D: Demographic Questionnaire

In order to successfully complete our study, we would like to know more about you. The information you provide will not be used to identify you in any way.

1. What is your age? _________

2. What is your gender? _____Male _____Female

3. How do you describe yourself? (please check the one option that best describes you)
   _____ American Indian or Alaska Native
   _____ Hawaiian or Other Pacific Islander
   _____ Asian or Asian American
   _____ Black or African American
   _____ Hispanic or Latino/Latina
   _____ Non-Hispanic White
   _____ Other: ______________________

4. Are you currently:
   _____Married or Partnered
   _____Widowed
   _____Divorced
   _____Single, Never Married

5. What is your highest level of education:
   _____ Elementary School
   _____ Some high school
   _____ High School graduate or GED equivalent
   _____ Some college
   _____ Associates Degree
   _____ Bachelors Degree
   _____ Graduate or Professional Degree
   _____ Other: ____________________

6. What is your current employment status?
   ____ Retired
   ____ Full time employed (35 hours a week or more)
   ____ Part time employed (less than 35 hours per week)
   ____ Disabled
   ____ Unemployed
   ____ Other: _____________________

7. Which best describes your yearly household income?
   ______ Under 10,000
   ______ 10,000 – 19,999

_______ 20,000 – 29,999
_______ 30,000 – 39,999
_______ 40,000 – 49,999
_______ 50,000 – 74,999
_______ 75,000 +

8. What is your religious preference?
_____ Muslim
_____ Christian
_____ Buddhist
_____ Jewish
_____ Hindu
_____ Atheist
_____ Agonistic
_____ Other:________________________

9. Please circle your degree of religious participation: (e.g. Attending church, reading religious scripture, attending synagogue, etc.)

Not religious Neutral Very religious
1 2 3 4 5 6 7 8 9 10

10. Please circle your degree of spirituality: (An inner sense of something or someone greater than oneself)

Not spiritual Neutral Very spiritual
1 2 3 4 5 6 7 8 9 10

APPENDIX E: Gratitude Questionnaire – 6

Instructions: Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1 = strongly disagree
2 = disagree
3 = slightly disagree
4 = neutral
5 = slightly agree
6 = agree
7 = strongly agree

_____ 1. I have so much in life to be thankful for.

_____ 2. If I had to list everything that I felt grateful for, it would be a very long list.

_____ 3. When I look at the world, I don't see much to be grateful for.

_____ 4. I am grateful to a wide variety of people.

_____ 5. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.

_____ 6. Long amounts of time can go by before I feel grateful to something or someone.

APPENDIX F: Geriatric Depression Scale

Directions: Choose the best answer for how you have felt over the past week:

1. Are you basically satisfied with your life? YES / NO

2. Have you dropped many of your activities and interests? YES / NO

3. Do you feel that your life is empty? YES / NO

4. Do you often get bored? YES / NO

5. Are you in good spirits most of the time? YES / NO

6. Are you afraid that something bad is going to happen to you? YES / NO

7. Do you feel happy most of the time? YES / NO

8. Do you often feel helpless? YES / NO

9. Do you prefer to stay at home, rather than going out and doing new things? YES/ NO

10. Do you feel you have more problems with memory than most? YES / NO

11. Do you think it is wonderful to be alive now? YES / NO

12. Do you feel pretty worthless the way you are now? YES / NO

13. Do you feel full of energy? YES / NO

14. Do you feel that your situation is hopeless? YES / NO

15. Do you think that most people are better off than you are? YES / NO

APPENDIX G: Memorial University of Newfoundland Scale of Happiness

Directions: I would like to ask you some questions about how things have been going for. Please circle "Yes" if a statement is mostly true for you, "No" if a statement does not apply to you.

1. On top of the world?	YES	NO	Don't know
2. In high spirits?	YES	NO	Don't know
3. Particularly content with life?	YES	NO	Don't know
4. Lucky?	YES	NO	Don't know
5. Bored?	YES	NO	Don't know
6. Very lonely or remote from other people?	YES	NO	Don't know
7. Depressed or very unhappy?	YES	NO	Don't know
8. Flustered because you didn't know what was expected of you?	YES	NO	Don't know
9. Bitter about the way your life has turned out?	YES	NO	Don't know
10. Generally satisfied with the way your life has turned out?	YES	NO	Don't know
11. This is the dreariest time of my life?	YES	NO	Don't know
12. I am just as happy as when I was younger?	YES	NO	Don't know
13. Most of the things I do are boring or monotonous?	YES	NO	Don't know
14. The things I do are as interesting as they ever were?	YES	NO	Don't know
15. As I look back on my life, I am fairly well satisfied?	YES	NO	Don't know
16. Things are getting worse as I get older?	YES	NO	Don't know
17. I feel lonely?	YES	NO	Don't know
18. Little things bother me more this year?	YES	NO	Don't know
19. If you could live where you wanted where would you live?			
20. I sometimes feel that life isn't worth living?	YES	NO	Don't know
21. I am as happy now as I was when I was younger?	YES	NO	Don't know
22. Life is hard for me most of the time?	YES	NO	Don't know
23. How satisfied with your life today?	Satisfied	Unsatisfied	Don't know
24. My health is the same or better	YES	NO	Don't know

than most people my age?			

APPENDIX H: The Satisfaction with Life Scale

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

1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree or Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree

_____ 1. In most ways my life is close to my ideal.

_____ 2. The conditions of my life are excellent

_____ 3. I am satisfied with life.

_____ 4. So far I have gotten the important things I want in life.

_____ 5. If I could live my life over, I would change almost nothing.

APPENDIX I: Trait Hope Scale

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

1 = Definitely False
2 = Mostly False
3 = Somewhat False
4 = Slightly False
5 = Slightly True
6 = Somewhat True
7 = Mostly True
8 = Definitely True

_____ 1. I can think of many ways to get out of a jam.
_____ 2. I energetically pursue my goals.
_____ 3. I feel tired most of the time.
_____ 4. There are lots of ways around any problem.
_____ 5. I am easily downed in an argument.
_____ 6. I can think of many ways to get the things in life that are important to me.
_____ 7. I worry about my health.
_____ 8. Even when others get discouraged, I know I can find a way to solve the problem.
_____ 9. My past experiences have prepared me well for my future.
_____ 10. I've been pretty successful in life.
_____ 11. I usually find myself worrying about something.
_____ 12. I meet the goals that I set for myself.

APPENDIX J: Multidimensional Health Questionnaire

INSTRUCTIONS: The items in this questionnaire refer to people's health. Please read each item carefully and decide to what extent it is characteristic of you. Give each item a rating of how much it applies to you by circling your response on this paper. Use the following scale:

A = Not at all characteristic of me.
B = Slightly characteristic of me.
C = Somewhat characteristic of me.
D = Moderately characteristic of me.
E = Very characteristic of me.

1. I do things that keep me from becoming physically unhealthy.
A B C D E

2. I am in good physical health.
A B C D E

3. I am depressed about my current physical health.
A B C D E

4. I feel like my physical health is something that I myself am in charge of.
A B C D E

5. I am motivated to keep myself from becoming physically unhealthy.
A B C D E

6. My body is in good physical shape.
A B C D E

7. I am disappointed about the quality of my physical health.
A B C D E

8. My health is something that I alone am responsible for.
A B C D E

9. I try to avoid engaging in behaviors that undermine my physical health.
A B C D E

10. I am a well-exercised person.
A B C D E

11. The status of my physical health is determined largely by what I do (and don't do).
A B C D E

12. When I think about my current physical health, I feel really down in the dumps.
A B C D E

13. I really want to prevent myself from getting out of shape.
A B C D E

14. My body needs a lot of work in be in excellent physical shape.
A B C D E

15. I feel unhappy about my physical health.
A B C D E

16. What happens to my physical health is my own doing.
A B C D E

17. I am really motivated to avoid being in terrible physical shape.
A B C D E

18. My physical health is in need of attention.
A B C D E

19. I feel sad when I think about my present physical health.
A B C D E

20. Being in good physical health is a matter of my own ability and effort.
A B C D E

APPENDIX K: Revised Mini-Mental Status Exam

Instructions: Please answer the questions below by writing the answer in the blanks beside the question.

1. What year is this? ______________________
2. What season of the year is it? ______________________
3. What month is it? ______________________
4. What is the date? ______________________
5. What day of the week is it? ______________________
6. What city (town) are we in? ______________________
7. What state are we in? ______________________