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The Happy Boomer: Baby Boomer Life Satisfaction Through Affect and Feeling of Belonging

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THE HAPPY BOOMER: BABY BOOMER LIFE SATISFACTION THROUGH AFFECT AND FEELING OF BELONGING

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ABSTRACT

THE HAPPY BOOMER: BABY BOOMER LIFE SATISFACTION THROUGH AFFECT AND FEELING OF BELONGING

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The age cohort of 65 years and older is a growing population. It is part of the group referred to as Baby Boomers, the generation born between the years 1946–1964. It will be the largest population to reach late adulthood to date. In the United States alone, the Baby Boomer cohort is expected to reach 70 million by 2030. In response to this growing elderly population much research has been conducted on Baby Boomer quality of life issues. Such research uncovered the phenomenon known as the well-being paradox. The well-being paradox refers to the findings that older adult's life satisfaction remains stable or can even increase with age despite age-related losses. Utilizing the theories of positive psychology and socioemotional selectivity, the Happy Boomer project offers an explanation for the well-being paradox. Using data from The Gross National Happiness Index Survey (Happiness Alliance, 2011), the Happy Boomer project analyzed associations between the dependent variable of life satisfaction and the independent variables of positive affect, negative affect, and feeling of belonging for 1,268 individuals ages 65 years and older. No previous research has been found that compares the predictive powers of these specific independent variables on the dependent variable, life satisfaction. Through an ordinal multiple regression, results showed that positive affect had the strongest association with levels of life satisfaction, followed by negative affect and feeling of belonging. Gender was not

predictive of life satisfaction. The results also demonstrated the independence of positive affect and negative affect associations with life satisfaction. These findings suggest that affect, specifically positive affect, could mediate the effects of age-related loss as they pertain to life satisfaction for older adults. Furthermore, these findings suggest that Baby Boomers may be able to maintain or increase levels of life satisfaction by focusing on activities that increase positive affect as well as activities that decrease negative affect. The electronic version of this dissertation is at AURA: Antioch University Repository and Archive, http://aura.antioch.edu/ and OhioLINK ETD Center, https://etd.ohiolink.edu

Dedication

This work is dedicated to my husband, Randall Massey, whose never-ending love, support, and encouragement has sustained me for the 10 years it has taken to complete this degree. Without your unwavering belief in me, I would have never come this far.

This is also dedicated to my children, Bijan Massey and Elliette Massey. Your addition to my life gave me a renewed sense of purpose and strength to complete what I started. Thank you for your patience, for making me into a better person, and enriching my life in ways I didn't know possible.

Acknowledgements

Father Alfred D'Souza's well-known quote, "Happiness is a journey, not a destination," was the opening line of my graduate school admission essay. Little did I understand, 10 years ago, just how true and complex this statement was. While no one will tell you that writing a dissertation will lead to happiness, the processes, relationships, and revelations made along the way will. While I endured many moments of self-doubt, I discovered the value of humility and warmth that can come from reaching out and collaborating with other like-minded people. This dissertation is an accumulation of 10 years of growth, both academic and personal, that has made me into the wife, mother, and professional that I am today.

First, I would like to acknowledge my committee members. Dr. Suzanne Engelberg, my chairperson, whose genuine concern for my success and well-being was evident in every meeting, phone call, and email. Second, I would like to acknowledge Dr. Alejandra Suarez, who has also been my academic advisor for the last 10 years. Her gentle demeanor and smiling face has been a source of constant reassurance. Last, but not least, Laura Musikanski, J.D. MBA, who graciously and speedily fielded every email I threw at her (and there were a lot) and whose contagious laughter reminded me that life and happiness were about more than just this one project.

Finally, I would like to thank my parents, Bruce and Janis Schumacher. Through this process, I have come to truly appreciate just what they were trying to tell us children growing up, that education and the process of learning is not about grades or test results, but rather about enriching your life and becoming a fulfilled human being. I've gone as far as I can go, Mom and Dad, and I owe my tenacity and determination to your encouragement and belief in me.

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Introduction

According to the Federal Interagency Forum on Aging-Related Statistics (2012), the population of people aged 65 and older residing in the United States will increase significantly between the years of 2010–2030. The population within this age group is expected to double from approximately 35 million to 70 million Americans. Part of the group known as the "Baby Boomers," this cohort is not only larger than previous age cohorts but also living longer than their predecessors. Previous quality of life research aimed at Baby Boomers uncovered what has been termed the well-being paradox; a phenomenon in which older adults report stable or increased levels of life satisfaction despite typical age-related loss. Furthermore, while this population is increasing in numbers, so too is it increasing in need. Thus, it would be beneficial to human service fields such as psychology, as well as local and national governments and community organizations, to better understand what contributes to a positive quality of life for this age group. This dissertation has two goals; to offer an explanation for the well-being paradox while also illuminating factors that contribute to the life satisfaction of this age group in an effort to improve the quality of life for this population.

Background

Within social science research, life satisfaction is a construct that is considered the cognitive evaluation of one's overall satisfaction with life (Diener, Emmons, Larsen, & Griffin, 1985). The Happy Boomer project is a way of understanding life satisfaction as it pertains to the Baby Boomer generation by analyzing the predictive powers of positive affect, negative affect, and feeling of belonging on levels of life satisfaction for individuals aged 65 and older. It is conceptualized through the lenses of positive psychology and geropsychology, with roots in the socioemotional selectivity theory and belongingness hypothesis. The Happy Boomer project utilizes data gathered by the Happiness Alliance, one of several organizations that are contributing to an international movement towards the measurement of gross national happiness (GNH) in addition to gross domestic product (GDP) for understanding citizens quality of life.

Gross National Happiness

Gross Domestic Product (GDP) has been the standard measure used by nations to understand their economy and needs, and subsequently, the quality of life of its citizens. In the 1930s, the United States Congress created a formalized measure of GDP in response to the Great Depression. It has been argued over the years, however, that GDP is not a sufficient reflection of a nation's quality of life (Diener & Seligman, 2004; Easterlin, 1995; England, 1998). Indeed, as Robert Kennedy highlighted in a 1968 election speech:

> The gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile. (Kennedy, 1968)

In recent years, dozens of organizations throughout the world have been established to measure their country's quality of life through various subjective indicators (e.g., The Centre for Bhutan Studies and Gross National Happiness Research, Canadian Index of Well-Being, Australian Centre on Quality of Life, and Organisation for Economic and Co-operative Development).

Happiness Alliance is a Seattle, Washington-based grassroots, nonprofit organization that oversees the Happiness Initiative and Gross National Happiness Index Survey. The Happiness Alliance works to enact social change that will encourage citizens, their communities, and governments to measure success not through income or GDP alone, but rather through the happiness and subjective well-being of its citizens (Happiness Alliance, n.d.).

Happiness Alliance modeled the Gross National Happiness Index Survey after a survey constructed by The Centre for Bhutan Studies and Gross National Happiness Research (1998). Bhutan, a small, Buddhist country located in the Himalayas, was the first documented government to consider citizens' subjective well-being as a primary measurement for success. With the development of The Centre for Bhutan Studies and Gross National Happiness Research, Bhutan led the movement for other nations to measure success in this way.

Over the years, hundreds of studies have looked at what contributes to life satisfaction. (For a comprehensive review see Sirgy et al., 2006.) Through those studies as well as the development of statistically validated measures (e.g., The Greater Victoria Well-Being Survey, 2010; General Social Survey, 2002; The European Social Survey, 2002; Detroit Area Survey, 2001; The World Health Organization Quality of Life Survey,

1997; University of Michigan and ABC New/Money Magazine Consumer Confidence Survey [as cited in Happiness Alliance, 2011], and The Centre for Economic Performance Recommendations for Measuring Subjective Well-Being [Dolan, Layard, & Metcalfe, R., 2011]), a number of factors, or domains, have been identified as contributing to life satisfaction. The domains chosen to be measured on the Gross National Happiness Index Survey are psychological well-being, health, material well-being, community, time balance, work experience, education, arts and culture, social support, environment, and governance.

Framework of the Happy Boomer Project

Positive psychology. Utilizing the data gathered through the Gross National Happiness Index Survey, the Happy Boomer project aims to understand what contributes to life satisfaction for baby boomers. The Happy Boomer project views life satisfaction through the lens of positive psychology. The science of positive psychology got its start in 2000 (Seligman & Csikszentmihalyi). Its development, though gradual, can be seen as a response to the decades the field of psychology spent overemphasizing mental illness and psychopathology. Initially, the field of psychology focused on a vast array of issues as they pertain to general mental processes and behavior. This focus changed, however, in the aftermath of World War II. In 1946, the National Institute of Mental Health (NIMH) was established. This organization, along with The United States Department of Veteran Affairs, placed a great deal of effort and grant money into the understanding and treatment of mental illness in response to the thousands of "shell-shocked" soldiers returning home. Thus, psychology followed suit and began focusing its efforts on mental illness and psychopathology rather than on general mental processes. Only recently has

psychology become concerned with what makes human beings happy, strong, and resilient. Positive psychology examines psychological strengths rather than ailments (Seligman & Csikszentmihalyi, 2000) and forms the framework for this dissertation.

Viewed through a positive psychology lens, satisfaction can be obtained through the utilization of individual strengths (Seligman & Csikszentmihalyi, 2000). Therefore, positive psychology works to identify and improve on strengths and positive characteristics of individuals, thus improving life rather than simply treating mental illness (Peterson, Park, & Seligman, 2005). One way to do this is to explore what contributes to life satisfaction.

Geropsychology. By focusing this research on the Baby Boomer generation, the Happy Boomer project contributes to the field of geropsychology, a specialized area of psychology that focuses on older adults. Geropsychology works to understand the aging process and improve the lives of older adults through research, biopsychosocial interventions, and/or psychotherapeutic interventions (American Board of Professional Psychology, n.d.).

To understand the view geropsychology has taken on life satisfaction, one must first be familiar with the concept of successful aging. The term "successful aging" was first developed by physicians as a way to classify individuals who possess "low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life" (Rowe & Kahn, 1997, p. 433). While successful aging started out as a medical term, it has gradually been adopted by the social sciences, yet its understanding within the field has not been clearly defined. Over the years, the social sciences have argued for a definition of successful aging that

includes psychosocial variables and considers the process of aging well rather than an idealized end-of-life goal (Baltes & Carstensen, 1996).

In 2006, Depp and Jeste conducted a comprehensive review of successful aging studies and discovered that the majority of research continued to define successful aging through medical, cognitive, and disability features with little emphasis on psychosocial variables. The authors argued for a definition that broadly refers to the experience of older adulthood with few physical ailments and ongoing positive psychosocial experiences. Still, in 2014, Cosco, Prina, Perales, Stephan, and Brayne discovered that while successful aging research had begun to include psychosocial variables, it continued to focus primarily on biomedical areas. Furthermore, Cosco et al. concluded that there is not yet an agreed upon definition for successful aging. Therefore, the Happy Boomer project aims to play a part in geropsychology and psychosocial aspects of successful aging research with the hope of contributing to a shift in the overall understanding of what it means to age successfully.

The Happy Boomer Project

Using a positive psychology approach to conceptualize life satisfaction and contribute to research on successful aging, the Happy Boomer project explores life satisfaction through subjective, psychosocial variables. Psychological research has traditionally viewed life satisfaction as a component of the broader concept of subjective well-being. Thus, organizations such as the Organisation for Economic Co-operation and Development (OECD) have aided in the process of more clearly defining these subjective variables. According to the OECD (2013), subjective well-being is “Good mental states, including all the various evaluations, positive and negative, that people make of their

lives, and the affective reaction of people to their experiences" (OECD, 2013, p. 29). In light of this broad definition, the OECD uses three main indicators when measuring subjective well-being; life satisfaction (the cognitive evaluation of one's overall life); affect (the moment-to-moment evaluations of one's emotional state); and eudaimonia, "a sense of meaning or purpose in life, or good psychological functioning" (OECD, 2013, p. 10). The Happy Boomer project is concerned with only two components of subjective well-being: life satisfaction and affect. The Happy Boomer project is also interested in the role feeling of belonging has on overall life satisfaction. As each of these concepts has been researched extensively, this literature review will introduce each concept only as it relates to the current study.

Life Satisfaction Research

The delineation between the terms subjective well-being, life satisfaction, and happiness has been a gradual process throughout the years of research conducted on these concepts. In addition, research on life satisfaction has often included differing conceptualizations. According to guidelines published in 2006 by Diener, life satisfaction represents a broad, reflective appraisal of a person's life as a whole. This appraisal can be conducted in one of two ways; by evaluating all areas of life at a particular point in time (snapshot), or through an integrative judgement of life since birth (cumulative). Diener (2006) suggests that when researching life satisfaction, respondents be directed to conceptualize their life satisfaction in one of these two ways.

Life satisfaction has been an area of interest within psychology for several decades. The first life satisfaction measure, the Life Satisfaction Index (LSI), was created by Neugarten, Havighurst, and Tobin in 1961. The LSI could be considered a snapshot

evaluation of life satisfaction at a given point in time. The LSI consists of 18 questions in which participants responded "agree," "disagree," or "not sure." Two points are given for each agreement with a positive statement and for each disagreement with a negative statement. An answer of "not sure" is given one point, resulting in possible scores of 1–36. Lower scores indicate lower levels of life satisfaction. In 1985, Diener et al. published the Satisfaction with Life Scale (SWLS). The SWLS is a 5-item instrument with each item measured on a 7-point Likert scale ranging from "strongly disagree" to "strongly agree" and offers a more cumulative evaluation of life satisfaction over the life course. Possible results range from 5–35 with lower scores indicating lower level of life satisfaction. These two measures have been used in multiple studies measuring life satisfaction through a variety of variables such as marital status (Berg, Hoffman, Hassing, McClearn, & Johansson, 2009; Ng, Loy, Gudmunson, & Cheong, 2009), health status (McCamish-Svensson, Samuelsson, Hagberg, Svensson, & Dehlin, 1999), lifestyle (McKenna, Broome, & Liddle, 2007), level of education (Gaymu & Springer, 2010), living conditions (Gaymu & Springer, 2010), personality (Schimmack, Diener, & Oishi, 2002), and gender (Bourque, Pushkar, Bonneville, & Béland, 2005; I. Lee, 2013; Ng et al., 2009; Plagnol & Easterlin, 2008).

These along with similar studies have shown that life satisfaction can be measured through a wide variety of variables, both objective and subjective. Conceptualizing life satisfaction through varying factors has led to three distinct theories of life satisfaction: the bottom-up or classical theory (Diener, 1984), the top-down or essentialist theory (Steel, Schmidt, & Shultz, 2008), and the socioemotional selectivity theory (Carstensen, Fung, & Charles, 2003).

Classical theory of life satisfaction. The classical theory, also referred to as the bottom-up approach (Diener, 1984), claims that life satisfaction is determined by the sum of objective factors (i.e., health, income, work status, etc.) that typically decline with age, and thus life satisfaction should decline with age as well. Indeed, there are studies supporting this theory (Bourque et al., 2005; Chen, 2001; Doyle & Forehand, 1984; Gana, Bailly, Saada, Joulain, & Alaphilippe, 2013). For instance, Doyle and Forehand conducted interviews of a nationally representative sample of 2,306 Americans aged 40 and above. The researchers measured participants' current life satisfaction using the LSI (Neugarten et al., 1961). Participants were also asked about their level of social involvement, income, educational attainment, money problems, health condition, loneliness, religion, marital status, race, and gender. Analysis showed that life satisfaction decreased with age (40–54 years, $M = 26.8$; 55–64, $M = 25.6$; 65+, $M = 24.4$). Zero-order correlations, in which researchers did not control for confounding variables, showed that life satisfaction for ages 40+ was most statistically significantly correlated with health ($r = -.38$, $p < .001$), loneliness ($r = -.37$, $p < .001$), and money problems ($r = -.32$, $p < .001$). Gender had a very weak correlation, ($r = -.01$, *p value not reported*). Furthermore, regression analysis with participants aged 65 and above showed variance in life satisfaction explained by health ($R^2 = .232$, $b = -.277$), loneliness ($R^2 = .328$, $b = -.273$), and money problems ($R^2 = .343$, $b = -.122$).

In a more recent study, Chen (2001) found support for the classical theory of life satisfaction demonstrated in a Taiwanese sample by exploring the effect of aging on life satisfaction. Chen conducted a study looking at adults in Taiwan aged 60 and older in 1993 (N = 3,151). The researcher explored life satisfaction as it related to the following

independent variables: age, education, ethnicity, marital status, income decrease, health deterioration, retirement, living arrangements, and social organization. Using questions from the LSI (Neugarten et al., 1961), the researcher conducted a factor analysis to identify items that assessed global feelings of life satisfaction in the past. The researcher then conducted a factor analysis of items from the LSI to identify questions that reflect one's feelings toward the future. The researcher then divided the sample into five age groups (60–64, 65–69, 70–74, 75–79, 80+). Initial analysis indicated that life satisfaction decreased with age as mean life satisfaction ratings were 1.70 (*SD* = 1.18) for ages 60–64, and 1.21 (*SD* = 1.25) for ages 80+. This difference was statistically significant at the 0.01 level. A similar difference appeared in the analysis of feelings towards the future with a mean life satisfaction score of 2.28 (*SD* = 1.41) for ages 60–64 and only 1.59 (*SD* = 1.52) by ages 80+, a statistically significant difference at the 0.01 level. Chen then conducted an ordinary least squares regression to estimate the effects of the following independent variables on life satisfaction: age, education, ethnicity, marital status, income decrease, health deterioration, retirement, living arrangement, and activity. Chen found that age alone accounted for only 0.2% ($p = .067$) of variance in life satisfaction. Including the social demographic factors of education, ethnicity, and marital status accounted for an increase in variance of life satisfaction from 0.2% to 2.9%, a statistically significant effect at the 0.01 level. The variable "income decrease" accounted for a 9% increase in variance of life satisfaction, statistically significant at the 0.01 level. The variables "health deterioration" and "retirement" accounted for a very small increase in variance (9%–9.1%), with "health deterioration" being statistically significant at the 0.05 level and "retirement" being statistically insignificant. Finally, the variable "living

arrangement" accounted for a 14.6% increase in variance of life satisfaction, a statistically significant effect at the 0.05 level. Given the contribution of these variables to the variance in life satisfaction, Chen concluded that the decrease in life satisfaction associated with age could be most closely attributed to the decline in the independent variables of "income decrease" and "living arrangement." These findings demonstrate the classical theory of life satisfaction which states that life satisfaction decreases with age due to age-related losses.

In contrast, Gana et al. (2013) conducted a study that demonstrated what has been termed the "paradox of well-being." This paradox reflects past research findings (e.g., Charles & Carstensen, 2010; Jeste & Oswald, 2014; Kunzmann, Little, & Smith, 2000) demonstrating that life satisfaction increases with age in spite of typical age-related losses. Gana et al.'s study was an eight-year longitudinal study of individuals aged 62–95 years. Data were collected every two years. The sample sizes were as follows: Wave 1, N = 899; Wave 2, N = 708; Wave 3, N = 556; Wave 4, N = 526; and Wave 5, N = 413. The dependent variable, overall life satisfaction, was measured using the SWLS (Diener et al., 1985). The independent variables were age, gender, education level, and self-perceived health. The researchers conducted a multiple-indicator growth model which calculated the effects of the independent variables on the dependent variable across time. Change in life satisfaction scores over the eight years was explored through latent growth modeling which estimates the growth of change over time. The researchers found that with each wave of data, the sample as a whole experienced a significant increase in life satisfaction, with mean levels of life satisfaction intercept or constant at M = 5.30, (probability less than .001) and mean levels of life satisfaction slope or change over time

at M = .011, (p = .024), indicating a statistically significant increase in life satisfaction over time. Furthermore, the researchers found that none of the independent variables had a significant effect on the amount of change in life satisfaction scores. The results of this study suggest that life satisfaction does not necessarily decrease with age, and that the variables of age, gender, education level, and self-perceived health do not necessarily lead to a decrease in life satisfaction for this age group. These findings demonstrate the well-being paradox and refute the classical theory of life satisfaction and age.

Essentialist theory of life satisfaction. Over the years, a second theory of life satisfaction emerged. Termed the essentialist theory (Steel et al., 2008), or top-down approach, this theory contradicts the classical theory in that it posits that the way one views his/her satisfaction with life is largely influenced by temperament, or genes. According to this theory, because life satisfaction is so heavily influenced by genetics, it should not be significantly impacted by objective variables (e.g., income, marital status, age, ethnicity, education level). One study offering support for the essentialist theory of life satisfaction was conducted by Stubbe, Posthuma, Boomsma, and De Gues (2005). Stubbe et al. examined the contribution of genes on individual differences in life satisfaction. Their total sample (N = 5,668) consisted of 4,329 twins and 1,339 nontwin siblings. Of the 4,329 twins, 2,219 were monozygotic (identical), with male-male monozygotic (MZM) twins totaling 647 and female-female monozygotic (MZF) twins totaling 1,572. The remaining twin pairs (2,110) were dizygotic (not identical), with male-male dizygotic (DZM) twins totaling 345, female-female dizygotic (DZF) twins totaling 822, and dizygotic opposite sex (DOS) twins totaling 943. Overall life satisfaction was measured using the SWLS (Diener et al., 1985). Through correlation

coefficients and structural equation modeling, the researchers determined that age and gender did not affect life satisfaction ratings. In addition, the researchers concluded that there were no twin-singleton differences in life satisfaction. In other words, simply being a twin (either monozygotic or dizygotic) did not impact life satisfaction ratings. However, the researchers also found that correlations of life satisfaction ratings among the twin pairs were statistically significantly larger for monozygotic twins (MZM $r = 0.31$, MZF $r = 0.40$) than for dizygotic twins (DZM $r = -0.01$, DZF $r = 0.10$), indicating that genes may influence life satisfaction. In fact, regardless of gender, the correlations for monozygotic twins (MZ, $r = 0.38$) were more than twice as large as the correlations for dizygotic twins (DZM $r = -0.01$, DZF $r = 0.10$, DOS $r = 0.11$). Additionally, correlations for monozygotic twins were nearly twice as large as correlations among sibling pairs (Brothers $r = 0.18$, Sisters $r = 0.09$, Brother-Sister $r = 0.01$) offering further evidence for the impact of genes on life satisfaction. In other words, between groups (monozygotic, dizygotic, and sibling pairs), life satisfaction correlations were not statistically significant, but within each group (monozygotic, dizygotic, and sibling pairs) the measurement of life satisfaction was most strongly correlated within the monozygotic twins. Finally, the researchers calculated that genetic factors accounted for 38% of the variance in life satisfaction, offering support for the essentialist theory of life satisfaction which attributes life satisfaction to genetic factors.

More recently, Bartels (2015) conducted a meta-analysis of twin pair studies and life satisfaction. The initial literature search resulted in 165 unique papers that included research of a combination of any of the following terms: wellbeing, happiness, or life satisfaction and twins, heritability, or genes. Only 24 of the 165 articles included

information pertaining to the heritability of happiness, wellbeing or life satisfaction. Through a search of the reference lists of these 24 articles, 6 more articles were identified and added the meta-analysis. The heritability estimates within these 30 studies ranged from 0–64%. Thus the researcher aimed to compute a stronger estimate of the role genes may play in life satisfaction. In order to do this, the researcher combined and weighted (by the number of participants in each study) the results of these studies and found that genetics accounted for 35% of the variance of wellbeing or life satisfaction offering further support for the essentialist theory of life satisfaction.

Another study that explored the essentialist theory of life satisfaction was conducted by Soto (2015). Soto conducted a longitudinal study with 16,367 Australian adults looking at the relationship between the Big Five personality traits (neuroticism, extraversion, openness, conscientiousness, and agreeableness) and well-being (life satisfaction, positive affect, and negative affect). The participants were asked to complete annual surveys between 2005 and 2009. Life satisfaction was assessed through nine domains (health, lifestyle, living situation, finances, attitudes, values, job, workplace, and parenting) in which participants indicated their degree of satisfaction on a scale of 0–10 at that point in time, a snapshot of their life satisfaction. This researcher-created scale demonstrated an alpha reliability of .79. Personality traits were measured on the 35-item Big Five Mini-Markers questionnaire (Saucier, 1994). The Big Five Mini-Markers asks individuals to rate the degree to which specific personality traits (e.g., shy, talkative, cold) apply to them. Positive and negative affect were assessed through nine questions taken from the Medical Outcomes Scale (MOS) Short-Form Health Survey (MOS SF-36; Ware & Sherbourne, 1992). The Medical Outcomes Scale Short-Form Health Survey

assesses eight health concepts, including emotions. The researchers utilized nine questions from the Medical Outcomes Scale Short-Form Health Survey which asked participants to rate how often they have felt various emotions (happy, down, etc.) over the past four weeks on a 6-point Likert scale. The nine questions taken from the Medical Outcomes Scale Short-Form Health Survey consisted of three questions measuring positive affect and six questions measuring negative affect and had an alpha reliability of .84.

Soto (2015) found that higher levels of life satisfaction correlated significantly positively with the personality traits of extraversion ($\beta = .313$, $p < .05$), agreeableness ($\beta = .258$, $p < .05$), and conscientiousness ($\beta = .253$, $p < .05$), and correlated significantly negatively with the personality trait of neuroticism ($\beta = -.303$, $p < .05$). The correlation between life satisfaction and the personality trait openness was not statistically significant. The specific p-value for that correlation was not reported.

Soto (2015) then went a step further and analyzed the data using a latent autoregressive model that attempts to predict data based on previously collected data. Soto's latent autoregressive model revealed that all five personality traits and life satisfaction have a nearly equal reciprocal influence on each other; that is, personality traits have nearly as much influence on life satisfaction as life satisfaction does on personality traits ($\beta = .711$-$.844$, $p < .05$). As a result, Soto concluded that components of well-being (life satisfaction, positive affect, and negative affect) may have a reciprocal relationship with personality traits, suggesting that more research needs to be done in order to tease apart the influence personality traits may or may not have on life satisfaction.

The research conducted by Soto (2015) and Stubbe et al. (2005) explored the essentialist theory of life satisfaction. The essentialist theory holds that life satisfaction is a relatively predetermined set point and therefore not solely the product of the objective variables of which one's life is composed. Soto (2015) and Stubbe et al. (2005) came to differing conclusions. However, both researchers offer an alternative understanding of life satisfaction to that offered by classical theory. This does not necessarily indicate, however, that objective variables have no impact on life satisfaction, or in other words, that the classical theory of life satisfaction is wrong. What these and similar studies demonstrate is that life satisfaction is a complex construct that can be understood through various means and that these studies may not be exhaustive. In other words, demonstrating that life satisfaction can be understood through objective as well as inferred genetic factors does not necessarily negate the impact of factors that may be less evident.

Socioemotional selectivity theory of life satisfaction. While research supporting the classical and essentialist theories continues, a third theory has emerged. The Socioemotional Selectivity Theory (SES) (Carstensen, 1995; Carstensen et al., 2003) holds that life satisfaction is influenced by the ability to regulate emotions while emphasizing close relationships**.** SES theory is rooted in the lifespan developmental theory of Selection, Optimization, and Compensation (SOC) (Baltes & Carstensen, 1996). The SOC theory posits that lifespan development can be understood through the *selection* of life domains one chooses to focus on, through the *optimization* or maximization of gains, and finally through *compensation* of losses which ensures the

maintenance of current functioning while minimizing for loss typically associated with aging.

SES theory essentially applies SOC theory to socioemotional constructs. SES theory holds that as people age perceived limitations of time lead to the selection of lifestyle shifts that place more emphasis on emotionally meaningful goals and the optimization of emotional experience and positive emotional relationships, resulting in life satisfaction that should increase with age or at least compensate for the negative effects of late life losses. For example, English and Carstensen (2014) conducted a longitudinal study looking at emotional regulation and social networks of 184 individuals aged 18–94 (M = 55, SD = 20.6). Three sets of data were collected over a 10-year period. Every five years the participants were given pagers and asked to complete an emotional response sheet indicating the degree to which they were currently feeling 19 different emotions on a 7-point scale when randomly paged five times a day over a one-week period. The participants were also asked to complete a social network questionnaire indicating their social connections and levels of closeness (outer circle, middle circle, and inner circle) to each connection, along with a 7-point measure of how many positive and negative emotions they associated with each social connection. The authors found that sometime between the ages of 50–60, total network size began to decrease, with the largest decrease occurring in the outer and middle network circles. The direction of this shift in the configuration of social circles continued throughout late adulthood. The researchers also computed the emotional tone of each circle of social connection and found that there was a statistically significant negative correlation between positive emotional tone ratings and negative emotional tone ratings for each social connection

circle (inner circle: $r = -.20$, $p < .01$; middle circle: $r = -.22$, $p < .01$; outer circle: $r = -.19$, $p < .01$), indicating that the more positive emotional tone, the less negative emotional tone within the circles. Additionally, the researchers discovered that individuals whose social connections were associated with a more negative tone had more negative emotional experiences in daily life. This was especially true for those who experienced a negative tone in their inner circle of social connections ($\beta = 0.24$; $p < .01$, *p-value not reported).*

English and Carstensen (2014) argued that these changes in social connections and emotional tone can be attributed to the pursuit for increased close personal relationships with age. As such, their results support the SES theory which holds that people strategically shape their social environments as they age in order to increase interaction with close social connections that are more emotionally satisfying. By including a sample with a wide age range (18–94 years), the authors were able to demonstrate how, compared to younger adults, older adults have a decreased network size and describe their networks more positively than younger adults, suggesting that as the sample aged, older adults strategically shaped their social circles in ways that included a greater percentage of close personal relationships that were more emotionally satisfying.

Positive Affect and Negative Affect Research

Within psychology, affect refers to the moment-to-moment positive and negative emotions that contribute to an individual's overall subjective well-being (Kuppens, Realo, & Diener, 2008). The social sciences view positive and negative affect as two individual constructs of emotional experience, named the two-factor theory of affect.

Indeed, much research has supported this understanding (Diener & Emmons, 1984; Hilleras, Jorm, Herlitz, & Winbald, 1998; Mroczek & Kolarz, 1998; Pinquart, 2001; Stallings, Dunham, Gatz, Baker, & Bengston, 1997; Watson, Clark, & Tellegen, 1988). Measurement tools such as the Bradburn Scale of Psychological Well-Being (also known as the Affect Balance Scale [ABS]; Bradburn, 1969) and the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988) have been developed to allow researchers to measure positive and negative affect independently. Watson et al. developed a model of categorizing positive and negative affect as can be seen in Figure 1.

High Positive Affect (High energy, full concentration, pleasurable engagement)	**High Negative Affect** (Subjective distress, unpleasurable engagement, anger, contempt, disgust, guilt, fear, nervousness)
Low Positive Affect (Sadness, lethargy)	**Low Negative Affect** (Calmness, serenity)

Figure 1. PANAS classification of states of affect. Adapted from "Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales," by D. Watson, L. A. Clark, and A. Tellgen, 1988, *Journal of Personality and Social Psychology, 54*, pp. 1063–1070.

The two-factor theory of affect emphasizes the importance of distinguishing between the experience of positive and negative affect. In 1997, Stallings et al. conducted a study that demonstrated the two-factor theory of affect. Their longitudinal study of 1,159 individuals encompassed three generations: grandparents (Generation One [G1]), their adult children (Generation Two [G2]), and their young adult grandchildren (Generation Three [G3]). The researchers hypothesized that positive affect would be

predicted by positive events only and that negative affect would be predicted by negative events only. The researchers administered the Affect Balance Scale (Bradburn, 1969) to participants in 1971 (Time 1) and again in 1985 (Time 2) and measured the amounts of positive and negative affect around the life events of marriages, divorces, births, death of a spouse, death of a child, death of a parent, hospitalizations, health decline, improved standard of living, retirement, and retirement of one's spouse. Factor analysis revealed that the Affect Balance Scale (Bradburn, 1969) successfully measured positive affect and negative affect separately for the entire sample through low interfactor correlations (T1: r - .01; T2: r = -.18, *p-value not reported)*.

The researchers also discovered that the total number of positive events they measured over a 14-year period of time was highly predictive of positive affect for G1 and G2 (G1, b = .66, p = .003; G2, b = .50, p = .001). The number of positive events predicting positive affect for G3 was statistically insignificant (b = -.04, p = .712). The researchers speculated that this insignificance was due to the expectedness of an event. That is, for G3 (young adults), positive events such as marriage, births, and improvements in standard of living are expected for that stage of the life course and thus were less predictive of positive affect, compared to older generations for whom such events are not typical for that stage of the life course. The total number of negative events was predictive of negative affect for all three generations (G1, b = .26, p = .009; G2, b = .23, p = .001; G3, b = .24, p = .007). As the statistics show, negative events for G1 were less predictive of negative affect than they were for G2 and G3. These inverse results also suggest that negative events such as the death of a spouse, hospitalizations, decline in health, etc. are less predictive of negative affect for older adults because they

are more expected as one ages, as compared to negative events occurring for G2 and G3; thus, the negative events were less predictive of negative affect for G1 than they were for G2 and G3, as they were more expected. Unfortunately, the researchers did not measure possible positive events for GI such as the marriage of a grandchild, or the birth of a grandchild or great grandchild, which may have further supported or refuted their findings that expectedness of an event influences the impact such events have on life satisfaction. Nonetheless, the reported results supported the research hypothesis and subsequently the two-factor theory of affect by demonstrating that positive life events were predictive of positive affect and negative life events were predictive of negative affect.

Given the supportive evidence for the independence of positive and negative affect, social science researchers began to explore the role positive affect and negative affect have on levels of subjective well-being (Diener, 2000; Diener, Suh, Lucas, & Smith, 1999; Headey, Kelley, & Wearing, 1993; Pavot & Diener, 1993). Over time, a model of subjective well-being was developed that was constructed of life satisfaction, positive affect, and negative affect as separate constructs (Diener, Napa Scollon, & Lucas, 2003). Supporting this model, Kuppens et al. (2008) conducted a study that looked at the frequency of positive affect and negative affect as they relate to life satisfaction. Interviewing 8,557 adults from 46 different countries, the researchers administered the SWLS (Diener et al., 1985) and a survey that asked participants how often they had felt each emotion in the last week. Positive emotions consisted of pleasant, happy, cheerful, pride, gratitude, and love. Negative emotions consisted of sad, anger, unpleasant, guilt, shame, stress, worry, and jealousy. Through multilevel analysis, the researchers found

that both positive affect and negative affect contributed independently to life satisfaction. As the multilevel analysis coefficients reflected, positive affect impacted life satisfaction more than negative affect did (positive affect: $b = 0.31$, $p < .001$; negative affect: $b = -0.18$, $p < .001$). These results not only demonstrate the influence of positive affect and negative affect on life satisfaction, but they also demonstrate the independence of positive affect and negative affect as being two different emotional constructs.

Feeling of Belonging Research

The final subjective variable that will be analyzed in this dissertation is the feeling of belonging one has to his/her local neighborhood/community. The concept of feeling of belonging or belongingness became well-known through Abraham Maslow's hierarchy of needs (Maslow, 1943). Within the hierarchy, belongingness is considered the third level of needs, after safety and physiological needs. Maslow believed that a person would "hunger for affectionate relations with people in general, namely, for a place in his [*sic*] group" (Maslow, 1943, p. 381). Since then, belongingness has developed into a component of the broader concept of sense of community. Sense of community has been studied in various fields, including human relations (e.g., Glynn, 1981), sociology (e.g., Hillery, 1955), and communication (e.g., Doolittle & McDonald, 1978). As a result, there is a prolific amount of information on the topic, evidenced by Hillery who in 1955 identified 94 separate definitions for community through an extensive search of the literature. Gusfield (1975) classified community into two types: territorial (communities that share a geographic location) and relational (communities that share similar interests, ideas, and beliefs, despite geographic location). At approximately the same time, Sarason (1974) wrote about a psychological sense of community. Through the theories and

subsequent research around psychological sense of community, social scientists concluded that belongingness is vital to human functioning, so much so that the absence of community can lead to feelings of isolation, alienation, loneliness, and depression (Cramm & Neiboer, 2014; Farrell, Aubry, & Coulombe, 2004; Sum, Mathews, Pourghasen, & Hughes, 2009). Given this understanding, it stands to reason that a feeling of belonging, or lack thereof, would have predictive properties of life satisfaction.

In 1986, McMillan and Chavis published a definition and theory of sense of community that included four main elements: membership, influence, integration, and shared emotional connection. Feeling of belonging was placed within the membership element and involved the feeling that one fits within the group, has a place, and identifies with the group. “It is my group” and “I am a part of the group” (McMillan, 1986, p. 10.). This classification could be attributed to either a geographical or relational community. Prezza and Costantini (1998) explored the link between sense of community and life satisfaction. However, their research focused on sense of community as it relates to geographical communities only, comparing small, medium, and large residential areas. Little research has been done on the relationship between feeling of belonging and overall life satisfaction.

Davidson and Cotter (1991) looked at the relationship between sense of community and the broader concept of subjective well-being as measured through happiness, worrying, and personal coping. At the time of this study, the social sciences were often treating happiness and life satisfaction synonymously, as described by Diener et al. (2003). Davidson and Cotter theorized that sense of community, which encompasses feeling of belonging (McMillan & Chavis, 1986) would be related to

subjective well-being, which according to the researchers, included the variable of life satisfaction (what Davidson and Cotter termed happiness).

Using random digit dialing, Davidson and Cotter randomly phoned a total of 992 residents of Alabama and South Carolina. Telephone interviews were conducted on three separate occasions (spring 1985, summer 1985, and summer 1987). To measure sense of community, the researchers used the Sense of Community scale developed by Davidson and Cotter (1986). The Sense of Community scale consists of 17 questions rated on a 4-point Likert scale. Subjective well-being was assessed through four close-ended questions that focused on life satisfaction (what the researchers called happiness), enjoyment, worry, and coping at that point in time, a snapshot of their satisfaction with life.

Finally, the researchers measured the respondents' evaluations of their communities through five different community domains: education, employment, health care, neighborhood problems and services, and city government. The researchers found that life satisfaction was significantly and moderately to highly positively correlated with sense of community (Time 1, $r = .45$, $p < .01$; Time 2, $r = .19$, $p < .05$; Time 3, $r = .34$, $p < .01$), whereas coping was moderately significantly positively correlated with sense of community only for Time 2 ($r = .16$, $p < .05$) and Time 3 ($r = .17$, $p < .01$). Finally, worrying was statistically significantly positively correlated with sense of community only for Time 3 ($r = .12$, $p < .05$).

These results demonstrated that the life satisfaction component of subjective well-being was impacted by sense of community each time the respondents were surveyed. This was not the case for coping or worrying. This research demonstrates that sense of

community, as a form of belonging, can have an impact on the happiness, or life satisfaction component of subjective well-being.

Baumeister and Leary (1995) took an alternative perspective of feeling of belonging, proposing that the need to belong was inherited from our primitive ancestors who required social relationships to survive. Belonging to a group meant stronger defenses, more opportunity to hunt/gather food, and more opportunity for reproduction. Through a review of empirical research, Baumeister and Leary developed the belongingness hypothesis which holds that "human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (p. 497). The studies the researchers examined revealed that many of the strongest emotions, both positive and negative, can be linked to the feeling of belonging. Through the development of the belongingness hypothesis, Baumeister and Learly supported Maslow's belief that the need to belong is a fundamental human motivation and that individuals are driven to develop and maintain meaningful relationships that lead to a feeling of belonging.

Indeed, Young, Russell, and Powers (2004) conducted research that supports this view. Through a survey of 9,445 women aged 73–78, Young et al. explored the feeling of belonging as it related to health and general well-being in older women. The participants completed a survey that included questions concerning their sense of belonging to a neighborhood, sociodemographics, well-being, physical health, and stress. Sense of belonging to a neighborhood was measured through questions such as "I have a lot in common with people in my neighborhood" and "I generally trust my neighbors" (Young et al. 2004, p. 2629). The researchers hypothesized that belonging scores would be

positively correlated with physical health, mental health, and social support, and negatively correlated with stress. The researchers found that sense of belonging, though weak, was significantly positively correlated with physical health ($r = .07$, $p < 0.001$) and mental health ($r = 0.15$, $p < 0.001$) and more strongly significantly correlated with social support ($r = 0.33$, $p < 0.001$), whereas sense of belonging was negatively correlated with stress ($r = -0.14$, $p < 0.001$). This research supports the argument that feeling of belonging to a community/neighborhood can have positive effects on general well-being.

Research on Life Satisfaction, Affect, and Feeling of Belonging

Through a comprehensive web search of peer-reviewed, scholarly articles, the only published study known to the researcher that looked at life satisfaction, affect, and feeling of belonging was conducted in 2014. Through their research on online social networking and life satisfaction, Oh, Ozkaya, and LaRose (2014) explored the influence social networking activity had on perceived social support, affect, sense of community, and life satisfaction. Through the use of snowball sampling, the authors collected data from 339 adults aged 18-81 ($M = 28$, $SD = 11.77$, $Mdn = 23$). Over a five-day period, the researchers conducted momentary sampling asking five questions: (a) the title of the social networking site most recently visited, (b) duration of time spent on the social networking site, (c) the features used on the site, (d) the type of supportive interaction and support exchanged during the interaction, and (e) the affect participants experienced right after their time on the site. Affect was measured using the Positive and Negative Affect Schedule (PANAS) (Watson et al.1988) along with 12 additional items that had been validated in a pretest to this research. Those additional questions were not included in the article. Finally, the participants were asked to report on their general feelings of

social support, sense of community, and a cumulative measure of life satisfaction. Feelings of social support were measured through nine questions adopted from Eastin and LaRose (2005) that measured supportive interactions on a 7-point Likert scale. These questions included “There is at least one person I know whose advice I really trust.” “No one I know would throw a birthday party for me.” “I feel connected with others who are important to me.” Sense of community was measured through questions developed by Sheldon, Elliot, Kim, and Kasser (2001) such as “I feel close and connected to other people who are important to me.” “I feel appreciated by one or more important people.” (Sheldon et al., 2001), and life satisfaction was measured using four items on a 7-point Likert scale; “In most ways my life is close to 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.” The items were adapted from the SWLS (Diener et al., 1985). The researchers found that there was a significant strong, positive correlation between sense of community and life satisfaction ($r = .48$, $p < .001$) as well as between positive affect and life satisfaction ($r = .30$, $p < .05$). There was a weak but statistically significant negative correlation between negative affect and life satisfaction ($r = -.04$, $p < .01$). Specific p-values were not included. These results support the hypotheses that both sense of community and positive affect are positively correlated with life satisfaction. The results not only support these hypotheses, but also demonstrate that negative affect is not as strongly correlated with life satisfaction as are positive affect and sense of community.

Summary of Background

The research explained above is an overview of what the social science fields have undergone in efforts to understand life satisfaction. Through the development of

theories regarding what contributes to life satisfaction (i.e., classical theory, essentialist theory, and socioemotional selectivity theory), the discovery of the independence of positive and negative affect, and the impact of feeling of belonging, social science researchers have made great strides in understanding what contributes to life satisfaction. However, as Ed Diener expressed in a personal communication with the researcher:

> We still do not fully understand how the types of SWB [i.e. life satisfaction, positive affect, negative affect] fit together, but we do know that although they are related, they also have distinct components. We know they correlate sometimes with somewhat different things, and so definitely should each be measured separately. (personal communication, October 14, 2014)

Taking these words to heart, the Happy Boomer project takes a unique approach to understanding what contributes to life satisfaction (a component of subjective well-being) for the Baby Boomer generation. By utilizing international data through the Gross National Happiness Index Survey for individuals aged 65 and older, the Happy Boomer project is unique in its statistical analyses and selection of variables. It is the hope of the researcher that the Happy Boomer project will contribute to the discussion of life satisfaction and the roles of affect and feeling of belonging as they concern the Baby Boomer generation.

Hypothesis

The primary goal of this project was to better understand some of the components of life satisfaction for the baby boomer generation. By utilizing data from the Gross National Happiness Index Survey (GNHIS) (Happiness Alliance, 2011), this project analyzed international data from hundreds of individuals aged 65 and older. More specifically, this project analyzed the predictive power of positive affect, negative affect, and feeling of belonging on life satisfaction. The research hypothesis was that positive

affect, negative affect, and feeling of belonging are able to independently predict levels of life satisfaction for individuals aged 65 and older as measured through the Gross National Happiness Index Survey.

Methods

Design

The Happy Boomer project is a quantitative, exploratory analysis that is cross-sectional in design. This project aimed to understand the predictive powers of feeling of belonging, positive affect, and negative affect on levels of life satisfaction as measured by the Seattle-based Happiness Alliance Gross National Happiness Index Survey (GNHIS) (Happiness Alliance, 2011) for participants aged 65 years and older. Correspondence regarding the use of the GNHIS data can be found in Appendix A.

Data Collection and Procedures

Instrument. The data analyzed in this research were collected by Happiness Alliance (formally known as the Happiness Initiative) through the survey instrument referred to as the Gross National Happiness Index Survey (GNHIS) (Happiness Alliance, 2011). The GNHIS is managed by Happiness Alliance and was developed in partnership with the Personality and Well-Being Laboratory at San Francisco State University. The survey can be found at http://survey.happycounts.org/survey/directToSurvey. The GNHIS was constructed over five phases and is based on examples of previously published happiness surveys, described below.

In 2008, The Gross National Happiness Centre of Bhutan developed a national happiness survey (http://www.grossnationalhappiness.com) in efforts to better understand the quality of life of its citizens (Ura, 2008). In 2010, Partners for the Well-Being of Greater Victoria constructed an abridged version of the GNH Bhutan survey titled The Greater Victoria Well-Being Survey. From The Greater Victoria Well-Being Survey, Happiness Alliance created an opt-in survey taken by 7,200 participants (Happiness Alliance, n.d.). Using the results of that survey, the Personality and Well-Being

Laboratory at San Francisco State University began construction of the GNHIS (Happiness Alliance, 2011) that was used for this research project. Figure 2 illustrates the timeline of the development of the GNHIS. A more detailed description of the GNHIS construction follows in the paragraphs below.

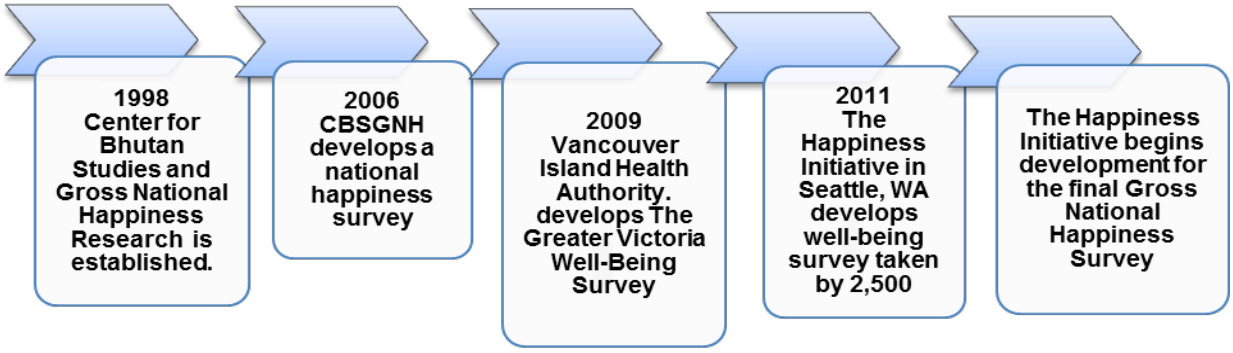

Figure 2. Timeline of international gross national happiness research leading to the Gross National Happiness Index Survey.

In Phase I of the Happiness Initiative GNHIS, developers created an hour-long survey based on the constructs from the original Seattle opt-in survey ($N = 2{,}500$) shown to have the highest corrected item-total correlations. In Phase II, developers searched for published surveys containing constructs that appeared to measure the domains of well-being that were believed to have the greatest influence on quality of life, based on face validity. These domains were: time balance, community vitality, psychological well-being, physical health, social connectedness, material well-being, work experience, governance, education, access to nature/environmental quality, and cultural vitality. The surveys chosen as examples were The Greater Victoria Well-Being Survey (Partners for the Well-Being of Greater Victoria, 2010), General Social Survey (The National Data Program for the Sciences, 2002), The European Social Survey (Norwegian Social Science Data Services, 2002), Detroit Area Survey (Marans, 2001), The World Health

Organization Quality of Life Survey (WHOQOL, 1997), University of Michigan and ABC New/Money Magazine Consumer Confidence Survey (as cited in Happiness Alliance, 2011), and The Centre for Economic Performance Recommendations for Measuring Subjective Well-Being (Dolan & Metcalfe, 2012).

Based on the domains with the highest corrected item-total correlation from the original Seattle opt-in survey and the domains chosen from the example surveys, a 440-item survey was created and emailed to over 10,000 email addresses. These email addresses were gathered from the email lists of the organizations Sustainable Seattle and Take Back Your Time. Sustainable Seattle is a nonprofit organization that works to promote sustainability through the measurements of indicators that are based on citizens' values and goals. Sustainable Seattle emphasizes stewardship, social justice, and collaboration (Sustainable Seattle, n.d.). Take Back Your Time is a coalition that advocates for a better quality of life by influencing public policy concerning maternity/paternity leave, sick leave, vacation leave, and so forth. Its primary objective is to help shape policies so that individuals may find a better work-life balance leading to a better overall quality of life (Take Back Your Time, n.d.). The email lists of these two organizations were chosen due to access and convenience. A total of 515 participants completed the survey.

Analyzing the results of Phase II of the GNHIS development, the developers conducted a factor analysis to identify which of the items from the 440 developed in Phase I had the strongest loadings with each factor and subsequent domain. The developers also identified which items had the highest corrected item-total correlation. Next, the developers measured for parallel forms of reliability by identifying items that

correlated most strongly with the original items from the Seattle opt-in well-being constructs. Finally, the developers considered comments made by the 515 participants.

Once these steps were completed, the developers began Phase III of survey construction with the goal of reducing the number of items for each domain to five. Based on the statistical requirements laid out in Phase II, the strongest 150 items were emailed to Amazon.com's Mechanical Turk (MTurk) website (http://mturk.com). In MTurk, individuals are paid a small fee for survey participation. A total of 404 individuals participated in this stage of the survey. In addition to the survey questions, the developers also asked these 404 participants to indicate their level of agreement with 10 domain definitions as defined by the Happiness Initiative (material well-being, health, time balance, psychological well-being, education and learning, cultural vitality, environment, governance, community, and work) in efforts to test for face validity of the survey. From the 404 completed surveys, the developers looked for items that maximized internal consistency and predictive validity. They did this by examining the internal consistency of each well-being domain in efforts to narrow down each domain to five items, with the requirement of an alpha coefficient of .70 ($\alpha = .70$). If five items did not meet $\alpha = .70$, more items were added based on their corrected item-total correlations, until $\alpha = .70$ was met.

In Phase IV of survey construction, the survey developed in Phase III was reposted on MTurk with 133 respondents who did not take the Phase III survey. For this phase of the survey development, the questions were altered to a 5-point Likert scale. Once the surveys were completed, the developers analyzed the 10 domains to confirm three main criteria:

- that each domain and its corresponding items formed a single factor as demonstrated through factor analysis;
- that each domain met internal consistency with a minimum $\alpha = .70$; and
- that the sum of the scale for each domain correlated with the overall satisfaction rating for that domain asked at the beginning of the survey by at least .05.

Once these criteria were met, the developers moved on to the final phase.

During Phase V, the developers acquired a nationally representative sample of adults through SurveyMonkey (http://surveymonkey.com) for a total of 578 respondents. SurveyMonkey is able to acquire a nationally representative sample based on participants' demographic profiles (SurveyMonkey, n.d.). The respondents were asked to complete three global ratings of well-being, domain agreement questions, and the final Happiness Initiative Gross National Happiness Index Survey (2011). The statistical analyses of the survey results indicated that each domain formed a single factor, was internally consistent, and correlated with the satisfaction rating it was proposed to predict.

The survey questions from the GNHIS used for analysis of the Happy Boomer project are as follows:

- Life Satisfaction Domain:
    1. Please imagine a ladder with steps numbered from zero at the bottom to ten at the top. Suppose we say that the top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible. If the top step is 10 and the bottom step is 0, on which step of the ladder do you feel you personally stand at the present time?

    a. 0 – Worst possible life for you to 10 – Best possible life for you

2. All things considered, how satisfied are you with life as a whole nowadays?
    a. 0 – Not at all satisfied to 10 – Extremely satisfied
3. Taking all things together, how happy would you say you are?
    a. 0 – Extremely unhappy to 10 – Extremely happy

- Positive Affect Domain:

  Please think about what you have been doing and experiencing during the past four weeks. Then report how much you have experienced each of the following feelings using the scale below:

  1. Happy
      a. Very rarely or never
      b. Rarely
      c. Sometimes
      d. Often
      e. Very often or always
  2. Joyful
      a. Very rarely or never
      b. Rarely
      c. Sometimes
      d. Often
      e. Very often or always

- Negative Affect Domain:

Please think about what you have been doing and experiencing during the past four weeks. Then report how much you have experienced each of the following feelings using the scale below:

1. Sad
    a. Very rarely or never
    b. Rarely
    c. Sometimes
    d. Often
    e. Very often or always
2. Afraid
    a. Very rarely or never
    b. Rarely
    c. Sometimes
    d. Often
    e. Very often or always

- Feeling of Belonging Domain:

1. How would you describe your feeling of belonging to your local community?
    a. Very weak
    b. Somewhat weak
    c. Neither weak nor strong
    d. Somewhat strong
    e. Very strong

- Gender:

1. Which gender do you identify as? (Multiple selections are allowed)
   a. Male
   b. Female
   c. Neither
   d. Other

Participants

Subjects who participated in the final GNHIS were recruited through convenience sampling. This happened through word of mouth, leadership trainings held by the Happiness Alliance, and web searches by survey takers. Paper-and-pencil versions of the GNHIS were gathered through a project with the Seattle Department of Neighborhoods that assessed neighborhood happiness throughout Seattle's Somali (N = 45), Filipino (N = 45), Vietnamese (N = 14), and Oromo (N = 44) communities. As a result of the Department of Neighborhood project, the subject pool was international, with some participants taking translations of the English version of the survey. Furthermore, convenience sampling has limited generalizability and is at risk for being biased and not representative of the general population (Kitchenham & Pfleeger, 2002).

Since its inception in 2011, the GNHIS has been slightly modified, resulting in four sequential rounds. During modification, the questions concerning the domain of positive and negative affect were reduced from a 12-item question in Round 1 to a four-item question in Round 2 and a two-item question in Rounds 3 and 4. In Round 1, participants were asked to rate how often they experienced the following feelings: positive, negative, good, bad, pleasant, unpleasant, happy, sad, afraid, joyful, angry, and contented. In Round 2, participants were asked to rate how often they experienced only

four feelings (happy, sad, afraid, joyful). By Rounds 3 and 4, participants were asked to rate how often they experienced feelings of being happy or anxious.

During the statistical analysis of this dissertation, it was determined that the number of participants aged 65 and older who had answered the revised affect questions in Rounds 3 and 4 did not constitute a large enough sample (n = 274) to conduct a multiple regression of four variables. Thus, in order to ensure a large enough sample size, the participants used in this study consisted of individuals aged 65 and older who participated in only Rounds 1 or 2 of the survey. These participants answered the affect questions that contained a measurement of how often they experienced feelings of happy, sad, afraid, and joyful. The resulting sample totaled 1,280 Baby Boomers with modal age falling between 70–75 years (n = 579). Eighty-six percent of participants were 80 years of age or younger, with a mean age of 70.07 years and a standard deviation of 5.248.

The data were edited to allow for statistical analysis. Nonnumeric data for gender and race were converted into numeric form. From there, the researcher conducted simple descriptive statistical analyses. From the entire dataset, the researcher included only respondents who indicated they were 65 years of age or older and endorsed one of three gender options (male, female, neither/other). A total of six respondents (0.5%) were excluded because they indicated they were over 110 years of age, resulting in a sample size of 1,274. See Table 1 for a breakdown of age and Figure 3 for age distribution. A total of nine (0.7%) respondents marked the “neither/other” gender category. A total of 16 respondents (1.25%) left the gender question blank. Of those 25 participants who did not indicate being either male or female, three were removed from analysis as their other demographic information was inconsistent (e.g., “Klingon,” “I AM NOT ONE OF

YOU," "Butthead"), resulting in 22 (1.64%) participants who did not identify as either male or female. See Table 1 for a breakdown of gender responses and Figure 4 for gender distribution.

Respondents selected an ethnicity from a list based off of the 2010 U.S. Census. Multiple selections were allowed. A total of 13 (1%) respondents indicated multiple ethnicities and their responses were converted into a researcher-created "multiple ethnicities" response category. A large majority of respondents were White (91.92%), limiting the generalizability of the sample. See Table 1 for a breakdown of ethnicity responses and Figure 5 for a graph of that information. No other changes were made to the respondent data. This form of data cleaning is considered appropriate as the sample size is still large enough for statistically relevant results (Cohen, 1992). Finally, 76 (6%) respondents indicated they currently lived in a country other than the United States, and 18 (1.412%) respondents left that question blank, resulting in 1180 (93%) of respondents residing in the United States.

Table 1

Demographic Characteristics of the Sample

Demographic	**Response**	**N**	**%**
Age	65–70	240	18.84%
	71–75	579	45.45%
	76–80	276	21.66%
	81–85	119	9.34%
	86–90	43	3.38%
	91–95	10	0.78%
	96–100	3	0.24%
	101 and above	4	0.31%
Gender	Male	496	38.93%
	Female	756	59.34%
	No Response	16	1.25%
	Neither/Other	6	0.47%

Ethnicity	White	1171	91.92%
	American Indian/Alaskan Native	17	1.33%
	Other	17	1.33%
	Hispanic	16	1.26%
	Filipino	14	1.10%
	No Response	11	0.86%
	Multiple*	8	0.63%
	Black/African American/Negro	5	0.39%
	Chinese	4	0.31%
	Indian	4	0.31%
	Hawaiian	2	0.16%
	Japanese	2	0.16%
	Korean	1	0.08%
	Other Asian	1	0.08%
	Samoan	1	0.08%

Note. Researcher-created category.

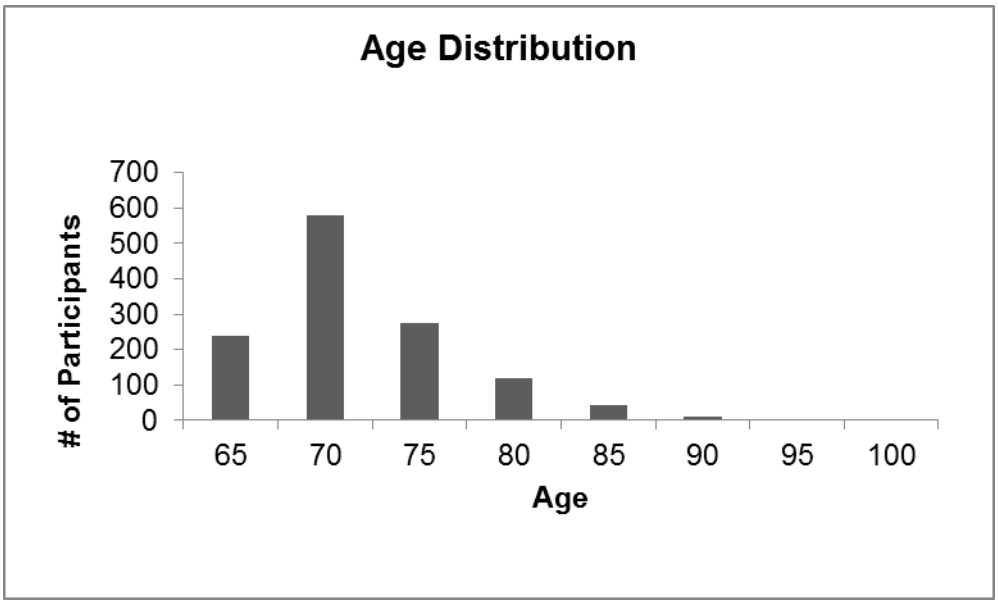

Figure 3. Age distribution of the sample.

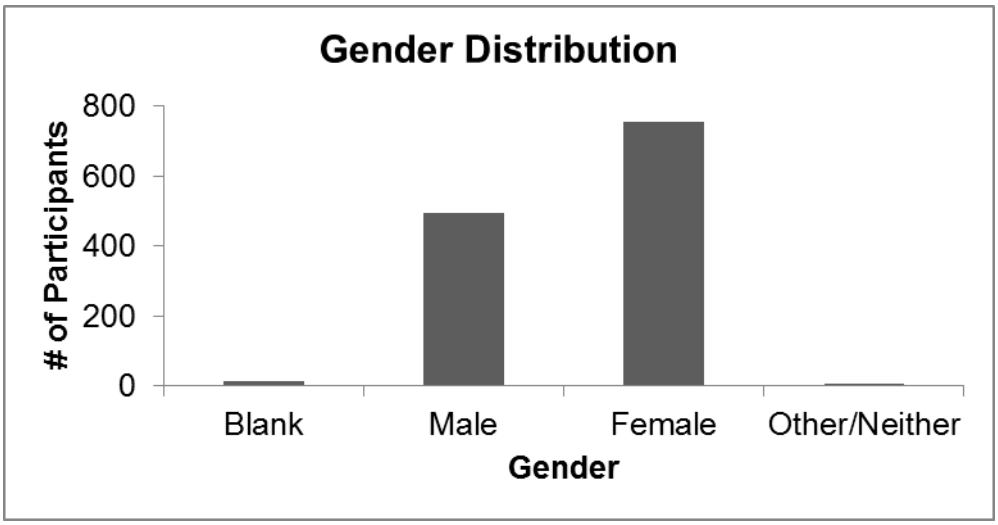

Figure 4. Gender distribution of the sample.

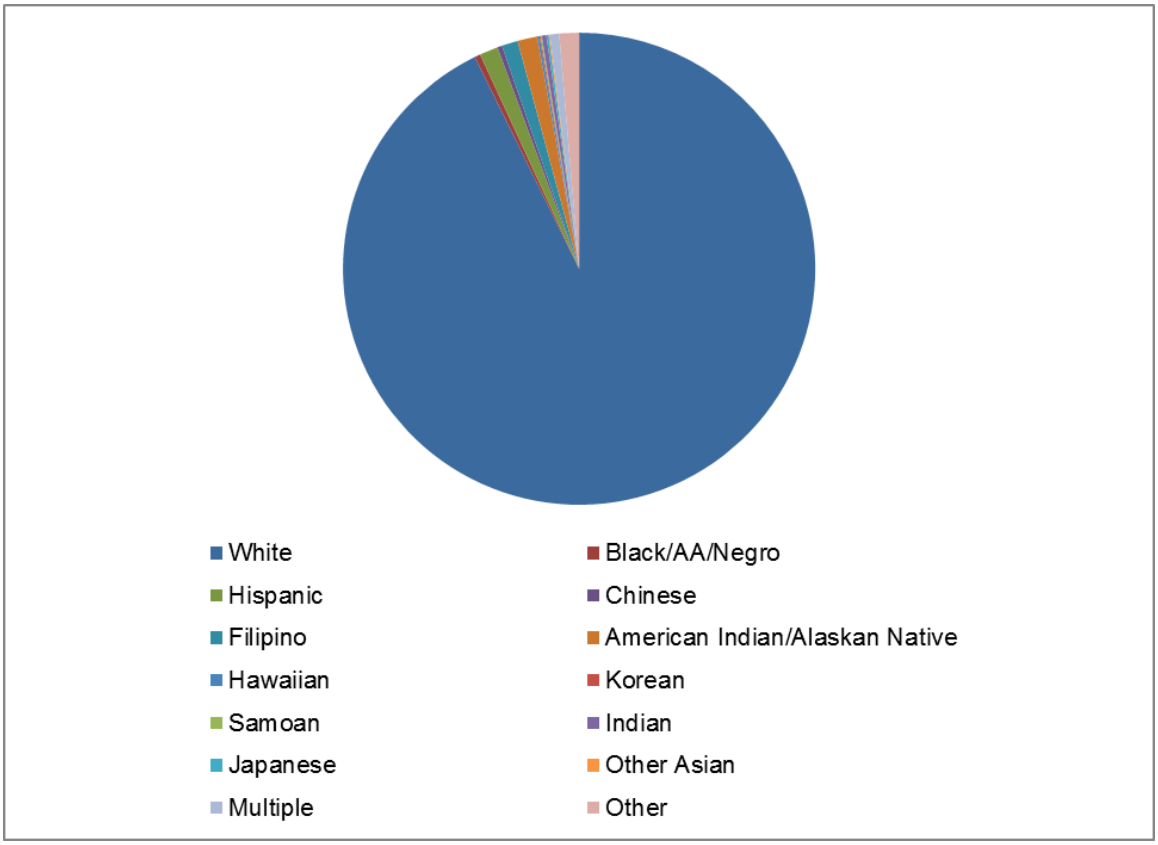

Figure 5. Ethnicity distribution of the sample.

Data Analysis

This quantitative, exploratory research analyzed components of life satisfaction

for individuals aged 65 and older using the Statistical Package for Social Sciences version 21.0 (IBM Corp., 2012). The research hypothesis held that levels of life satisfaction could be predicted by the independent variables of positive affect, feeling of belonging, and negative affect for participants aged 65 and older as measured by the Gross National Happiness Index Survey (GNHIS). A standard ordinal multiple regression analysis was conducted to assess the degree to which the predictor variables were predictive of the response variable. A correlation matrix between each variable was also run in order to test for multicollinearity and effect size.

Ordinal multiple regression. A multiple regression was performed in order to understand the degree to which life satisfaction is predicted by the variables of feeling of belonging, positive affect, and negative affect. Because the data gathered were ordinal in nature, rated on Likert scales, an ordinal multiple regression was the appropriate type of analysis (Cohen, Cohen, West, & Aiken, 2003).

The response variable life satisfaction was calculated by summing the answers to three questions from the GNHIS life satisfaction domain. (See Data Collection section, above, for the wording of those three questions.) The resulting life satisfaction scores ranged from 0–30, which SPSS reads as 30 separate categories within the variable. To facilitate interpretation, the 30 categories were converted into fewer categories. Because the life satisfaction categories were evenly distributed, the researcher chose to convert the life satisfaction categories into three equal levels of life satisfaction: low life satisfaction, ≤ 10; medium life satisfaction, 10.01-20; and high life satisfaction, ≥ 20.01. SPSS then calculated the regression against the cut-points of the levels of life satisfaction and treated them as intercepts. That is, the regression of the predictor variables was measured against

a participant falling within either the category of high levels of life satisfaction or the category of low levels of life satisfaction.

Results

Standard Ordinal Multiple Regression

The research hypothesis held that levels of life satisfaction could be predicted by the individual variables of positive affect, negative affect, and feeling of belonging. Indeed, through an ordinal multiple regression analysis, it was discovered that the predictor variables were each able to individually predict levels of life satisfaction, thus supporting the research hypothesis. Furthermore, the analysis revealed that positive affect is the strongest predictor of levels of life satisfaction, as can be seen in Table 2. This is evident through examination of the odds ratio (OR). The OR indicates the association between a predictor variable and the response variable. An OR equal to 1 indicates no association. An OR greater than 1 indicates that the amount of predictor variable present is associated with higher odds of the response variable. An OR less than 1 indicates that the amount of predictor variable present is associated with lower odds of the response variable. In other words, the OR indicates the odds of experiencing high levels of life satisfaction over experiencing low levels of life satisfaction based on the presence of a particular predictor variable. Furthermore, the confidence interval (CI) of the OR estimates the precision of the OR. If the lower and upper limits of the CI span the number 1 (e.g., 0.75–1.25), there is no association for that particular OR between the predictor variable and response variable.

As Table 2 illustrates, the odds that positive affect is a predictor of high levels of life satisfaction are 14.778 (95%, CI [9.299–23.483]) times greater than the odds of it being a predictor of low levels of life satisfaction. In other words, positive affect is a better predictor of high levels of life satisfaction than it is a predictor of low levels of life satisfaction.

In order to directly compare the magnitude of associations each predictor variable had with life satisfaction, the inverse OR and corresponding CIs for negative affect were calculated. Using the inverse OR and corresponding CIs for negative affect, it was revealed that negative affect is the second strongest predictor of levels of life satisfaction. The odds that negative affect is a predictor of low levels of life satisfaction are 3.953 (95%, CI [2.793–5.587]) times greater than the odds of it being a predictor of high levels of life satisfaction. The odds that feeling of belonging is a predictor of high levels of life satisfaction are 1.863 (95%, CI [1.611–2.154]) times greater than the odds of it being a predictor of low levels of life satisfaction.

In the initial regression analysis, the variable of gender (male, female, and other/neither) was examined to determine the extent to which it predicts life satisfaction. The other/neither category consisted of only nine participants. By comparing such large samples of male (n = 496) and female (n = 756) respondents against the drastically small sample of other/neither (n = 6), the regression for gender was skewed. To remedy this, a secondary analysis was run in which the gender variable of "neither/other" was removed from the regression analysis resulting in a final sample size of 1,268. All of the data associated with the respondents who were part of the "neither/other" gender group was removed for all questions included in the analysis. This allowed the researcher to compare the predictability of the variable male on levels of life satisfaction against the predictability of the variable female on levels of life satisfaction. As Table 2 indicates, gender is not predictive of levels of life satisfaction as it is not statistically significant ($p = .626$) and the lower and upper limits of the confidence interval span the number 1,

indicating no association between gender and levels of life satisfaction (95% CI [.779–1.514]).

The Wald Chi-Squared (X^2) score is a test of significance of the predictor variables. As can be seen in Table 2, the significance of the predictor variables is as follows: feeling of belonging, $X^2(1) = 70.542$, probability less than .001; positive affect, $X^2(1) = 129.875$, probability less than .001; and negative affect, $X^2(1) = 60.406$, probability less than .001. These scores indicate that the null hypothesis can be rejected and that the predictor variables of feeling of belonging, positive affect, and negative affect are able to predict levels of life satisfaction. Furthermore, the Wald Chi-Squared figure indicates that gender is not a predictor of levels of life satisfaction, $X^2(1) = .238$, $p = .626$.

Table 2

Final Regression Model for Feeling of Belonging, Positive Affect, Negative Affect, and Gender as They Predict Levels of Life Satisfaction

Predictor Variable	*Order Logit Estimates (Std. error)*	*Wald Chi-Squared(df)*	*p-value*	*Odds Ratio*	*Inverse Odds Ratio*	*95% CI*	*Inverse 95% CI*
Feeling of Belonging	.622(0.74)	70.542(1)	.000	1.863		[1.611, 2.154]	
Positive Affect	2.693(.236)	129.875(1)	.000	14.778		[9.299, 23.483]	
Negative Affect	-1.375(.177)	60.406(1)	.000	.253	3.953	[.179, .385]	[2.793, 5.587]
Male	.083(.170)	.238(1)	.626	1.086		[.779, 1.514]	
Female	.000	.	.	1.000		.	

Correlation Matrix

A correlation matrix was run to better understand the relationships among the variables prior to running the regression analysis. The correlation matrix was also utilized to test for multicollinearity and calculating effect size. Because the data is ordinal in nature, a Spearman's rho was run. Spearman's rho is one of the measures that can be used to determine the magnitude of associations between nonparametric, ordinal data (Cohen et al., 2003; Pallant, 2010). As seen in Table 3, positive affect was significantly positively correlated with life satisfaction (r_s = .467, probability less than .001). Feeling of belonging was significantly positively correlated with life satisfaction (r_s = .309, probability less than .001) and positive affect (r_s = .199, probability less than .001). Finally, gender was significantly positively correlated with feeling of belonging (r_s = .064, p = .023) and negative affect (r_s= .063, p = .027), but did not have a significant correlation with either life satisfaction (r_s = .000, p = .990) or positive affect (r_s = .032, p = .238). Significant negative correlations were seen between negative affect and life satisfaction (r_s = -.333, probability less than .001), negative affect and feeling of belonging (r_s = -.171, probability less than .001), and negative affect and positive affect (r_s = -.211, probability less than .001).

Table 3

Correlation Matrix Using Spearman's Rho

	Life Satisfaction	Feeling of Belonging	Positive Affect	Negative Affect	Gender
Life Satisfaction	1.000				
Feeling of Belonging	.309**(.000)	1.000			
Positive Affect	.467** (.000)	.199** (.000)	1.000		
Negative Affect	-.333** (.000)	-171** (.000)	-.211**(.000)	1.000	
Gender	.000 (.990)	.064* (.023)	.032 (.238)	.063*(.027)	1.000

Note. Correlation Coefficient (p-value). *Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

Multicollinearity

Once the direction and degree of correlation were computed, the variables were examined for multicollinearity. Multicollinearity occurs when two or more of the predictor variables are highly correlated with another predictor variable in the regression equation. If two predictor variables are too highly correlated, there is the risk that they may be measuring similar things. Thus it would be difficult to ascertain the unique influence of each predictor variable on the response variable leaving the results of the regression analysis potentially unreliable and difficult to interpret. Multicollinearity is measured through the variance inflation factor (VIF), a collinearity diagnostic tool. The VIF indicates the magnitude of the inflation in the standard error associated with a particular variable due to multicollinearity. In other words, a VIF of 8 would indicate that the standard errors within a multiple regression are larger by a factor of 8. According to

Cohen (2003), multicollinearity is present with a variance inflation factor (VIF) of 10 or higher. Through the test of multicollinearity, it was determined that the independent variables used in this study had VIFs between 1.003–1.314 and thus were not correlated enough to interfere with the main analysis to be performed.

Effect Size

Once the correlation matrix was run and the variables were checked for multicollinearity, effect size was measured. Effect size differs from statistical significance in that effect size indicates the magnitude of association between the response and predictor variables, independent of sample size. In essence, the effect size can tell us the strength of the likelihood of an occurrence. A large effect size is easier to observe than a small effect size in which the occurrence is difficult to observe or occurs infrequently. Cohen (1988) stated that effect size can be broken into small, medium, and large. Small effect size ranges between .10 and .29, medium between .30 and .49, and large between .50 and 1.0. Cohen devised these ranges so that a medium effect size could be "visible to the naked eye of a careful observer" (p. 156). Given these guidelines, one can quickly determine by looking at the correlation coefficients listed in Table 3 that the correlations within the Happy Boomer project all fall within the low to medium effect size range, indicating that the correlations present between the variables are not necessarily easy to observe. In other words, while it is safe to assume that positive affect, negative affect, and feeling of belonging each influence life satisfaction, the strength of the influence is not easily observable, nor is it clear whether one has more influence on life satisfaction than another. That is, one cannot visually watch how positive affect does or does not influence life satisfaction. Thus effect size allows one to understand the influence of positive affect on life satisfaction in a quantified manner.

Discussion

The purpose of this study was to understand how levels of life satisfaction can be predicted by the independent variables of positive affect, negative affect, and feeling of belonging for individuals aged 65 years and older, as measured by the Gross National Happiness Index Survey (GNHIS) (Happiness Alliance, 2011). Through an ordinal multiple regression analysis, the results showed that levels of life satisfaction can be predicted by the individual independent variables of positive affect, negative affect, and feeling of belonging, supporting the research hypothesis. Furthermore, it was found that positive affect has the strongest predictive association with levels of life satisfaction, followed by negative affect and feeling of belonging. The results also show that gender is not predictive of levels of life satisfaction.

No previous research has been found that compares the predictive powers of positive affect, negative affect, and feeling of belonging on levels of life satisfaction from the same sample of older adults. Thus the Happy Boomer project is unique in design, analysis and results because it demonstrates that while both feeling of belonging and affect have predictive properties on levels of life satisfaction, affect (both positive and negative) appears to be a better predictor than feeling of belonging for individuals ages 65 years and older. This finding strengthens the SES theory of aging and life satisfaction while also offering explanation for the well-being paradox which is the phenomenon of older adults maintaining or even increasing feelings of life satisfaction despite losses associated with aging.

Early theories of life satisfaction (classical versus essentialist) have not been able to sufficiently explain the well-being paradox. A more recent theory, the SES theory

(Carstensen, 1995) offers an alternative explanation. The SES theory posits that due to the awareness of limited time, older adults focus less on information seeking and building self-concept and more on emotional regulation. Emotional regulation consists of the stability of positive affect with a decline in negative affect (Charles, Mather, & Carstensen, 2003). Furthermore, SES theory holds that older adults achieve this emotional regulation by surrounding themselves with close personal relationships which inherently contain the presence of positive affect and feeling of belonging (Carstensen, 1995; Carstensen et al., 2003). In support of the SES theory, the Happy Boomer project offers explanation for the well-being paradox by revealing that the experience of positive affect is associated with levels of life satisfaction more so than the experience of negative affect as seen through ordinal regression analysis resulting in positive affect proving to be the strongest predictor of life satisfaction when compared with negative affect and feeling of belonging.

When compared to other research exploring life satisfaction with older adults, the results of the Happy Boomer project supports the results of Young et al. (2004) in that feeling of belonging had a positive effect on life satisfaction. However, Young et al. utilized a much larger sample (N = 9,445) and focused on women aged 73–78. Whereas a study conducted by Oh et al. (2014) found different results. The Oh et al. study included all the constructs analyzed in the Happy Boomer project but found sense of community to have the strongest positive correlation to life satisfaction, followed by positive affect and negative affect. These different results between Oh et al. and the Happy Boomer project may be due to differences in sample size, methodology and a more comprehensive measure of sense of community. The Happy Boomer project included 1,268 participants

ages 65-101 in the analysis whereas Oh et al. had a sample size of only 339 with a much larger age range of 18-81 with a median age of 23. Furthermore, Oh et al. measured sense of community through 9 individual questions whereas the Happy Boomer project measured feeling of belonging through only 1 question. These differences in design could contribute to the differing results.

The Happy Boomer project also supports the previous findings that positive and negative affect are independent of each other (Diener & Emmons, 1984; Watson et al. 1988). That is, the presence of positive affect does not necessarily indicate the absence of negative affect. The Happy Boomer project takes it a step further and demonstrates that while these variables are independent of each other, one has more predictive properties than the other concerning levels of life satisfaction, a finding similar to that of Kuppens et al. (2008). In their research, Kuppens et al. demonstrated that positive affect and negative affect contributed independently to life satisfaction and that positive affect had more impact on life satisfaction than negative affect. While both the Happy Boomer project and Kuppens et al. measured life satisfaction in a cumulative way, the interpretation of results differed. Unlike the Happy Boomer project, Kuppens et al. interpreted their results through a cultural lens exploring how the influence of affect, whether positive or negative varied based on whether participants were from an individualistic or collectivist society. Indeed the authors found that while positive affect and negative affect influence life satisfaction independently, the amount of influence varied depending on their relevance to life satisfaction for different cultures. The Happy Boomer project did not include a cultural component in the analysis.

Additionally, the Happy Boomer project supports previous research linking feeling of belonging with levels of life satisfaction. For instance, Davidson and Cotter (1991) found that sense of community has a strong positive correlation with subjective well-being. Both the Happy Boomer project and the Davidson and Cotter research conceptualized the evaluation of life satisfaction cumulatively and had similar sample sizes with Davidson and Cotter surveying 992 participants while the Happy Boomer project had N =1,268. However, unlike the Davidson and Cotter research, the Happy Boomer project focused on adults ages 65 and older whereas Davidson and Cotter's sample included all adults over the age of 18.

Limitations

Several limitations impede the generalizability of this study. Firstly, the participants were recruited through word of mouth and leadership trainings. This type of sampling is considered convenience sampling which is at risk for being biased and not representative of the general population (Kitchenham & Pfleeger, 2002). Indeed, when compared to the Baby Boomer generation as a whole, the sample used in the Happy Boomer project is skewed particularly in representing race. As of 2010, Non-Hispanic/Whites made up 76% of the Baby Boomer generation (U.S. Census Bureau, 2010), whereas the sample used in this project Non-Hispanic/Whites make up 91.92%.

Furthermore, self-report measures contain limitations such as social desirability and question phrasing (Fadnes, Taube, & Tylleskar, 2009). Social desirability can have three different manifestations: reporting incorrect information, omitting information, or altering the magnitude of the reported information due to the fear that information will be

revealed publicly. Question phrasing can also alter responses due to the fact that respondents often consider the context of the question. In other words, knowing the questions on the Gross National Happiness Index Scale (GNHIS) (Happiness Alliance, 2011) measure happiness, respondents may attempt to exaggerate positive responses and/or mitigate negative ones.

Recommendations for the Future

Considering the results of the Happy Boomer project, researchers, social service providers, health professionals and public officials interested in improving the life satisfaction of Baby Boomers are urged to focus on initiatives that can increase the presence of positive affect while also decreasing the presence of negative affect. Such initiatives could also include increasing the presence of feeling of belonging that could potentially have a cumulative impact on levels of life satisfaction when combining it with increased positive affect. While the Happy Boomer project did not explore the cumulative impact of feeling of belonging and positive affect on life satisfaction, it could be inferred that the two could have a greater impact than either one could alone. Future research into this may help illuminate whether or not this is the case. Future research could also add to the findings of the Happy Boomer project by taking a longitudinal approach to understanding how increasing positive affect while decreasing negative affect contributes to life satisfaction over time.

As suggested by the Happiness Alliance (n.d.) positive affect can be increased through practicing mindfulness, gratitude, and generosity. Previous research has also found that positive affect can be increased through spending time in nature as demonstrated in a study by MacKerron and Mourato, (2013). In their study, the

researchers found that on average, positive affect was improved when participants were outdoors in all green or natural environments. Positive reminiscing has also been found to be helpful in increasing positive affect as demonstrated by Bryant, Smart, and King, (2005). Bryant et al. found that between three groups of participants, those who participated in reminiscing about positive events only experienced a greater increase of positive affect throughout the week following the reminiscing group than those who reminisced about either positive, negative, or neutral events.

While focusing on activities to increase positive affect is important, the results of the Happy Boomer project suggest that decreasing negative affect can also have an impact on life satisfaction. Interestingly, as the Happiness Alliance (n.d.) recommended mindfulness to increase positive affect, it has also been shown to reduce negative affect as demonstrated by Gregoire and Lachance (2015). In their study, the researchers found that individuals (N = 43) who listened to two short guided meditations at two separate times during the day showed a decrease in psychological distress and an increase in mindfulness as measured through a self-report questionnaire. Thus it could be inferred that by increasing mindfulness, negative affect might be decreased with improved life satisfaction as a byproduct. Negative affect can also be decreased by avoiding people who are often angry or discouraging and seeking out people who are supportive and positive (Costanza, Derlega, & Winstead, 1988).

Finally, ways to increase feeling of belonging include joining groups who share similar interests such as reading, music, movies, hobbies etc. These groups are effective whether they are in a close geographic location or if they interact virtually. (Farrell et al., 2004; M. R. Lee, Yen, & Hsiao, 2014).

In addition, future research should examine whether positive affect has greater association with levels of life satisfaction than objective variables such as income or living condition for the same sample. It would also be beneficial to understand any cultural differences in the roles of positive affect, negative affect, and feeling of belonging as they impact life satisfaction. Finally, correlations among the variables indicated that gender was significantly correlated only with feeling of belonging and negative affect, but was not significantly correlated with life satisfaction or positive affect. Further research exploring these differences may help illuminate different methods for improving life satisfaction for men and women.

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Appendix A

Correspondence to use Happiness Alliance data

Correspondence to use Happiness Alliance data

Ms. Musikanski,

I am a graduate student at Antioch University in Seattle and was told your organization (The Happiness Initiative) has much data that could be available for a dissertation project. Please let me know if this is still the case how I might go about accessing some of this data.

Thank you for your time,

Brooke Massey, MA, LMHCA
Antioch University Seattle

Hi Brooke

We do provide our data to researchers with a signed data protection agreement (I will send this to you via email), and with an understanding you will correctly site us and share findings once they are ready for the public so we can get the word out. We also ask for a brief description of how you will use the data, again, so we can get the word out.

Does all of this sound like it would work for you? Happy to have a conversation with you, if you like.

Very best,

Laura

Laura Musikanski, JD, MBA
Executive Director
Happiness Initiative
[redacted] |www.happycounts.org

Appendix B

Happiness Data Privacy and Protection Agreement

Happiness Data Privacy and Protection Agreement

Collateral Agreement Between Parties Happiness Initiative, Seattle WA and Brooke Massey, by evidence of my signature or my identity via E-mail communication,

I represent that I am authorized to enter into this agreement on behalf of myself. I hereby agree that information provided to me by the other parties to this agreement will be treated as valuable, confidential and proprietary and that in the course of use of the materials I will hold such information in strict confidence during and after completion of this agreement unless otherwise agreed to in writing by the other parties. I will dispose of the data when it is not longer needed for the purposes of my research. With requisite permission granted, use of the work product of one or both of the other parties shall be acknowledged or credited in any release or communication consistent with basic standards of academic practice.

Brooke Massey, MA, LMHCA
Antioch University Seattle
[redacted]

Appendix C

Permissions Not Required

Permissions Not Required

Permission is Not Required for the Following:

- A maximum of three figures or tables from a journal article or book chapter
- Single text extracts of less than 400 words
- Series of text extracts that total less than 800 words

No formal requests to APA or the author are required for the items in this clause.