2020

The Influence of Baby Boomers' Perceptions of Well-Being on Their Preference in Post-retirement Residential Alternatives as Moderated by Their Affinity for Technology

Eric J. Emerson
Rollins College, eemerson@rollins.edu

THE INFLUENCE OF BABY BOOMERS' PERCEPTIONS OF WELL-BEING ON THEIR PREFERENCE IN POST-RETIREMENT RESIDENTIAL ALTERNATIVES AS MODERATED BY THEIR AFFINITY FOR TECHNOLOGY

By

Eric J. Emerson

Dissertation

Presented in Partial Fulfillment of Requirements for the

Degree of

Executive Doctor of Business Administration

in the

Crummer Graduate School of Business, Rollins College

2020

Signature Page

Dissertation Defense: September 2, 2020

DBA Candidate: Eric J. Emerson

The content and format of the dissertation are appropriate and acceptable for the awarding of the degree of Doctor of Business Administration

Committee Chair

Dr. Robert C. Ford, Ph.D.: _____

Committee Second

Dr. Koray Simsek, Ph.D.: _____

Acknowledgments

This research study and accompanying manuscript is a result of the guidance, input, and support of: Dr. Robert C. Ford (Chair), Dr. Koray Simsek (Second), Dr. Mark Johnston (Reader), Dr. Greg Marshall (Academic Director), Dr. Shalini Gopalkrishnan (Statistics Advisor) and Mr. Christopher Posey (Writing Professional). In addition, I would like to acknowledge colleagues and friends who have participated in this scholarship process. Lastly, the insights and wisdom of my Father, Jim, into the retirement housing industry, continue to prove invaluable, both academically and professionally.

Abstract

This study was premised on the idea that baby boomers, like anyone else, desire to maximize their well-being. That is, they seek situations that provide positive emotion, engagement, relationships, meaning and accomplishment (PERMA) which determine their personal appraisal of well-being based on both objective and subjective measures.

Thus, the purpose of the research was to identify the most important PERMA elements of well-being that the baby boomer cohort who have decided to retire but have not yet done so (i.e. pre-retirees), seek in their preferred post-retirement residential alternative. Moreover, this study investigates the degree to which this group sees that choice being influenced by their affinity for technology.

The data for this correlational study was collected through a survey instrument administered to respondents electronically. The responses were analyzed utilizing logistic regression to generate research findings and implications.

The results of this study suggest there is a relationship between the PERMA elements of well-being, singly and collectively, and the preferred post-retirement residential alternative. Further, when considering the impact of affinity for technology on these two variables, the hypothesis of moderation was not significant.

Future research in these two areas is warranted as technological innovations continue to impact the delivery of the elements of well-being, and as baby boomers move through their retirement years, to consider the potential impact on their preferred post-retirement alternatives.

Keywords: well-being, SWB, PERMA, baby boomers, affinity for technology, preferred post-retirement residential alternative.

Table of Contents

List of Tables

Table Page

List of Figures

Figure Page

CHAPTER 1 – INTRODUCTION

As the United States' population ages, there is increasing concern as to how to provide the growing number of retirees with those factors that meet their physical, emotional, and social needs and influence their well-being. The U.S. shares this demographic trend with other developed countries that also have aging populations with disposable income to consider residential alternatives to the traditional aging-in-place approach. Most retirees still simply desire to live in their own homes for as long as possible, health permitting (Bockerman, Johansson, & Sarrni, 2012). According to the *National Council on Aging* (2012), nine out of ten seniors (defined as those over 60) plan to continue living in their current home for the next five to ten years. A second increasingly attractive option, however, is to move into one of the many types of retirement communities where seniors can choose to live independently while having access to varying degrees of services that support their needs and provide for their desired level of well-being. The spectrum of these alternatives ranges from retirement communities that offer active adult (55+), senior apartments, and /or congregate care (independent living, assisted living, and memory care) to nursing homes with medical services. Some facilities include all these alternatives to accommodate the aging process. In a recent survey of more than 1,000 older adults and their influencers (e.g., adult children), 54% of those responding indicated that they prefer the term "retirement community" when referring to organizations providing housing and

services for the aging compared with other naming conventions (Zion, Gardea, Jurgens, & Hollman, 2019). Thus, based on this study, the terminology "retirement communities" will be used generically throughout about organized establishments available for residential senior care.

The challenge for retirement communities has been to identify and deliver those things that matter most to those who are looking for and can afford their services. Whether these options provide low-cost alternatives to aging-in-place or full-service experiences for those desiring to enhance their aging years, those offering retirement community options have identified what they feel are key factors and influences that should be important to various market segments whose members are considering retirement community alternatives to fulfill their well-being during their post-retirement years. However, despite the volume of published research (Lindert, Bain, Kubzanksky, & Stein, 2010; George, 2009; Hettler 1976) seeking to identify the key factors that lead to well-being in this demographic, there is surprisingly little known about exactly what seniors entering retirement want and value in their pursuit of well-being. The *American Senior Housing Association,* for example, utilizes a six-dimension model to define the components of well-being based on work originally done by Hettler (1976) which encompasses physical, social, emotional, occupational, intellectual, and spiritual components. Likewise, the *World Health Organization* suggested that affect, social relations, life satisfaction, physical health, meaning/achievement, and spirituality are all important factors defining well-being as people age (Lindert, Bain, Kubzanksky, & Stein, 2010). George (2009), based on her research, found more than 50 variables that have been empirically tested as being influential to a person's sense of well-being. Based on these debates on the important elements of well-being, this study seeks to examine those most important to baby boomers.

Much of the early research seeking to identify these factors based their research on the concept of psychological well-being developed by Ryff (1989) which defined it simply as the avoidance of unhappiness. While this seemed reasonable, it failed to generate much theoretical or empirical support from other scholars. The more recent and related construct of subjective well-being (SWB), defined as a multi-dimensional concept that includes both cognitive and emotional components (Diener, 1984; Pavot & Diener, 2008; Diener & Ryan, 2009) has become the more widely accepted explanation of well-being used by researchers. This broader definition includes an assessment of the degree to which people are content, satisfied, or happy with life, whether at present, or over a lifetime.

The research suggests that there are many factors contributing to well-being, including several non-health related components. By way of example, Van Malderen, Mets, and Gorus (2013) suggest influences such as behaviors, personal factors, physical and social environments, and economics can contribute to an enhanced quality of life and well-being and also play key roles in the active aging process. In its *State of Well-Being Rankings for Older Americans* (those over 55), Gallup-Healthways (2015) includes factors such as purpose, social, financial, community, and physical as five elements this organization has identified as crucial to well-being. Clearly, there are numerous potential variables, unique to individual preferences, which can be included in a definition of a person's sense of well-being, and this study intends to determine if there is consensus among these numerous variables utilizing the five elements of the PERMA model; positive emotion, engagement, relationships, meaning, and accomplishment.

Study Purpose

While it is difficult to argue with the goal of providing baby boomers with an optimal sense of well-being in retirement, perhaps the most important reason to study well-being is that

high levels of well-being contribute to people's good health and effective functioning (Diener, 2012; De Neve, Diener, Tay, & Xuerb, 2013). This study is premised on the idea that aging baby boomers, like anyone else, inherently desire to experience a sense of well-being. Therefore, they seek experiences, social settings, engagement opportunities, and health solutions which contribute to their individually perceived sense of well-being which in some combination ultimately influences their preferred post-retirement residential alternative.

Those considering retirement have many different sets of expectations in terms of what factors they seek to provide for their well-being and how what they seek is delivered by different residential alternatives. This study focuses on the challenges facing retirement communities as they attempt to identify and deliver those factors that this demographic perceives as important to fulfill their well-being in the midst of a technological revolution which is changing the way retirees consider their many options. While *The Wall Street Journal* recently reported aging-in-place advocates think an affinity for technology will make it easier for seniors who age-in-place to remain independent longer (Grant, 2019), the same article reports the belief of retirement community providers that their housing alternatives offer well-being solutions that cannot be replaced by technology (e.g. human interaction and engagement).

Since the largest current portion of this senior segment is the baby boomer generation, those born between 1946 and 1964 (Russell, 1982), the study focuses specifically on this group, and more specifically, the pre-retirement segment (age range 62-74). The reason for focusing on this segment is to better understand the elements of well-being most important to them as they are the group most likely to be contemplating how to fulfill their needs and achieve well-being through their choice of a post-retirement residential alternative. According to The National Center for Health Statistics, the average American life expectancy is 79 (Murphy, Xu, Kochanek,

& Arias, 2018). As a result, baby boomers (oldest are age 74) are now a key target market for retirement community providers.

Although the population of the baby boomer era will obviously decline over time, their rate of entry into the post-retiree sector presents both a tremendous current opportunity and challenge for retirement community providers to deliver products and services that fulfill a sense of perceived well-being. Thus, the purpose of this study is to identify the most important elements of well-being that the baby boomer cohort who have decided to retire but have not yet done so (i.e. pre-retirees), seek in order to achieve their desired levels of well-being in their preferred post-retirement residential alternative. Moreover, this study will investigate the degree to which this group sees that choice being influenced by their affinity for technology.

The "baby boomer" generation is generally defined as those aged 56 to 74 named to reflect the substantial increase in birth-rates in the post-World War II era (Hogan, Perez & Bell, 2008). Now more than 50 years later, the aging baby boomer cohort represents a "silver tsunami" (Maples, 2002), describing the phenomenon of the doubling of the over 65 population during the next 25 years. This is the key market segment of who is the current primary demand driver for retirement communities. The baby boomers began turning 65 in 2011 and the characteristics of this population will likely influence the characteristics of societal aging as the generation continues to move into retirement. By 2030, the entire baby boomer cohort will be over 65 representing over 20 percent of the U.S. population (Colby & Ortman, 2014).

Based on the 2010 census, the U.S. Census Bureau projects that by the milestone year of 2030, the number of Americans over the age of 65 will surpass the number of Americans under the age of 18 with estimates of 78 million and 76.7 million within each cohort respectively (U.S. Census Bureau, 2012a) - see Appendix A. Not only are people living longer due to increased

health and nutrition, but this population of baby boomers has the technological knowledge to find new ways to meet their needs and maximize their well-being as they age. The impact of this generation's choices on where and how-to age cannot be ignored by those concerned with their living preferences in retirement but must be understood and prepared for by retirement communities.

Research Questions

The research questions this study seeks to address are:

- *"Which well-being elements, singularly or in combination, influence baby boomers' preferred post-retirement residential alternative?"*
- *"Does baby boomers' affinity for technology moderate how the well-being elements, singularly or in combination, influence their preferred post-retirement residential alternative?"*

Definition of Study Variables

1. Well-Being – the five elements of PERMA comprising a sense of well-being (IV).
2. Affinity for Technology – willingness to utilize automated methods in the fulfillment of services that support well-being (Moderating IV).
3. Preferred Post-Retirement Residential Alternative – aging-in-place or residing in a retirement community (DV).

Theoretical Basis

While its eudaimonic and hedonic roots date back to the days of Aristotle, until the field of positive psychology became more widely studied, very little theoretically based research was done on the domain of well-being (Seligman, 2011). Within its broad context, in perhaps the seminal article related to the topic, Diener (1984) defined well-being to encompass "happiness, life satisfaction and positive affect" (p. 542). Therefore, well-being is appropriate as a formative

latent variable for assessing the baby boomer cohorts' preference toward their preferred post-retirement residential alternative as it relies on multi-dimensional individual determinants.

Through his more recent extensive work around well-being outlined in his book *Flourish*, Seligman (2011) suggests The Well-Being Theory is "a theory of uncoerced choice of what people want for their own sake" (p. 16). To assess the construct, he proposes five measurable elements:

1. Positive emotion – "the pleasant life."
2. Engagement – "absorbed in activity."
3. Relationships – "positive relationships with others."
4. Meaning – "something bigger than yourself."
5. Accomplishment – "achievement for its own sake".

The five elements above are referred to by acronym as "PERMA." Collectively, the five PERMA elements, measured with their related sub-domains, combine to form a measure of well-being. In other words, the five individual PERMA elements collectively define well-being and are the theoretical basis of this paper.

To better illustrate how the PERMA elements serve as the building blocks of well-being, Seligman (2011) offers the following criterion and explanation:

The five elements of Well-Being Theory must each have the following properties:

1. Contributes to well-being.
2. Have people pursue each PERMA element for its own sake, not merely to get any of the other elements.
3. Each is defined and measured independently of the other elements (exclusivity). (p. 16)

Within each of the elements there may be various subjective sub-domains defining what makes up each PERMA element. Sub-domains for each of the PERMA elements include:

1. Positive emotion: valence and arousal for positive emotion.
2. Engagement: absorption, interest, and involvement.
3. Relationships: connection with others, satisfaction, and giving/receiving support.
4. Meaning: sense of direction, transcendence, and sense of value/worth.
5. Accomplishment: self-efficacy, sense of accomplishment, and the achievement of personal goals. (Butler & Kern, 2016, p. 5)

Since Seligman's introduction in 2011, PERMA has become the most widely researched theory of well-being as it is multi-dimensional and measurable. Many studies (Sun, Kauffman, & Smillie, 2018; Butler & Kern, 2016; Kun, Balogh, & Krasz, 2016; Kern, Waters, Alder, & White, 2015; Asebedo & Seay, 2014; Slavin, Schindler, Chibnall, Fendell, & Shoss, 2012) have utilized PERMA elements as the theoretical bases from which to assess well-being for numerous divergent cohorts in explaining the relationship to varying dependent variables. Therefore, the five PERMA elements are utilized in this study to assess the baby boomer cohort's preferences as to which of the components they perceive to be most influential in their choice of post-retirement residential alternative.

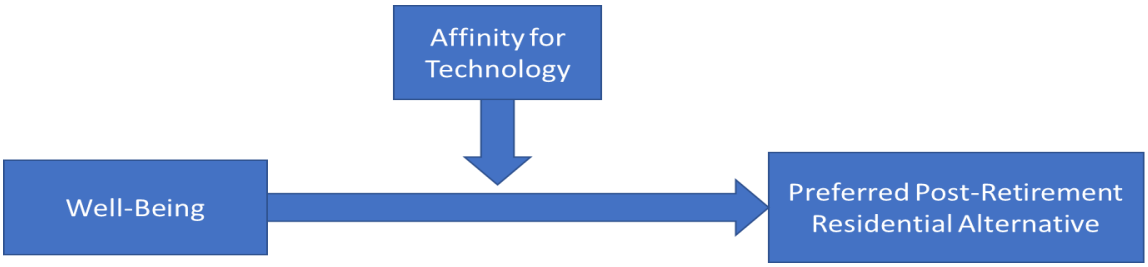


Figure 1. Conceptual Model

The conceptual model is designed to represent the influence of the elements of well-being (PERMA) on baby boomers' preferred post-retirement residential alternative. The impact of the

PERMA elements of well-being on the preferred post-retirement alternative will be measured individually and collectively to determine potential correlational relationships. Previous studies (Evans, Kantrowitz, & Eshelman, 2002; Oswald et al., 2007; Sixsmith et al., 2014; Herbers & Mulder, 2017) have asserted a relationship between both housing quality and housing tenure and SWB amongst older adults. This is based on the Ecological Theory on Aging (Lawton & Nahemow, 1973) which is based on one's adaptation to their current environment during the aging process and normal life cycle, thus influencing their preferred residential alternative.

Further, the potential effect, if any, of baby boomers' affinity for technology (AFT) will be measured to determine whether AFT moderates a baby boomer's preference in the post-retirement residential alternative as they consider the elements of well-being. The theoretical basis of affinity for technology is based on the need for cognition (Cacioppo & Petty, 1982), in their work (Lorenz-Huber, Boiutain, Camp, Shanakar, & Connely, 2011) noted research is lacking in areas addressing the convergence of aging, technology, and the home. While much of the prior work (Tomita, Mann, Stanton, Tomita, & Sundar, 2007; Beach et al., 2008) has been driven by providing utility through technology rather than fulfilling well-being (Hough, 2004), developing a framework to better assess home-based technologies for older adults is needed (Lorenz-Huber et al., 2011).

Contributions to Research

The aim of this study is to provide insights into the elements of well-being that matter most to the baby boomer cohort as they enter their retirement years and how these will influence their preference of post-retirement residential alternatives. Measuring the PERMA elements individually and collectively for this population has not been studied extensively utilizing quantitative methods. This study responds to the call by Nieboer and Cramm (2018) who

concluded from their research that more studies using valid and reliable methods for well-being assessment amongst older populations are needed to assess overall well-being and life satisfaction.

Further, this study includes an investigation into the moderating effect of baby boomers' affinity for technology on the influence of the PERMA elements of well-being on the preference of their post-retirement residential alternative. Including this recognition of technology will add new information about the importance of this factor on well-being especially as it pertains to seniors. This contributes to the body of knowledge as innovations continue to impact seniors' well-being and their life choices in retirement. Findings from this research will be of importance to retirement community providers to help them better understand what elements of well-being are most influential to those entering retirement, and whether incremental investment in technological innovation is an important factor when baby boomers are choosing to age-in-place or reside in a retirement community.

CHAPTER 2 – LITERATURE REVIEW

The review of the literature focuses on the construct of well-being in aging, specifically for baby boomers transitioning into retirement, to determine its influence on their preferred post-retirement residential alternative as well as the potential impact of the affinity for technology. To do so, the evolution of the measures of Well-Being Theory research, including the elements of PERMA, along with subjective well-being (SWB), one's personal assessment of well-being, and the affinity for technology will be reviewed with other empirical and qualitative studies undertaken within the domain to determine what research value can be added to the body of knowledge. In addition, the various post-retirement residential alternatives available to the pre-retirement baby boomers in their post-retirement years will be summarized, along with research investigating the trade-offs that might be made to balance well-being in retirement between affinity for technology and the need for human interaction.

Well-Being

The complex construct of well-being is often associated with achieving happiness. Conversely, it also includes the avoidance of unhappiness or displeasure. Combined, the pursuit of these two outcomes are referred to as the hedonic approach to well-being, that is, the pursuit of pleasure and the avoidance of displeasure or pain (Wilson, 1967; Kahneman, Diener, & Schwartz, 1999). The steep increase in research into well-being has been accompanied by

increased confusion in the definitions used. This vagueness exists both in the number of terms used to describe it (e.g., happiness, SWB, hedonic well-being, life satisfaction, psychological well-being, etc.) as well as in the identification of the different components that comprise the definition (Jayawickreme, Foregard & Seligman, 2012). The pursuit of well-being within the context of this study is concerned with the degree to which well-being is fulfilled and the extent to which an individual is perceived to be functioning overall, both subjectively and objectively as both perspectives are components of overall well-being (Ryff 1989; Ryan & Deci, 2001).

Subjective Well-Being (SWB)

In comparison to the general term of well-being, SWB represents how individuals perceive their own sense of well-being as they assess their happiness with life. It is a perceptual concept based on the premise that only the person him or herself can define what it means to be happy or unhappy (i.e. it is subjective). In his groundbreaking work, *Correlates of Avowed Happiness*, Wilson (1967) offered happiness as a broad definition of SWB and concluded there had been little theoretical work supporting SWB. As a result, more than 700 articles on SWB were authored attempting to build theoretical support, culminating in Diener's (1984) article, *Subjective Well-Being*. Diener's (1984) tripartite model is comprised of life satisfaction, positive affect, and negative affect. Diener's (1984) model led many studies to test it by using an operationalization of the three parts in the Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larson, & Griffin, 1985) that would yield a valid measure of an individual's perception of well-being (i.e. SWB). This measure led to the development of other multi-dimensional scales to measure the "how and why" of SWB. While earlier scales measuring well-being had focused only on measuring the single factor of happiness, researchers exploring the

SWB construct (e.g., Kahneman & Krueger 2006; Douma, Steverink, Hutter, & Meijering, 2017) now investigated well-being as a multiple dimensional construct with numerous variables.

As SWB is a key determinant of quality of life, its measurement is crucial to understanding how to improve people's lives over time (Diener & Ryan, 2009). There are undoubtedly multiple ways to attain high levels of SWB as one ages. Knowledge of those ways is important for understanding what factors people seek to satisfy their needs and fulfill their well-being in the residential alternatives they seek after retirement (George, 2009). Further, since SWB is focused on personal subjective beliefs, it also captures the non-health related elements of well-being that are more difficult to observe and measure (Bockerman et al., 2012).

Because of its widespread acceptance by researchers, a key decision in this study is to use the Well-Being Theory (Seligman, 2011) to assess the well-being of baby boomers as PERMA includes elements beyond happiness and life-satisfaction (SWB) that contain both objective and subjective measures. While SWB is an important component of Well-Being Theory (as it is concerned with individual perception), the primary focus of this study is on the overall concept of well-being as determined by the five elements of PERMA which measure and contribute to it, both individually and collectively.

Because well-being is concerned with how people view themselves in terms of their own feelings and place in the world (Michaelson, Mahoney, & Schifferes, 2012) it can influence how individuals evaluate outcomes both now as well as in the future, such as post-retirement residential alternative decisions. Pavot and Diener (2008) indicated additional research into the effect of well-being on predictive behaviors and life outcomes is worthy of pursuing.

Well-Being in Retirement

As noted above, there is some evidence that well-being may change over time (Rashid & Seligman, 2018). However, there is also evidence that the elements of well-being remain stable throughout one's lifetime (Ehrhardt, Saris, & Veenhoven, 2000; Blanchfower & Oswald, 2004). Regardless of whether a person's assessment of what constitutes well-being may change with age, one of the key challenges for those who study aging is to identify the factors that contribute to that person's sense of well-being. That is, no matter what the definition of well-being is, it is important to identify the conditions that maintain and/or improve a person's sense of well-being throughout the aging process (Wisemann & Hannich, 2008). It is important then, to understand what the factors and elements contributing to fulfilling a person's sense of well-being are at any given point in their aging process, not just qualitatively, but also quantitatively (Costanza et al., 2007).

Retirement is often conceptualized as being either a negative transition accompanied by psychological distress or a positive transition accompanied by an enhanced or stable state of well-being (Kim & Moen, 2001; Pinquart & Schindler, 2007). The underlying premise of this study is that the baby boomer cohort seeks to fulfill their needs that define their sense of well-being in retirement by the choices they make including where to reside in their post-retirement years. The Well-Being Theory proposes that this is achieved through a combination of factors and is highly individualized based on PERMA, with its five underlying elements: positive emotion, engagement, relationships, meaning and accomplishment. Therefore, for pre-retirees, identifying the elements of well-being important during the aging process is a key component to fulfilling them.

Achieving one's preferred outcome of well-being is important for obtaining the positive influences well-being has on health and longevity, productivity, and positive social behavior during aging (Jan-Emmanuel et al., 2013). Thus, well-being can be achieved through both tangible and intangible attributes, such as relationships and meaning (which possess both) and are ways through which to fulfill the five contributing elements of PERMA.

PERMA Elements of Well-Being

The utilization of the PERMA elements as the building blocks of well-being in studies (Sun, Kauffman, & Smillie, 2016; Butler & Kern, 2016; Kun, Balogh, & Krasz, 2017; Kern et al., 2015; Asebedo & Seay, 2014; Slavin et al., 2012) has become more prevalent since Seligman's 2011 introduction of his Well-Being Theory.

Table 1.
PERMA Studies

Authors	**Studies**
Slavin et al.	2012 PERMA: A Model for Institutional Leadership and Culture Change
Asebedo & Seay	2014 Positive Psychological Attributes and Retirement Satisfaction
Kern et al.	2015 A multidimensional approach to measuring wellbeing in students: Application of the PERMA framework
Sun, Kauffman, & Smillie	2016 Unique Associations Between Big Five Personality Aspects and Multiple Dimensions of Well-Being
Butler & Kern	2016 The PERMA Profiler: A brief multi-dimensional measure of flourishing.
Kun, Balogh, & Krasz	2017 Development of the Work-Related Well-Being Questionnaire Based on Seligman's PERMA Model

However, some researchers (Goodman, et al., 2018) have challenged the PERMA Theory of Well-Being as to whether or not it is truly distinct from Diener's (1984) SWB definition or merely a different combination of elements as their confirmatory factor analysis work highly correlated (r = .98) SWB with PERMA.

Because the PERMA Theory of Well-Being definition and its five contributing elements can be defined and measured as separate but correlated constructs, it will be utilized for the purposes of this study. Each of the PERMA elements are outlined below with examples in previous literature of how the individual components within the PERMA framework may be relevant to the aging baby boomer cohort as they seek to fulfill well-being in retirement.

Positive emotion. Positive emotion generally refers to happiness. For older adults, this sense of happiness seems to work in part by increasing their perceptions of support from their network of friends and family. An important issue that is receiving increased attention is how well-being and positive emotions can influence life outcomes (Jan-Emmanuel, et al., 2013). In a large representative sample of elderly people, Steptoe and Wardle (2011) found in a five-year longitudinal study, that higher levels of positive affect were significantly associated with a higher probability of longevity among seniors, increasing it by as high as 35%. Further, Wurm and Benyamini (2014) concluded that positive emotions and optimism may help positively moderate the negative and potentially harmful aspects of aging among the older population (mean study age of 62). As evidenced in their groundbreaking longitudinal research *The Nun Study* (Snowden et al., 1997), a growing body of literature has shown positive and negative emotion-related attitudes and states to be associated with physical health, mental health, and longevity (Danner, Snowden, & Friesen, 2001).

Optimism seems to work in part by increasing older adults' perceptions of support from friends and family and this can lead to increased happiness. In their study of the positive aspects of well-being in older adults, Ferguson and Goodwin (2010) conceptualized that optimism leads to positive affect which they also correlate with a sense of purpose in life (or meaning, also a PERMA element). While the results of much of this research support the benefits of positive emotion, prior works addressing optimism and well-being have been performed through long-term studies. Testing the importance of the positive emotion (P) element of PERMA on the baby boomer cohort on a short-term time horizon should provide new insights into the domain as optimism may prove influential on forthcoming decisions regarding a particular preference in the post-retirement residential alternative.

Based on this body of research, the following hypothesis is proposed regarding the positive emotion element of well-being:

H1a: *Baby boomers' perception of the importance of the positive "P" emotion element of well-being will influence their preferred post-retirement residential alternative.*

Engagement. Engagement is defined as being absorbed, interested, and involved in life's activities and life in general (Sun, Kauffman, & Smillie, 2017). Engagement has been found to be an important component of successful aging (Ryff, Heller, Schaefer, Van Reekum & Davidson, 2016; Rowe & Kahn, 1987). However, few studies (e.g., Lodi-Smith & Roberts, 2012; Small, Dixon, McCardle & Grimm, 2012) have measured interest in engagement activities as adults get older (other than on a longitudinal basis).

In looking at the "second-half," Carstensen, Fung, and Charles, (2003) found that as people age, emotionally meaningful connections with others may become more important than accomplishment, thus evidencing how the multi-dimensional aspect of the PERMA model is an

effective tool for assessing individual elements of well-being and their interrelationships. Hirsch et al. (2000) found in their study on social and emotional factors in eldercare technologies, that during aging it is important to not only maintain independence, but also engagement as a crucial element affecting the quality of life and well-being as one ages and balancing the two factors is necessary to fulfill well-being.

Based on this body of research, the following hypothesis is proposed regarding the engagement element of well-being:

H1b: *Baby boomers' perception of the importance of the engagement "E" element of well-being will influence their preferred post-retirement residential alternative.*

Relationships. Relationships within the context of PERMA well-being simply entail fulfilling involvement with other people. Positive relationships with others have been found to be a key dimension of happiness and a more guided sense of purpose in life (Ryff, 1989). Positive relationships and interaction with others yield feelings of love, support, and satisfaction (Sun, Kauffman, & Smillie, 2018). This may be of even greater importance as age increases since meaningful social relationships, in both quality and quantity, represent a major opportunity to enhance well-being and the quality of life, which may result in increased longevity (Holt-Lundstad, Smith, & Layton, 2010). In their meta-analysis on *Social Relationships and Mortality Risk*, the researchers reviewed data across more than 300,000 individuals, tracked for an average of seven-plus years, which indicated that those with positive social relationships had a 50% greater likelihood of longer-term sustainability (lower mortality risk) compared to those with poor or inadequate social relationships (Holt-Lundstad, Smith, & Layton, 2010).

A key word search (Tay, Tan, Diener, & Gonzalez, 2012) of over 18,000 articles published on social relationships and health in the past decade alone, found growing interest in

the areas of isolation, loneliness, and health. After synthesizing 146 of these articles within their literature review on the basis of social support, social integration, and social networks, Tay et al. (2012) found only 50 articles directly related to social connectedness and mortality which indicated that social support was positively and significantly correlated with overall health and well-being.

Based on this body of research, the following hypothesis is proposed regarding the relationship element of well-being:

H1c: *Baby boomers' perception of the importance of the relationship "R" element of well-being will influence their preferred post-retirement residential alternative.*

Meaning. Meaning encompasses having a sense of direction and purpose in life, or a connection to something greater than oneself (Steger, 2012). It is also highly correlated with sense of purpose, which can often be diminished initially in retirement, as discontinuing work can erode meaning and create psychological distress, thus impacting well-being (Asebedo & Seay, 2014). In a meta-analysis from 70 studies on determinants of purpose of life in middle- and old-age, Pinquart (2002) found that purpose in life had a strong association with social integration (engagement) and relational quality (both elements of PERMA). Further the study (Pinquart, 2007), indicated higher overall competence (well-being) counteracting declines in purpose with aging.

Through fostering a sense that they have some control over their environment in retirement, a sense of purpose and meaning can be garnered for the senior cohort, which is vital to their well-being (Ferguson & Goodwin, 2010). As introduced with the conceptual model in Chapter 1, environmental adaptation can be a key influencer in the post-retirement residential alternative. While important in aging, research (Lightsey, 2006) has shown that meaning is an

important element that begins in youth and develops over a lifetime illustrating the value of PERMA as it can be measured at different points in time to discern potential changes throughout the aging process.

Based on this body of research, the following hypothesis is proposed regarding the meaning element of well-being:

H1d: *Baby boomers' perception of the importance of the meaning "M" element of well-being will influence their preferred post-retirement residential alternative.*

Accomplishment. Accomplishment is the fifth and final element of PERMA and encompasses the pursuit of success, mastery, winning, realization of goals, and achievement (Asebedo & Seay, 2014). From a subjective perspective, accomplishment involves a sense of working toward and reaching personal objectives and having the self-efficacy to complete tasks (Butler & Kern, 2016). In a study surveying more than 700 MTurk participants (Sun, Kauffman, & Smillie, 2018), respondents were asked to compare personality traits with PERMA well-being. The researchers found that making progress toward attainment of goals and internal competence (i.e. the accomplishment element of PERMA) was essential to fulfilling well-being. Since accomplishment is an element of well-being, baby boomers' perceptions of sense of accomplishment may likely be reflective of their post-retirement preferences in their post-retirement residential alternative.

Based on this body of research, the following hypothesis is proposed regarding the meaning element of well-being:

H1e: *Baby boomers' perception of the importance of the accomplishment "A" element of well-being will influence their preferred post-retirement residential alternative.*

PERMA Based Studies

For purposes of this study, the focus is on the PERMA elements comprising well-being specifically for the baby boomer cohort. Other studies have utilized PERMA to predict well-being and strengthened support for validity and reliability in its measurement. While these applications of PERMA are also endorsements of its theoretical grounding, they also conclude that there are still many opportunities to expand the study of PERMA to other domains, constructs, and variables that have not yet been studied such as how and where retirees seek to spend their post-retirement years

As an example, and perhaps most like this study, is the 2014 research by Asebedo and Seay who sought to assess well-being by measuring *Positive Psychological Attributes in Retirement Satisfaction*. The authors found PERMA elements influential to well-being amongst seniors (those over 50) leading to satisfaction in retirement utilizing separate unique measures (rather than Butler & Kern, 2016) to assess the impact of each PERMA element on satisfaction in retirement. The hypotheses were predicated on correlating positive fulfillment of PERMA well-being with retirement satisfaction, and concluded the elements were an effective means through which to do so.

Another recent study of relevance (Kun, Balogh, & Krasz, 2017), presents a *Work-Related Well-Being Questionnaire* based upon the PERMA model (Seligman, 2011). Perhaps its key finding, using confirmatory factor analysis, was that (in this case, employees). Although their study was specific to a workplace setting, it offers some results of interest to this study as it proved the importance of discovering the underlying factors determining well-being for a specific cohort.

A similar application of the PERMA model was utilized by Slavin, et al. (2012) in their analysis of PERMA as a method for promoting positive cultural change within a medical environment, for working, leading, and educating. The combination of both medical and educational professional insights offers a unique perspective for the application of PERMA. While the approach undertaken is not clinical, it does address both cognitive and emotional components of well-being. Although a true study was not performed, collaboration was undertaken utilizing PERMA as a framework to develop specific guiding principles based on each of the PERMA elements to promote well-being in an institutional environment among, students, providers, and leaders. This approach can be used as an interesting example for retirement communities, to not only seek opportunities to maximize the well-being of their residents, but for seeking ways for all those involved in its fulfillment to "flourish" as well.

The PERMA study undertaken by Kern et al. (2015) is unique for several reasons. First, Dr. Margaret Kern, as a student of Dr. Martin Seligman at the University of Pennsylvania, was highly involved with his research on PERMA. She later teamed with another one of his students, Julie Butler, to devise *The Perma-Profiler: A multidimensional measure of flourishing* (Butler & Kern, 2016) which was important in the development of PERMA research as it established a valid and reliable measurement tool of PERMA through questions unique to each individual element which will be utilized in this study. Second, much like the targeted baby boomer population, Kern et al.'s (2015) cross-sectional research addresses the five PERMA elements on a specific cohort (students) within a specific age range. Since this research was conducted and published prior to the validation of *The PERMA-Profiler*, a specific questionnaire was developed by a combination of scales and measures to obtain its results. Thus, the methodology involved measuring the PERMA elements as separate dimensions, similar to this study. Their findings

emphasized the importance that certain PERMA elements may change as aging occurs within a cohort. However, the authors recognized that a possible limitation of their study was a homogeneous population from which their sample was drawn and recommended sampling from a more heterogeneous location population, that might have greater variance in the experiences that impact their personal assessments of individualized well-being.

Based on these bodies of research, the following hypothesis is proposed regarding the combined elements of well-being:

H1e: *Baby boomers' perception of the importance of the PERMA elements of well-being collectively, will influence their preferred post-retirement residential alternative*

Affinity for Technology Among Seniors

While improvements in technology offer the opportunity to improve well-being through enhanced forms of communication and services, it comes with a trade-off of the human component of providing a personal connection. Thus, gaining a better understanding of baby boomers' affinity for technology as compared to human interaction and the effect of this dichotomy on each of the PERMA elements of well-being has not been addressed in prior research. For retirement community providers, assessing the relationship among the PERMA elements, a person's willingness to substitute technology for human touch (affinity for technology), and well-being would be beneficial in determining their strategy for accommodating the preferred post-retirement residential alternatives and how that strategy can best meet the needs of their potential customers as they choose between technological and human means.

To a certain degree the retirement communities are shifting their focus to capitalize on the opportunities presented by younger seniors now moving into retirement (Kusisto, 2019).

Within this growing market of seniors there is a segment, baby boomers, who are different from the traditional group of residents choosing to reside in retirement communities. The baby boomer generation of seniors are redefining the meaning of retirement and aging as many have the health and wealth to continue leading very active lifestyles. They stay involved in their communities, and many remain employed past the age of 65 (Potkanowicz, Hartman-Stein, & Biermann, 2009). By designating the age 62 or older as pre-retirement for purposes of this study, capturing baby boomer study participants who have decided to retire, but have not yet done so, should be achievable as they are within this study population. Williamson et al. state (2006) that the baby boomers are "better educated, more technologically literate, generally wealthier than any previous generation" (p. 54). As a function of time, baby boomers are more familiar with technology than prior generations and the unique characteristics of this cohort should have a significant impact on how they view technology and what they desire in their post-retirement residential alternatives.

Carpenter-Aeby, Castro, Newsome, and Teel (2017) performed a systematic literature review of articles addressing quality of life issues important to baby boomers. After considering more than 243 articles, predominantly qualitative, the consistent thematic thread is on the elements that impact the physical, functional, psychological, and social health of baby boomers and their relationship to their quality of life (and well-being) (Carpenter-Aeby et al., 2017). Attributes related to their unique housing requirements and access to enhanced technology were also widely mentioned as needs of baby boomers seeking to achieve well-being in their aging process. While only 20 suitable articles, based on relevance and face validity, were found in the literature based on their criteria of works addressing quality of life in retirement, the primary factors impacting baby boomers' well-being were "physical health, functional health,

psychological health, social health, and financial well-being" (Carpenter-Aeby et al., 2017, p. 47). The psychological health (positive emotion) and social health components (engagement) are directly related to two of the PERMA elements.

Seniors' Preferences for Technology versus Human Interaction

Technology is being increasingly regarded as an effective means for older adults to stay positive, be engaged, relate to others, find meaning, and accomplish objectives (PERMA) leading to well-being. With its role in improving older adults' quality of life, technology is gaining increasing attention as a potential solution to some of the challenges associated with aging (Lee & Coughlin, 2015; Demiris et al., 2004; Magnusson, Hanson, & Borg, 2004). Further, baby boomers have demonstrated a willingness to pay for technologies to improve their well-being, quality of life, and independence (Schulz et al., 2014).

However, due to shortcomings in assessing older adults' lifestyles, needs, and expectations, technology is not being widely adopted or extensively utilized among the current retiree user group because of cost, connectivity, and usefulness issues (Orlov, 2019). Despite concerns and challenges regarding usability and acceptance, there are several areas in which seniors hold relatively positive views of technology and technology-related products. For instance, at a general level, 58% of seniors feel that technology has had a mostly positive effect on society, while just 4% feel that impact has been mostly negative (Anderson & Perrin, 2017).

It seems likely the baby boomer generation will be more familiar and comfortable with technological resources and their receptivity, adoption, and utilization will be much higher than that of the preceding generation because of the pervasive influence of their current usage. Some groups of seniors, such as those who are younger, more affluent, and more highly educated, already report owning and using various technologies at rates consistent with adults under the

age of 65 (Anderson & Perrin, 2017). Researchers (e.g., Essén & Östlund, 2011) note the importance of understanding the needs and requirements of older adults in the design, development, and delivery of technology.

The literature addressing how well-being elements can be effectively fulfilled through technological intervention is in its infancy. Most innovative applications of technology to date are designed to augment the human element involved in promoting well-being rather than replacing it (Topol, 2019). These technologies may enable more of the benefits of human interaction by replacing the mundane tasks with technological solutions. In their review of Davis' (1985) Technology Acceptance Model (TAM) in health-care, Holden and Karsh (2010) note, that while the pressure on increased efficiencies may warrant consideration of technological solutions in health care, new technologies will need to be proven as key facilitators of fulfill well-being to the baby boomer cohort rather than as potential barriers.

Through their research on technology and aging, Lee and Coughlin (2015) suggest the focus should not be merely on the physical aspect of innovation, but also address the services side of technological applications which deliver optimal consideration to end-users (i.e. retirees and retirement community residents) along with the offering providing a reasonable value proposition. Going forward, the focus will likely be on tech-delivered services as opposed to tech-enabled products, and opportunistic "tech-sensing" initiatives to acquire and analyze information relevant to fulfilling well-being will become more beneficial (Kark et al., 2019).

The current overall classification of technological offerings can be categorized into the following areas: enhancing communication and engagement, providing safety and security, maximizing health and wellness, and promoting learning and meaning (Orlov, 2019). Many of the solutions technology can provide are related to the PERMA elements of well-being (e.g.

engagement, relationships, meaning, and accomplishment). Studies have been done to identify older adults' needs and expectations in the context of technology usage, however, most were focused on generating findings on a specific device and not generalizable across the broader senior population (Lee & Coughlin, 2015). The two key factors identified in their research (Lee & Coughlin, 2015) for technological acceptance among older adults were "perceived usefulness and ease of use" (p. 755). Thus, solutions provided by technology must be readily available and highly adaptable to their targeted user cohort. According to *LeadingAge*, an organization representing the retirement community industry, provider organizations are bombarded daily with the latest technology products and are challenged with decisions about how to best use their resources (Stone, 2017). Therefore, retirement communities should strive to understand the technological offerings and determine whether they can fulfill the elements of well-being sought by their residents.

The *Consumer Technology Association* indicated the current technology marketplace of products and services for baby boomers is fragmented, with an ever-shifting and evolving industry comprised largely of startups, challenged by delivery issues and end-user resistance, and yet, taken as a whole, the technology business serving the senior cohort is estimated to grow to $29.8 billion by 2022 (Orlov, 2019). Retirement community providers, therefore, must continually consider the actual benefits provided by technology against the perceived usefulness and actual utilization to determine whether emerging technologies can fulfill the well-being needs of its current and prospective future residents.

Clearly, given the reluctance of many older people to interact with new technologies, consideration should be given to assessing personal and technological factors which can positively or negatively impact the engagement experience leading to well-being (Hough, 2004).

Many of these factors may be imbedded within individual PERMA elements. Because increased engagement has significant societal and industry implications, future research is needed to determine what factors can be used to create an atmosphere conducive to senior interaction with higher information technologies (Hough, 2004).

To a certain extent, today's baby boomers are redefining the concept of what growing old entails. Characteristics of this emerging new era of seniors are different from their predecessors. How they perceive the utilization of technological innovations will likely present a distinct platform from which providers will deliver automation solutions. In the next ten years, all baby boomers will be in their mid-60s or older, so despite optimistic predictions, their future affinity for technology cannot be certain (Golant, 2017).

Ideally, technology can provide the basics of a service experience and humans can fill in the gaps with the required amount of personal interaction. With the emergence of artificial intelligence and big data, organizations have the tools to better understand what human touch aspects of an experience a customer expects, that can give an organization an advantage, and that increases consumer well-being (Solnet et al., 2019). The increase in the availability of information about how technology can fulfill customer desires should allow providers of goods and services to aging baby boomers the ability to assess the technological affinity much more effectively.

Human interaction and personal touch have long been cornerstones of the healthcare and hospitality industries. The fundamental concept supporting the human delivery of service fulfillment is that customer-provider exchanges within these industries tend to be more relational than transactional, necessitating the human element of personal touch (Solnet et al., 2019).

During the process of aging-in-place, baby boomers may experience limited human interaction in their activities of daily living. In retirement, when they do interact with others, it may be restricted to a small group or even one individual. By comparison, in a retirement community, baby boomers may be exposed to many more opportunities for human interaction through engagement with other residents and staff members. The often referenced "tech vs. touch" trade-off refers to finding the best balance between affinity for technology and human interaction to deliver the expected level of services (and fulfill the elements of well-being) to the targeted (baby boomer cohort) market (Solnet et al., 2019).

Numerous studies show that the best part of people's days is when they are involved in social interaction with others which leads to an increase in well-being (Kahneman & Krueger, 2006). The human-centered approach to well-being can fill the need for social interaction. According to the National Institute on Aging (2011), research suggests a positive relationship between human interaction and health, and that social isolation may have significant adverse effects for aging adults. This is not to conclude, aging-in-place leads to isolation, but rather recognized the need for incorporating human interaction to fulfill well-being.

It is well established that the process of growing older is associated with issues of loneliness leading to a decreased sense of well-being and that technology can help to maintain important social networks and connectivity with others (Sokoler & Svensson, 2007). For technology to remain viable, it must also increase the ability to stay active and engaged in retirement (Orlov., 2019). This can lead to self-actualization and enhanced well-being but can also have an unintended consequence of increasing social isolation (Golant, 2017).

Often the perception of human interaction (i.e. knowing it is available if needed) is adequate to satisfy the social component of well-being (George, 2009). In their research on older

adults' perceptions (affinity) of technology, Lorenzen-Huber et al. (2011) noted participants indicated that there might be a limit to how long technology can replace personal care and support and that technology should not be a substitute for human contact. One study participant noted "people (caregivers) coming in is nice" (Lorenzen-Huber et al., 2011, p. 243).

According to a *Senior Housing News Special Report* (2019), retirement communities are utilizing virtual reality for a broad range of applications including isolation, pain management, and even staff training. Counter to stereotypes about technology use, older adults were open to social interactions in the virtual world. However, participants expressed the belief that virtual interactions should not occur at the expense of real-world interactions (O'Brien, Smith, & Beck, 2019). Artificial intelligence applications might be helpful at engaging individuals (e.g., virtual communities), but may also run the risk of intensifying isolation by decreasing in-person interactions (National Academies of Science, Engineering, Medicine, 2019). For this reason, technology-enabled systems have been generally considered less desirable than human delivered services even where older adults wish to remain independent and avoid institutional care (Woolhead et al., 2004).

Most innovative applications to date are designed to enhance the human element involved in promoting well-being rather than replacing it. Technology can be utilized in tandem with human delivery to augment and support the touch provided services freeing up time to provide more human touch delivery of services and establish better relationships with customers or in certain instances eliminate the need for human involvement altogether (Solnet et al., 2019). While the pressure on increased efficiencies may warrant senior living operators' consideration of substituting technology for human touch, most are mindful of the value human touch adds to their value proposition. To the extent technology can fulfill tasks which in turn allow more time

for staff interaction in providing more direct resident care, technology enables more human interaction but more evidence is needed to show the value of doing this when budget considerations often show the value of cutting the technology-replaced personnel.

Based on this body of research, baby boomers' affinity for technology moderating impact on the PERMA elements of well-being and its influence on their choice of preferred post-retirement residential alternative, the following hypotheses are proposed:

H2a: *Baby boomers' affinity for technology moderates how the positive emotion "P" element of well-being influences their preferred post-retirement residential alternative.*

H2b: *Baby boomers' affinity for technology moderates how the engagement "E" element of well-being influences their preferred post-retirement residential alternative.*

H2c: *Baby boomers' affinity for technology moderates how the relationship "R" element of well-being influences their preferred post-retirement residential alternative.*

H2d: *Baby boomers' affinity for technology moderates how the meaning "M" element of well-being influences their preferred post-retirement residential alternative.*

H2e: *Baby boomers' affinity for technology moderates how the accomplishment "A" element of well-being influences their preferred post-retirement residential alternative.*

H2f: *Baby boomers' affinity for technology moderates how the PERMA elements of well-being collectively influence their preferred post-retirement residential alternative.*

Post-Retirement Residential Alternatives

Aging-in-place. Understanding the relationship between housing and well-being in later life is highly relevant, especially when the factors regarding aging-in-place are considered, as

quality of housing is directly correlated with SWB (Herbers & Mulder, 2017). The concept of aging-in-place has numerous meanings but is generally defined as "remaining living in the community, with some level of independence, rather than in residential care" (Davey, Nana, de Joux, & Arcus, 2004, p. 133). While this can include a private residence, condominium, apartment, or a group setting (Orlov, 2019), also embedded in the definition is the idea of "community" or neighborhood and not solely the home. Aging-in-place can also have a broader meaning as it is representative of maintaining independence and familiar connections, both emotional and physical, that seniors are often unwilling to sacrifice in retirement, unless by physical or mental necessity.

Economics are often another relevant factor when considering residential alternatives, as the cost of residing in a retirement community can be substantial, and therefore, excludes a large portion of the aging population. Pang (2011) notes that given the increases in the aging population during the next 15 to 20 years, affordability in retirement will be a major issue. In response, there must be alternative resources available, family, friends, or outside services, to provide the necessary care to age-in-place.

According to the U.S. Census Bureau (2001), over 90% of adults over the age of 65 live independently. Since older adults in general are physically less mobile, their activities mostly take place within their home environment (Baltes, Maas, Wilms, & Borchelt, 2001). As a result, older adults experience constraints based not only their reduced physical and cognitive capabilities, but also with social activities and interactions. While often a potential solution to address these issues, technology can also be perceived to potentially decrease social contact and personal interactions (Antonucci, Ajrouch, & Manalel, 2017). Furthermore, people generally fear loneliness and isolation even more than physical and cognitive decline (Walsh & Callan,

2010). For this reason, technology-enabled stay at home systems have been evaluated as less desirable than personal services even though older adults wish to remain independent and avoid institutional care (Woolhead, Calnan, Dieppe, & Tadd, 2004). Thus, for the reasons outlined above, technology could potentially have a detrimental impact on the PERMA elements of well-being when choosing to age-in place.

The debate over whether the benefits of aging-in-place outweigh its potential drawbacks continues. While avoiding an "institutional" model allows retirees to maintain a certain degree of autonomy, privacy, and personalization, it can also lead to a certain degree of isolation. As functional mobility decreases so does the ability to interact with others which can lead to social isolation. Among key determinants of health, social isolation has been shown to have the greatest observed effect on health and well-being (Cordier et al., 2018). Correspondingly, there is a need to balance the benefits of aging-in-place with the advantages of residing in a retirement community when choosing a post-retirement residential alternative with the objective of fulfilling well-being.

The latest developments in technology as well as future improvements can be explored as a means for baby boomers to remain in their homes and still be able to care for themselves (Carpenter-Aeby et al., 2017). The desire to age-in-place can increase the acceptance of technology when it allows individuals to remain in their homes and still fulfill the elements of well-being (Peek et al., 2014). Additional alternatives to technology for aging-in-place (e.g. family members or caregivers) can negatively influence its acceptance (Peek et al., 2014). Trends in health care services suggest an increased need for technologies that support older adults living independently in their homes (Lorenzen-Huber et al., 2011). While the government and insurers see benefits of using technology to help people remain at home longer, device

complexity, pricing constraints, poor usability, and rapid obsolescence combined with a lack of standard professional training have created numerous barriers to broadening usage within the aging population (Orlov, 2019).

Peek et al. (2014) conducted a systematic review of mixed studies aimed at reviewing the technological factors influencing the decision to age-in-place by older adults. Their review of more than 2,800 articles resulted in 16 relevant studies that met their inclusion criteria, of which only two were quantitative in nature. They concluded further quantitative studies are needed, particularly as relating to how pre-implementation and post-implementation factors are interrelated and measured, and how they impact existing models of technological acceptance. The 2014 Peek et al. study also concluded more research is needed for technologies to promote aging-in-place beyond basic safety and security monitoring. This is what makes aging-in-place somewhat limited, it is a strategy that focuses on providing for physiological and safety needs, but one that too often fails to provide opportunities for the other basic human needs such as love and belonging, self-esteem, and self-actualization (Johnson, Johnson, & Sarafan, 2011).

Retirement communities. The nomenclature used to describe the various levels of care encompassing the retirement community industry is expansive. Retirement communities within the senior housing industry can be classified according to the level of services and types of housing provided. Terms such as retirement home, life plan or continuing care retirement community, active-adult community, assisted living facilities, memory care units and skilled-nursing homes are all utilized to describe the numerous options available dependent on the continuum of care desired or required. See Appendix C for classification of retirement communities (CBRE, 2019).

According to the Centers for Disease Control and Prevention (2013) there are more than 23,000 professionally managed retirement communities (with 25 or more units/beds) in the U.S., representing over three million professionally managed units/beds nationally. Demand growth is fueled by seniors who are becoming more educated about the benefits of living in retirement communities and have the financial capacity to take advantage of the numerous services and amenities available to them. One of the key trends to demand drivers is mortality rates, in that people are simply living longer.

Driving this increased life expectancy, and consequently the average population age, is the overall advancement in public health strategy and the quality of medical treatment. As Americans age during the next several decades, the elderly population will require a larger number of formally trained, professional caregivers as a direct effect of chronic diseases, which in turn affect independence and mobility. According the Social Security Administration (2013), the projected growth in this age group will present many challenges to both policy makers and programs by having a significant impact on families, businesses, healthcare providers and, most notably, the demand for retirement communities. As a result, the "tech vs. touch" trade-off may occur out of practical necessity rather than by personal choice in terms of fulfillment of services to promote well-being in the aging process. The mandate for intervention through technology has been illustrated recently by the 2020 worldwide Coronavirus (COVID-19) pandemic which essentially forced the use of technological alternatives in the delivery of services as well as means through which to fulfill some of the elements of well-being, for example engagement, relationships, and meaning.

Despite the strong desire to age-in-place, there is also strong evidence for residing in a retirement community. In their study, Bockerman et al. (2012) found that when controlling for

health and functional status, demographics, and income level, individuals who are living in retirement communities have reported higher levels of well-being than those who are living at home. Similar research has shown that moving into a retirement community enhances older adults' social engagement (Heisler, Evans, & Moen, 2003). However, living in a retirement community can also result in a considerable loss of privacy and personal autonomy that are essential components of SWB. While there is clearly a strong and prominent desire among the baby boomer cohort to age-in-place if possible, there is a recognition that there might be a limit to how long technology can replace personal care and support living independently (Lorenzen-Huber et al., 2011). Further, Golant (2017) points out many baby boomers occupy residences that were designed for them as younger adults, and are thus, often ill-equipped for aging-in-place, thus making retirement community alternatives a viable option. Both post-retirement residential alternatives require baby boomers' consideration of the perceived impact on how best to fulfill well-being in retirement.

Conclusions

As the trend for baby boomers' desire to age-in-place is likely to continue, it is important to find a balance between independence (aided by affinity for technology) and human touch (Solnet et al., 2019) to fulfill the PERMA elements of well-being. Technology as a substitute or augmenter of the human touch in service will likely continue to grow as innovations evolve (Bolton et al., 2018). Privacy implications and usability factors will both likely present barriers associated with technological adaptation. Implementation of technology in the context of seniors already residing in retirement communities also presents acceptance challenges in terms of user adaptation. While there is a high-likelihood new technology will be developed to increase older adults' independence and ability to remain living in their homes, there is also evidence-based

research of the benefits to well-being of residing in a retirement community. In the recently released *Age Well Study* by Mather Lifeways, the 2018 second-year longitudinal results indicated residents of retirement communities generally experience higher levels of well-being than older adults living in other residential alternatives (Mather Institute, 2019).

The development of new technologies for aging should be directed toward increasing quality of life by enhancing relationships and providing practical support for living independently (Lorenzen-Huber et al., 2011). More attention needs to be directed towards technology designed to support the social and emotional aspects of aging focused on innovations which provide the critical well-being elements associated with growing older (Sokoler & Svensson, 2007). This can occur for seniors aging-in-place and those residing within retirement community environments.

Given the many different types of retirement communities available and the variety of services offered, future research is needed to explore in more detail the well-being needs for older adults within the various post-retirement residential alternatives available (Douma et al., 2017). George (2009) points out a lack of studies that examine the effects of social integration at the community level on well-being while aging.

The overlay of baby boomers' affinity for technology versus the human interaction factor to well-being fulfillment in retirement represents a gap in the literature in terms of preferences among the baby boomer cohort that this study plans to address. As noted by George (2009), it is important to understand how aging adults feel about their lives and the preferred strategies they will utilize to maximize their sense of well-being in retirement.

Finally, "the possibility that technology could be used to replace services that have been or could be provided face-to-face must be acknowledged, and the relative effectiveness of such

trade-offs must be evaluated" (Blashke, Freddolino, & Mullen, 2009, p. 650). Without social interaction, meaning, and purpose, advanced aging in one's home, often alone, can result in dwindling choices and mounting levels of loneliness, helplessness, and boredom (Thomas & Blanchard, 2009). The emphasis on how the elements of PERMA balance against the ever-evolving technological innovations must be carefully considered when assessing the decision to age-in-place as compared with residing in a retirement community or other possible alternatives. This highly individualized decision will be critical to baby boomers as they contemplate how their sense of personal well-being in retirement can best be fulfilled.

CHAPTER 3 – RESEARCH METHODOLOGY

The study research methodology is designed to answer the research questions derived from the study purpose which is to identify the most important elements of well-being that the baby boomer cohort, who have decided to retire but have not yet done so (i.e. pre-retirees), seek in order to achieve their desired levels of well-being in their preferred post-retirement residential alternative. Moreover, this study investigated the degree to which this group sees that choice being influenced by their affinity for technology. This was achieved through addressing the following research questions:

- *"Which well-being elements, singularly or in combination, influence baby boomers' preferred post-retirement residential alternative?"*
- *"Does baby boomers' affinity for technology moderate how the well-being elements, singularly or in combination, influence their preferred post-retirement residential alternative?"*

In this chapter, the research design is presented including the identification of the study sample and population, controls, sample size, data collection and questionnaire, measures, data analysis and path model, model estimation process and results evaluation, and conclusions. The goal of this chapter is to provide a description of the process for obtaining and analyzing the data through logistical regression that inform the findings and guide the conclusions, and, finally,

present the implications and discuss the recommendations for both practitioners and researchers for future studies.

Sample and Population

The research data was collected via a web-based survey instrument through a questionnaire administered by a third-party. For purposes of this study, Qualtrics^{XM} (Qualtrics) research services will be utilized for data collection and survey administration. Qualtrics is a survey software company offering research data gathering services from available populations on their platform based on client directed specifications of targeted populations. In their case study of on-line research, Chang and Vowles (2013), concluded the on-line method can be "superior to other survey methods" (p. 129) if properly developed and administered. The reason for utilizing Qualtrics, instead of alternative platforms, was because it has access to over 90 million potential panel respondents (Qualtrics, 2020) allowing for greater profile specificity within the targeted population. Further, respondents are screened and verified based on designated study criteria to ensure eligibility and compliance with designated client controls. Specifically, the database population sampled by Qualtrics was limited to pre-retirement baby boomers defined as those between the ages of 62 to 74. As a result, the Qualtrics technique focused on older adults as opposed to traditional survey methods which often make it more difficult to reach demographically similar older people (e.g. baby boomers) (Wright, 2005).

While this population does not encompass the entire baby boomer cohort (those ages 55-74), it targets that segment of the cohort relevant to the study purpose based on two criteria. First, this segment of seniors includes those eligible to begin drawing early retirement earnings from the Social Security Administration *Life Expectancy Calculator* (Social Security Administration, 2015). Secondly, according to the Department of Housing and Urban

Development (HUD) (2019) guidelines, the age for eligibility for entry into most congregate care retirement communities begins at age 62. For these reasons, the sampled population included those baby boomers within this age bracket (ages 62-74) that are most likely to be entering pre-retirement and likely to be considering their preferred post-retirement residential alternatives.

Controls

Certain control variables were used to ensure the responses obtained are only from respondents who are relevant to the study purpose. The Qualtrics sample selection included only those whose age fits the criteria defined above. Moreover, to control for factors that may influence a baby boomer's selection of a preferred post-retirement residential alternative beyond those of interest to this study, five other screens for the Qualtrics sample selection were applied.

First, only those who are defined by Qualtrics as "pre-retirement seniors transitioning into retirement" were sampled. This screen means that only those who have indicated that they have made the decision to retire but have not yet done so were presented with the survey. Second, only those whose income exceeded a specified income level (greater than $50,000) deemed large enough to afford the average cost of a retirement community were sampled. Third, only those potential respondents who are currently unpartnered were included to avoid any complications in the post-retirement living accommodation choice caused by a partner. Fourth, only U.S. residents were included to avoid any variances caused by international laws. Finally, only those who self-identify as being in "good health" were included as poor health could dictate the post-retirement residential alternative. While other controls might have been considered such as education, race, and ethnicity, these should ensure the sampled population includes those baby boomers who can consider their selection of preferred post-retirement residential alternative based on where they believe they can best fulfill their needs and achieve well-being. The

controls used in this study include those of gender, age, marital status, and income that are considered standard explanatory variables in the SWB literature (Böckerman, Johansson, & Saarn, 2012).

Sample Size

The sample population size used for this study was based on attaining a statistical power of 80% (β), for an acceptable probability of not making a Type-II error or the likelihood of accepting a finding as true which is in fact false (Cohen, 1992). Specifically, "the required sample size should be determined by means of power analysis based on the part of the model with the largest number of predictors" (Hair, Hult, Ringle, & Sarstedt, 2017, p. 25).

*G*Power* (Faul et al., 2009), a tool used to compute statistical power analysis, was used to calculate the sample size. The sample size was estimated at more than 242 respondents based on the *G*Power* calculation assuming 20 percent minimum effect size (f^2), and a five-percent significance level (α). This minimum sample size approach should ensure adequate statistical power (ρ) and that the results will be robust and generalizable (Hair et al., 2017). See sample size calculation and graphical distributions in Appendix C.

Data Collection and Questionnaire

Data was collected through a survey questionnaire described below. After Rollins College Institutional Review Board (IRB) approval for the use of human research subjects, the survey was administered via the web to a limited Qualtrics sample of 37 people as a "soft launch" or pilot study to assess the functionality and internal consistency of the questionnaire in obtaining the desired data. In their analysis of sample size for pilot studies, Johanson and Brooks (2010) noted that 30 participants from the representative sample is a reasonable amount for a pilot study. Results from this pilot study were used as a small-scale trial run to assess the quality

of the survey instrument based on participant responses. The advantages of a pilot study are to provide an indication of where there may be weaknesses in the survey instrument and the opportunity to address these in advance of launching the full study (Van Teijlingen & Hundley, 2001). All participants included for the pilot study were pre-qualified based on the criteria specified above as control variables and contacted via email through the Qualtrics platform. The email provided a brief description of the study along with an invitation to link to the survey along with an estimated time for completion. By clicking through, the respondent provided informed consent, read an overview of the study purpose, and was given descriptions of aging-in-place and retirement community to ensure clear definitions of terms. The survey was divided into sections based on topical area and similar scale coding intervals to minimize potential respondent confusion. See Appendix E for survey. The sections included the introductory material, survey questions, demographic questions, and a concluding section to thank respondents for their participation.

After receiving the results of the pilot survey, variability (including kurtosis, skewness, and missing data) of the responses, along with initial factor loadings to identify outliers and lack of normality in distributions were reviewed. Cronbach's alpha calculations were performed after the pilot was administered to check for internal consistency and reliability of the collected data (Christensen, Johnson, & Turner, 2011). Based on the responses received from the pilot survey, questions were refined or eliminated as justified after pre-test results to identify any suspicious, inconsistent, or abnormal response incidents (including non-reply) from the data set. Pilot respondents were excluded as participants in the final survey to avoid any potential carryover effects. Qualtrics participants were incentivized in a variety of different manners dependent on the participant and the particulars of the study. Verbiage along the lines of "You will be

compensated the amount you agreed upon before entering into the survey" was included in the introductory section. The cost of obtaining the actual study survey data from Qualtrics was $7.50 per respondent for completed questionnaires.

Measures

To achieve the research purpose, three variables were measured in the participant survey. These were the PERMA elements that define the elements of well-being as the predictor variables, the preference for post-retirement residential alternative as the dependent variable, and affinity for technology as the moderating variable. The scales utilized and encompassed within the various sections of the questionnaire are described below.

PERMA (Part I). The construct of the PERMA well-being elements are considered first-order latent variables and were collected through the 15-item questionnaire for measuring PERMA developed and validated for reliability and internal consistency by Butler and Kern (2016). The 15 items represent three questions for each of the five PERMA elements. Therefore, PERMA scores could be established for each element (average score of the three questions per element) and in totality (average score for all 5 elements). In their extensive testing of the PERMA questionnaire, Butler and Kern (2016) found that the 11 combined samples tested showed overall PERMA internal and test-retest reliability (Cronbach's alpha) of .94 and convergent and divergent validity of .84 indicating more than adequate reliability and validity.

The PERMA questionnaire utilizes an 11-point anchored Likert scale graduated on a zero to ten range, with zero representing extremely low levels and ten representing extremely high levels. The PERMA questionnaire used in this study was derived by Butler and Kern (2016) from a data bank of more than 700 items representing various PERMA subdomains previously collected by Butler (2011). These subdomains were used to generate an initial PERMA

questionnaire bank of 109 items which was ultimately refined to 15 (three per PERMA element) through statistical testing (factor loadings) to determine which questions best represented each of the PERMA elements (Butler & Kern, 2016). Representative questions for each of the elements include (see Appendix E for all fifteen PERMA questions):

Positive Emotion – "How often do you feel joyful?"

Engagement – "How often do you feel absorbed in what you are doing?"

Relationships – "To what extent do you receive support from others when you need it?"

Meaning – "To what extent do you lead a purposeful and meaningful life?"

Accomplishment – "How much of the time do you feel you are making progress towards accomplishing your goals?"

The questions above, along with the ten additional questions from the 15-item PERMA questionnaire (two per PERMA element), have been shown to be most indicative of the various sub-domains supporting each element of PERMA and are, therefore, used as the most appropriate measures for the PERMA elements of well-being.

Subjective well-being (Part I). To serve as a further validation of the total PERMA score representing well-being, a separate measure, the tripartite model of SWB (Diener, 1984) was included to reconfirm the validity of the overall PERMA score. The 1984 Diener model represents the first multi-dimensional measure of SWB. The reason for including this measure was to assess any significant differences between PERMA and SWB. As referenced earlier, a recent study (Goodman et al., 2018) showed a strong (r = .98) latent correlation between SWB and PERMA asserting the premise that the two theories merge to one well-being factor, which is what this study measures.

To achieve this additional metric, the well accepted and widely used Diener et al. (1985) five-item, 7-point Likert, Satisfaction with Life Scale (SWLS) was used (e.g. "I am satisfied with my life"), along with a one-item question of happiness measuring positive affect and three questions assessing negative emotions (e.g. "In general, how often do you feel sad?") . The SWLS is intended to assess an individual's global judgement of her or his life satisfaction (i.e. SWB) and is considered a key measure of overall well-being. The same Likert scale and measurement range (0-10) as the PERMA elements was utilized to gather positive and negative affect components of the SWLS. Negative affect is not a component of PERMA and may prove as a value comparative measure between PERMA questionnaire and SWLS responses and its corresponding influence on well-being.

Health (Part I). Although health was used as a control screen in sample selection, it was decided that a check on the accuracy of this self-report screen would be enhanced by measuring health separately. As reported earlier, the research has shown that health is an important determinant in post-retirement residential alternative selection and is the only subjective screen used for this study, however, it is based on respondent self-report. If baby boomers' post-retirement residential alternative decision is predicated on a health-related need, the influence of the PERMA elements of well-being will be unduly biased. Thus, three health-related questions were included to ensure health issues did not distort the data collected. These questions on physical health helped to determine the accuracy of the health screen provided by Qualtrics as well as an additional psycho-social measure as physical health and resilience are often outcomes correlated with well-being (Norrish & Seligman, 2015). To do so, Butler and Kern (2016) devised generic queries such as, "In general, how would you say your health is?" which was included in the survey using the same Likert scales as used to measure PERMA elements.

Affinity for Technology (Part II). As the correlational relationship of baby boomers' perceptions of well-being to predict their preferred post-retirement residential alternative was assessed through logistic regression, the influence of technology on that relationship was also addressed in this study. To measure this moderating variable component of the research, the Affinity for Technology Interaction (ATI) Scale (Franke, Attig, & Wessel, 2019) was used to measure individual respondent's affinity for the use of technology. The reason this was included in the model as a moderator was to investigate whether a person's affinity for technology influences their preference of a post-retirement residential alternative.

The ATI Scale is grounded in the construct of "need for cognition" or the degree to which one engages in and enjoys thinking about situations and experiences in a meaningful way (Cacioppo & Petty, 1982). This is directly aligned with two of the PERMA elements (engagement and meaning) because both approaches seek involvement and increased understanding. The validated nine-item ATI questionnaire was chosen for the purpose of this study because it encompasses a broad definition of affinity for technological applications rather than focusing on a specific technology. The questionnaire criteria generally entail "technical systems" which include apps and other software, as well as digital devices (e.g. smart phones, computers, televisions, and similar technologies). While it does not apply to aging-specific technologies, its broad spectrum is appropriate to the sample population of "pre-retirees" to assess their general receptivity to technology. As defined by its creators, "the ATI can be viewed as a key personal resource for technological interaction" and thus is appropriate for research in investigations into the human affinity for the uses of technology (Franke et al., 2019, p. 2).

The ATI questionnaire in its full format consists of nine items presented on a 6-point Likert-type scale (even numbered scales are "forced responses" as they eliminate neutral

responses) with completely disagree and completely agree as anchors. The questionnaire also includes three negatively worded items requiring reverse coding for analysis. After completion, respondents were scored on a mean of the totaled nine items. The ATI scale has been successfully tested for reliability showing good to excellent internal consistency (Franke et al., 2019). Therefore, utilizing the ATI questionnaire in the study methodology provided an effective tool for determining participants' affinity for technological innovation through an established and validated measure, and thus reflected its moderating influence (if any) on the relationship between the elements of PERMA and the dependent variable of preferred post-retirement residential alternative.

Preferred post-retirement residential alternative (Part III). The dependent variable (DV) of preferred post-retirement residential alternative was the final variable in the measurement model. For housing decisions in later life, electing not to move or "aging-in-place" represents the status quo, moving from one's current home is the alternative (Moen & Erikson, 2001). The single item question, "When I retire, I plan to reside where I live now (age-in-place)" was utilized to measure the preferred post-retirement residential alternative. It was measured on an 11-point Likert scale anchored by strongly disagree to strongly agree. Previous research allows for single item measures in similar type research. In their study on perceptions of aging-in-place, Anh, Kwon, and Kang (2020) used the single question, "I want to age-in-place in the future," also utilizing a Likert anchored scale.

To better understand baby boomers' preferences in post-retirement, the proposed single-item query was augmented with two additional questions offering respondents other potential post-retirement residential alternatives. This was especially important for responses to the dependent variable retirement community inquiry with a "disagree" level (scored as 4 or lower)

to garner more insight into participants' other plans for their preferred post-retirement residential alternative. Thus, the following additional questions were administered:

- "My preferred place to live after retirement, is to reside a) in my current geographic location b) closer to my family c) in a retirement destination d) other (please specify)"
- "My preferred place to live after retirement, is to reside a) in my current residence b) a different residence in my current neighborhood c) someplace different than where I reside now d) other (please specify)"

' The above questions addressed the post-retirement residential alternatives available to most of the respondents. See questionnaire in entirety in attached Appendix E.

Data Analysis

The five constructs (PERMA) were independently measured, evaluated with the PERMA scores, and then analyzed with ordinal logistic regression to predict their impact on the dependent variable (preferred post-retirement residential alternative). The PERMA scores were determined by taking the average of the three responses used to measure each of the five PERMA elements. This procedure was consistent with researchers' scoring of the PERMA questionnaire (Mirehie & Gibson, 2020; Butler & Kern, 2016)

In addition, the categorical moderating effect of affinity for technology was measured against the PERMA elements to determine whether it changes the strength of the relationship between each PERMA element, individually or collectively, on the preferred post-retirement residential alternative. The path measurement models are shown below.

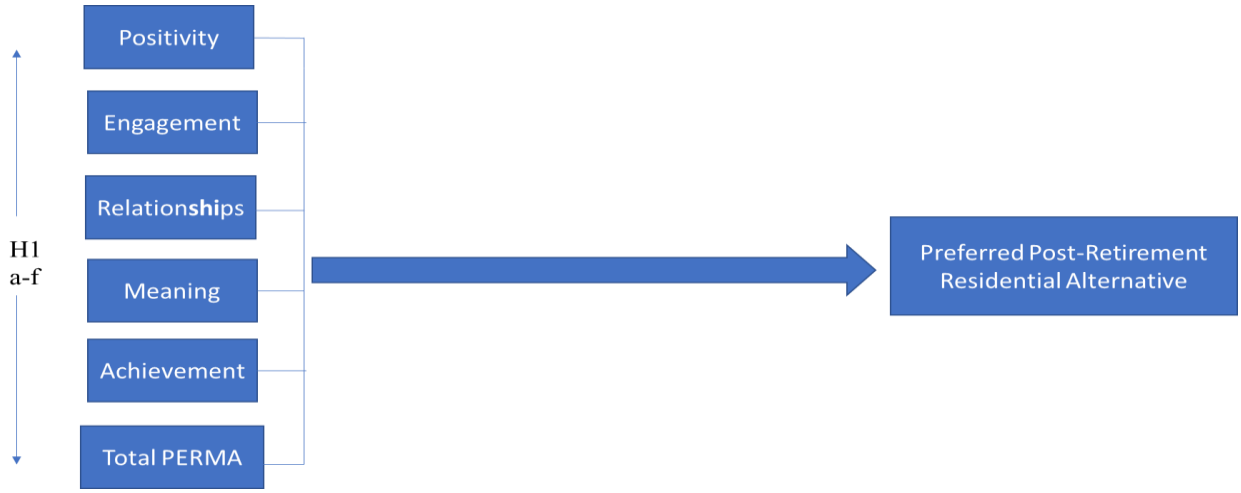


Figure 2. Model without Moderation (H1 a-f)

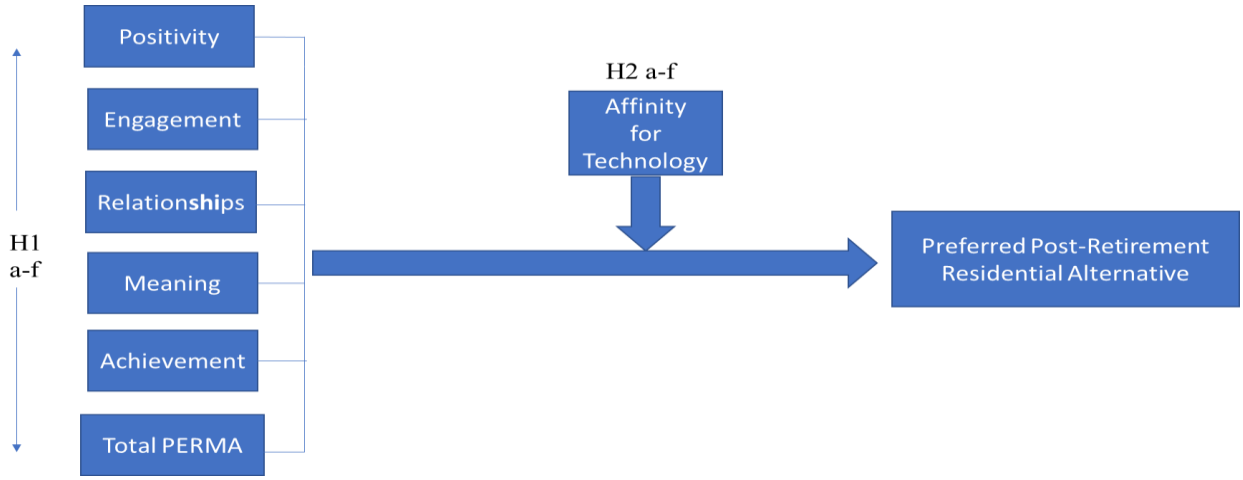


Figure 3. Model with Moderation (H2 a-f)

The process of establishing multi-item scales for each construct started with an investigation of the theoretical and empirical literature. Where possible, existing measurement scales that have been validated in the extant literature were utilized as well as questionnaires based on prior published work. No "re-wording" or reordering of existing questionnaires occurred. Likert scales are used extensively with parametric statistics throughout as they are generally considered to be valid estimations of a person's attitude or perspective on the subject at hand (Schrum, Johnson, Ghuy, & Gombolay, 2020). Although different anchor weights can be

found in different uses of Likert scales (zero to three through zero to ten), the scale intervals used in the original measures were also used when possible in this study to maintain the validity and reliability of the original scales (Krosnick & Presser, 2010). However, to avoid as much respondent confusion as possible caused by changing the scale intervals, the survey will be organized into four sections with similar Likert scale intervals. The complete survey instrument can be found in Appendix E.

Model Estimation and Results Evaluation

After obtaining the participant responses, the data were reviewed to identify abnormalities, inconsistencies, outliers, and potential errors. In terms of statistical tests for the data set, because scale data can be summed for Likert items, the data can be analyzed through parametric tests with more confidence (Schrum et al., 2020). Since multi-item scales were utilized, Likert scales can be effectively evaluated through parametric tests (Schrum et al., 2020). Cronbach's alpha was measured to determine internal consistency and test scale reliability. Descriptive statistics of demographic characteristics (age, gender, race, education, and income) of the sample population were included in a tabular format.

A correlational research study of the data was undertaken using logistic regression utilizing IBM SPSS Statistics 25 software to evaluate the five latent variables. Latent variables are typically representative of constructs that are not entirely directly observable (Hair et al., 2017), and therefore appropriate measurements for the elements of PERMA. The correlational nature of the latent variables is indicative of the degree to which the independent variables are predictive of the dependent variable. The impact (if any) of the latent variables (elements of PERMA) on the dependent variable (preferred post-retirement residential alternative) was assessed.

The PERMA elements were factor analyzed to confirm if they could be statistically clustered into five factor groupings. To examine whether significant differences from the aggregated factor means exist between the pilot and final study responses, *t-tests* were performed on the five factors for each set of data. The test for any lack of variability by respondents will included in a review for excessive kurtosis, skewness, and small standard deviations based on Hair et al. (2017). The selection criteria was a combination of kurtosis in excess of two or less than negative two, skewness in excess of one or less than negative one, and a standard deviation of less than one identified by respondents based on criteria in Hair et al., (2017), to assess the extent the data deviate from normality

Any correlations between factors were calculated and depicted graphically to illustrate the distribution of the response data and determine whether it is normal. An additional regression analysis was then be performed with the moderating variable (affinity for technology) for comparative purpose of the data and corresponding regression line to illustrate the fit of the affinity of technology. These were depicted graphically for comparative purposes with the regression equation. Power (*p-value*) was calculated to determine the probability of rejecting the null hypothesis. The *p*-value was evaluated against the threshold of .05 as indicated in the sample size calculation to test for significance. A *p*-value greater than .05 was considered not significant to the hypotheses.

The model's collinearity, coefficients, discriminant validity, and overall model fit were also assessed. The causal indicators should have factor loadings of .70 or above, based on Jolliffe (1986) criterion, to reflect which indicators should be retained. Parametric tests were performed to determine correlation between constructs to test whether there was a normal distribution between variables. The model was tested against the hypotheses through the coefficients of

determination (r^2) to assess whether there is a correlational relationship through a linear dependence between the PERMA elements and preferred post-retirement residential alternatives variable as well as any potential impact on this relationship from the moderating effect of baby boomers' affinity for technology.

Summary

Conducting valid research with both theoretical and practical implications requires valid measures to assess well-being (Diener et al.,1985; Testa & Simonson, 1996; Muldoon, Barger, Flory & Manuck, 1998). Because well-being is a key component of quality of life, its measurement is crucial to understanding how to improve people's lives over time (Diener, 2009).

The purpose of this study was to measure the PERMA elements of well-being and their relationship with a baby boomer's preferred post-retirement residential alternative. In addition, this study investigates the potential influence of a baby boomer's affinity for technology on that relationship. As explained above, the methods and measurement models that will be utilized achieve this study's purpose. As Douma et al. (2017) noted, well-being should be studied as a multidimensional, individualized, and contextualized process to generate meaningful empirical information for researchers and policymakers. The focus of this study on baby boomers considering post-retirement residential alternatives helped to accomplish this objective by providing data on the relationship between the elements of well-being and baby boomers' preferences for their post-retirement residence. Moreover, the influence of their affinity for technology provided additional insights into how the emergence of technological substitutions of technology for human interaction in their preferred post-retirement residential alternative.

CHAPTER 4 – DATA ANALYSIS AND FINDINGS

The data analysis and findings this chapter reports the results of the research undertaken to accomplish the study purpose of assessing baby boomers' perception of the impact of the elements of well-being on their preferred post-retirement alternative, as well as the potential moderating influence of their affinity for technology. The objective of the data analysis is to determine which PERMA elements of well-being (singularly or in combination) influence this decision, and whether affinity for technology moderates these relationships. The chapter includes the survey results and subsequent statistical analysis. This encompasses a description of the key characteristics of the survey participants, and the results of the data analysis.

Survey Process and Timing

An approval of the survey method and data collection from human subjects was required from the Rollins College Institutional Review Board (IRB). This application was prepared and submitted in late May 2020 (following the study proposal defense) and, after submitting additional requested information, IRB approval was obtained in mid-June 2020. An initial pilot study was then conducted (see below) followed by final data collection to gather the results reported here as tests of the study hypotheses.

Participants and Procedures

Pilot study. The initial questionnaire was "soft launched" as a pilot survey to 37 participants recruited from the Qualtrics^{XM} platform. The sample of 37 exceeded the

representative threshold of 30 recommended for pilot studies (Johnson and Brooks, 2010). The questionnaire was administered electronically via e-mail through a web-based survey instrument. A primary purpose of the pilot study was to determine whether the study controls (as described in Chapter 3) were appropriate within the planned participant populations.

The pilot study resulted in an initial pool of respondents that met the control criteria of pre-retirement status, age (62-74), self-reported good health, marital status, income (> $50K per annum) and U.S. domiciled. As a result of the rapid response rate for the pilot, the controls were adjusted slightly to increase the selection criterion and better refine the potential respondent pool. To ensure "pre-retirement" status responses were obtained, a qualifying question was added to determine whether a respondent was currently employed. In the event respondent replied "no", the survey was automatically terminated. In addition, rather than requesting marital status, the qualifying question was revised to read, "Are you currently in a relationship or unpartnered?". By choosing "in a relationship" respondents were also immediately disqualified. Lastly, the U.S. domiciled criteria were internally segmented within the survey instrument to ensure geographic diversity of responses. Each state was assigned to one of four regions within the U.S. (Midwest, Northeast, South, and West). The criteria were based on the most recent U.S. Census data (U.S. Census Bureau, 2012c), and a proportionate number of responses were required from each region. Further, a survey control was implemented to ensure that once a region's quota had been met, additional responses could not be accepted from it.

In terms of questionnaire items specific to the study, prior to the soft launch of the pilot, the dependent variable question was slightly modified and simplified to read, "When I retire, my preferred place to live is where I live now (age-in-place)" to be answered through an eleven-point Likert Scale (0 = completely disagree, 10 = completely agree) and analyzed using ordinal

regression. To provide objective context, this question was preceded by broad definitions of both age-in-place and retirement communities so respondents could understand the differences between selection options. The clarity and consistency of the responses obtained from the pilot helped to reaffirm the decision to revise the dependent variable question. Two additional questions were also included to better clarify the dependent variable of post-retirement residential alternative.

Final Study. The final study included 243 respondents (which excluded the 37 participants in the pilot study). The minimum number of completed responses to meet the minimum sample size required for the project of 242 (see Appendix D) was achieved. After obtaining the web-based data, the respondent information was placed into both Microsoft Excel and IBM SPSS 25 formats. The final survey included 60 items on the questionnaire. The data was "cleaned" to assess the following; minimum survey time of at least four minutes (average survey time was approximately thirteen minutes), completion of all survey questions, differentiation of internet protocol addresses (to verify unique users), fulfillment of geographic quotas (described above), suspicious response patterns, and a coding review (including appropriate reverse coded questions) to ensure each question was answered within appropriate questionnaire parameters.

Demographics. In addition to the criteria specified within the study controls, certain other demographic data were collected from respondents to better understand the unique characteristics of the participants not already specified within the control criterion. The demographic data included age (within the control range), state of residence, gender, education level, income range, race classification, children, and exercise tendencies. By study design, the sample control population had a specified age range of 62-74. Within that range, the mean

respondent age was 66. The state of residence included respondents from 33 different states within the four designated geographic regions. The highest response state was California (15%), followed by Texas (9%), and Florida (7%). Again, as a control, all participants were to be unpartnered in terms of relationship status and 100% of this objective was achieved amongst respondents. Of the respondents, 72% were female and 28% were male. In terms of education level, 7% indicated high school, 28% some college, 37% bachelor's degree, and 28% postgraduate degree. The race or ethnicity of the sample population consisted of 88% Caucasian, 6% African American, 4% Hispanic, and 2% Asian. Within this group, 65% had children. See frequency tables in Appendix E and for a summary of the descriptive statistics and frequencies of the demographics of the study population based on the completed questionnaires.

Measurements and Scale Analysis

Exploratory Factor Analysis. In this study, for most of the survey questions as detailed in Chapter 3, existing validated scales were utilized. In such instances, it is not typically necessary to perform exploratory factor analysis (EFA). The health-related questions, Satisfaction with Life Scale (SWLS), PERMA questionnaire and related scale for the independent variable, as well as the affinity for technological innovation (ATI) scale for the moderating variable all represent existing validated scales. Regardless, EFA was performed on each of these scales, the results of which are shown in Appendix H. After varimax rotation was performed on each, the results of the EFA were not conclusive.

Scale Assessment. An assessment of the survey results was performed for each of the health-related questions, PERMA questions, and affinity for technology questions utilizing Cronbach's Alpha as a measure of scale reliability and internal consistency. As shown in Exhibit H, almost all scales had generally good reliability (>.80) as would be expected when utilizing existing validated scales.

Health. The health questions in the survey were included as a check measure against the sample control of self-reported good health. Within the sample population, health was self-reported between 7.31 to 7.91 (based on 0-10 – see Appendix F). By comparison, the validated health scale queries (Butler & Kern, 2016) were evaluated for reliability of responses and tested with a Cronbach's Alpha of .927 indicating good internal consistency of the scale as well as congruence of participant responses with the control requirements.

PERMA. Each of the five PERMA (Seligman, 2012) elements was tested for internal consistency. The "P" positive emotion element positive emotion of PERMA responses tested favorably with a Cronbach's Alpha of .915. The "E" engagement element of PERMA responses produced the lowest Cronbach's Alpha scoring at .595. The "R" relationship element of PERMA generated a reliability level of .80. The "M" meaning element of PERMA tested at a Cronbach's Alpha of .899. Finally, the "A" accomplishment element of PERMA resulted in a Cronbach's Alpha of .723. Thus, the internal consistency and reliability of the PERMA elements produced generally favorable validity amongst the study respondents.

Affinity for Technology. The Affinity for Technology Innovation (ATI) Scale (Franke, Attig, & Wessel, 2019) responses (nine questions with three reverse coded) were also tested for reliability and internal consistency. Affinity for Technology (AFT) tested at .857 utilizing coefficient alpha.

Preferred Post-Retirement Residential Alternative. The dependent variable was used to test PERMA and ATI through a single item question, "When I retire, my preferred place to live is where I live now." The results of tests for correlation between the dependent variable and the independent and moderating variables are shown in a correlation summary on *Table 3* below. The dependent variable of preferred post-retirement residential alternative was also tested

through regression, one question (ordered logit model) measured against the PERMA and ATI (see *Table 4* below). The reason for doing this was because the preference in the preferred post-retirement residential alternative is an ordinal dependent variable. Other recent studies (Ahn, Kwan, & Kang, 2020; Asebedo & Seay, 2014) have used a single item approach to measure retirement related tendencies. The dependent variable was evaluated against each of the PERMA elements, both individually and collectively, based on the PERMA Score for each element as well as for an overall average PERMA Score. For the ATI Scale to assess the impact of technology, affinity for technology was based on an overall average ATI Scale score per respondent.

Descriptive Statistics

In terms of the data and statistics used to summarize and describe the population, *Table 2* below indicates the responses to both the independent variable measure (PERMA) and moderating variable (AFT) measure. The measures shown are shown as the mean, or arithmetic average, along with the variance indicator of standard deviation, skewness to determine symmetry, and kurtosis to assess distribution normality

Table 2.

	N	Mean	Median	Std. Deviation	Skewness	Kurtosis
DV - How much do you agree or disagree with the following statement? When I retire, my preferred place to live is where I live now (age-in-place).	243	8.00	9.00	2.68	-1.67	2.05
“P”ositive Emotion Average	243	7.26	7.67	1.79	-1.08	1.03
“E”ngagement Average	243	7.45	7.67	1.35	-0.74	0.69
“R”elationship Average	243	7.12	7.33	2.07	-1.05	1.20
“M”eaning Average	243	7.67	8.00	1.74	-1.20	1.80
“A”ccomplishment Average	243	7.65	7.67	1.23	-0.62	0.25
Technology Average	243	3.24	3.22	0.96	0.32	0.01
PERMA Average	243	7.43	7.67	1.42	-1.02	1.28

The responses generally showed good variation with a standard deviation >1.0 and was slightly higher for the dependent variable question and not as significant for the technology average. The skewness and kurtosis measures were in generally acceptable ranges of-1/+1 individually, and -2/+2 respectively.

Correlations

To test the relationships among the variables and determine whether any predictive relationships exist, *Table 3* below depicts the results of a correlational analysis of the data utilizing Spearman (non-parametric) correlation calculations.

Table 3.

	DV: When I retire, my preferred place to live is where I live now (age-in-place).	PAverage (*r*)	EAverage (*r*)	RAverage (*r*)	MAverage (*r*)	AAverage (*r*)	PERMAAVG (*r*)	TechAverage (*r*)
DV: When I retire, my preferred place to live is where I live now (age-in-place).	1							
"P"ositive Emotion Average (*r*)	.097	1						
"E"ngagement Average (*r*)	.158*	.605**	1					
"R"elationship Average (*r*)	.106	.716**	.511**	1				
"M"eaning Average (*r*)	.121	.805**	.644**	.709**	1			
"A"ccomplishment Average (*r*)	0.125	.652**	.551**	.483**	.696**	1		
PERMAAverage (*r*)	.129*	.899**	.753**	.840**	.914**	.761**	1	
TechAverage (*r*)	-0.061	.101*	.106*	.078*	.098*	.161**	.107**	1

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

The purpose of *Table 3* is to indicate the strength of and direction (positive/negative) of the quantitative relationships between PERMA and the dependent variable as well as ATI and the preferred post-retirement residential alternative through the coefficient of correlation (*r*). Based on the results in *Table 3*, the correlation tests showed significance to the "E" engagement element of PERMA as well as the collective PERMA elements and the dependent variable based

on the .01 (2-tailed) and .05 (2-tailed) recommended significance levels for testing hypotheses. Two-tailed test criteria were utilized due to the neutral nature of the PERMA hypotheses. Further, all the PERMA elements, individually and collectively were positively correlated with one another as well as with the "tech average." The "tech average" or AFT score from the ATI Scale is not significantly correlated with the dependent variable for moderation based on the same recommended correlation levels. The slight correlational relationship that did exist between AFT and the dependent variable was negative. Since the AFT hypotheses are also neutral, 2-tailed test criteria were utilized as well.

Regressions

Because multiple independent variables (PERMA) are being used to explain the single dependent variable of preferred post-retirement residential alternative, regression analysis was performed to measure the predictive strength of the relationships. In addition, since the dependent variable was on an ordinal scale (Likert), ordinal regression was initially utilized.

After reviewing the initial ordinal results and to establish a study "baseline," binary logistic regression was also performed utilizing only the "0" completely disagree, and "10" completely agree scores of two clearly defined groups of respondents (N = 105). The reason for using this extreme groups approach (EGA) was to achieve greater statistical power in the testing of the hypotheses based on respondents who were very clear in their preferred post-retirement residential alternative intention (Preacher et al., 2005). Further, each of the PERMA elements were tested individually, and then collectively in binary, and ordinal regressions, as separate and unique variables. Finally, the Firth (1993) logistic regression approach was used given the wide range of responses and to test robustness of the model due to the small sample size. Results from the Firth approach did not change the outcomes or conclusions from binary and ordinal

regressions, so they have been excluded from *Table 5.* The results of the two types of regression analysis from the single dependent variable question presented in the study are shown in *Table 4.*

Table 4.			Binary *N*	Binary Percentage	Ordinal *N*	Ordinal Percentage
How much do you agree or disagree with the following statement? "Retirement communities" refers to organized establishments available for residential senior care. "Age-in-place" refers to remaining living in the community, with some level of independence, rather than in residential care. - When I retire, my preferred place to live is where I live now (age-in-place).	0		9	8.6%	9	3.7%
	1		n/a	n/a	6	2.5%
	2		n/a	n/a	4	1.6%
	3		n/a	n/a	2	0.8%
	4		n/a	n/a	6	2.5%
	5		n/a	n/a	9	3.7%
	6		n/a	n/a	12	4.9%
	7		n/a	n/a	16	6.6%
	8		n/a	n/a	35	14.4%
	9		n/a	n/a	48	19.8%
	10		96	91.4%	96	39.5%
Valid			105	100.0%	243	100.0%

To determine the amount of variation in the preferred post-retirement residential alternative that can be explained by PERMA, a coefficient of determination (r^2) is required. Since r^2 does not compute in logistic regression, an equivalent "pseudo" r^2 calculation was performed. As seen in *Table 5,* Nagelkerke r^2 ranged between .095 and .185 for binary logistic regression and between .009 and .024. for ordinal logistic regression. The Nagelkerke pseudo r^2 (Nagelkerke, 1991) is the most generally used pseudo r^2 measure. By applying the Nagelkerke measure, the model has generally explanatory power ranging from 9.5% (engagement element) to 18.5% (positive emotion element) with binary logistical regression. The collective PERMA elements (binary) pseudo r^2 is 16.4%. Using ordinal regression, explanatory power ranged from .9% (relationship) element, 2.4% (engagement element,), The collective PERMA pseudo r^2 is 1.8% utilizing ordinal regression.

Parameter Estimates

Statistical tests were performed to determine relationships between constructs to test whether there is any relationship among the variables. The results of the statistical tests for both binary and ordinal logistical regressions are shown in detail in Appendix J and summarized below in *Table 5*. Relationships deemed significant are emboldened.

Table 5.

Hypothesis	Binary Nagelkerke Pseudo r^2	Binary Regression *p*-value	Binary Model Significance *p*-value<.05	Ordinal Nagelkerke Pseudo r^2	Ordinal Regression p-value	Ordinal Model Significance *p*-value<.05
Positive Emotion – H1a	**.185**	**.004**	**X**	.012	.085	
Engagement – H1b	**.095**	**.034**	**X**	**.024**	**.017**	**X**
Relationships – H1c	**.108**	**.022**	**X**	.010	.100	
Meaning – H1d	**.158**	**.007**	**X**	.009	.116	
Accomplishment – H1e	**.121**	**.018**	**X**	**.016**	**.048**	**X**
PERMA – H1f	**.164**	**.005**	**X**	**.018**	**.031**	**X**
Positive Emotion/Tech– H2a	.083	.066		.017	.798	
Engagement/Tech – H2b	.032	.248		.035	.231	
Relationships/Tech – H2c	.063	.106		.015	.617	
Meaning/Tech – H2d	.086	.063		.019	.236	
Accomplishment/Tech – H2e	.032	.245		.023	.630	
PERMA/Tech – H2f	.062	.111		.026	.402	

The model fit of the binary regression analysis in *Table 5* indicates that the primary dependent variable question related to "choosing to reside where I am now (age-in-place)" showed statistical significance (*p*-value <.05) for all of the PERMA elements individually, as well as the collective PERMA average, thus indicating they are all predictive of the preferred post-retirement residential alternative. Only hypotheses **H1b**, **e**, and **f** are supported by the study model through ordinal regression. None of the hypotheses of moderation (**H2a-f**) showed significance utilizing either binary or ordinal logistic regression method.

Based on the analysis outcomes above, binary regression (using the extreme groups sample size N=105) was selected for **H1a-f** as it only requires two variables (IV and DV) thus, supporting the smaller population. To best support the three variables involved (IV, MV, and DV) for **H2a-f**, ordinal regression was selected with the inclusion of the entire sample (N=243). The hypotheses outcomes are described individually in greater detail in Chapter 5.

Additional Analysis

Covid-19

Because of the timing of this study, a question related to Covid-19 was included to determine if the pandemic impacted the answers to the dependent variable question. A separate ordinal analysis of the Covid-19 question is included in Exhibit K. The additional question was not statistically significant within the model. Note that this relationship was not hypothesized as part of the original study.

Nominal Regressions

Two additional preferred post-retirement residential alternative related questions were utilized to gain additional insight into the dependent variable question regarding preferred post-retirement residential alternative. Because the choices for these questions were nominal, the selection alternatives are based on an occurrence rate of responses for each selection and, therefore, measured through nominal regression.

Table 6. **Nominal Question 1**

		N	Percentage
If you decide to move someplace besides where you live now when you retire, which factor is MOST important in deciding where you would prefer to reside: - Selected Choice	Someplace nearby in my current geographic location	48	19.8%
	A location that is closer to my family	69	28.4%
	Another location/state/city considered to be good for retirees	41	16.9%
	Other (please specify)	12	4.9%
	I am not likely to move / Not applicable to me	73	30.0%
Total		243	

Model Fitting Information

Model	Model Fitting Criteria -2 Log Likelihood	Likelihood Ratio Tests Chi-Square	df	Sig.
Intercept Only	723.128			
Final	675.626	47.502	44	.332

Pseudo R-Square

Cox and Snell	.178

Based on the nominal regression analysis in *Table 6* above, the additional dependent variable question related to preferences in post-retirement destinations did not show significance (*p* = .332). As a result, this indicates there is no significant relationship between Nominal Question l and the dependent variable. Note that this relationship was not hypothesized as part of the original study.

Table 7. **Nominal Question 2**		N	Percentage
If I decide to move someplace besides where I live now when I retire, I am likely to move to: - Selected Choice	Another residence in my current neighborhood/community	32	13.2%
	A new residence but less than 50 miles from where I live now	43	17.7%
	A new residence but more than 50 miles from where I live now	43	17.7%
	Someplace geographically distant from where I live now (please specify)	35	14.4%
	I am not likely to move when I retire / Not applicable to me	90	37.0%
Total		243	

Model Fitting Information

Model	Model Fitting Criteria -2 Log Likelihood	Likelihood Ratio Tests		
		Chi-Square	df	Sig.
Intercept Only	742.054			
Final	692.489	49.566	44	.261

Pseudo R-Square

Cox and Snell	.185
Nagelkerke	.194
McFadden	.067

Based on the nominal regression analysis in *Table 7* above, the additional dependent variable question related relocation preferences in post-retirement did not show significance *(p* =

.261). As a result, this indicates there is no significant relationship between Nominal Question 2 and the dependent variable. Note that this relationship was not hypothesized as part of the original study.

CHAPTER 5 – CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

The purpose of this chapter is to provide an overview of the results of the research investigating the influence of baby boomers' perception of well-being on their preference in post-retirement residential alternatives, and the moderating role of affinity for technology. This closing chapter will provide an interpretation of the study findings. The first section of this chapter summarizes the study results as they address the research questions and the associated hypotheses as presented in Chapter 2. The second section of the chapter discusses the results of the data analysis presented in Chapter 4 for each of the two hypotheses. The next section offers implications of the hypotheses testing. The fourth section of this chapter presents limitations of this research. The final section provides recommendations for future research.

The research questions this study sought to address are the following:

- *"Which well-being elements, singularly or in combination, influence baby boomers' preferred post-retirement residential alternative?"*
- *Does baby boomers' affinity for technology moderate how the well-being elements, singularly or in combination, influence their preferred post-retirement residential alternative?"*

Overview of Results

This study was premised on the idea that aging baby boomers, like anyone else, inherently desire to experience a sense of well-being. The objective of this research, and its purpose, was to determine the influence of baby boomers' perception of the PERMA elements of well-being, singly and in combination, on their preferred post-retirement alternatives (aging-in-place or other), and the moderating effect of their affinity for technology (AFT). The impact of the PERMA elements and AFT were assessed by a carefully defined responding sample who were asked to indicate their preference in a post-retirement residential alternative.

Hypotheses 1a-f. As described in Chapter 4, while ordinal logistic regression was the analysis method designated in the original study design, **H1a-f** were also tested with binary logistic regression as an alternative analysis method to establish a baseline of extreme group respondents. Based on the Likert type scale used, binary regression analysis was performed based on sample responses on two-items with opposite numerical values "0" and "10". Baby boomers' perceptions of the influence of the individual and collective PERMA elements on their preferred post-retirement residential alternative were then compared for significance utilizing both binary and ordinal logistic regression models to better understand the strength of the relationships. Based on the outcomes of both methods presented in Chapter 4, it was determined binary regression for "extreme groups" of the population would be the most appropriate method for testing hypotheses **H1a-f** because this subsample of respondents are those who are most certain of their preferences in their post-retirement residential alternative. The study data revealed that there is significant support for the relationship of the PERMA elements of well-being, individually and collectively, on the preferred post-retirement residential alternative. Therefore, as hypothesized, **H1a-f** were supported by the study.

Hypotheses 2a-f. Further, the effect of baby boomers' affinity for technology (AFT) was also assessed through both binary and ordinal logistic regression analysis to determine whether AFT moderates baby boomers' preference for their preferred post-retirement residential alternative when considering the influence of the PERMA elements of well-being. As introduced in Chapter 1, AFT was postulated as a moderator to determine whether it can be used to fulfill the elements of well-being most important to baby boomers. After reviewing the two combined approaches, it was determined that because of the presence of three variables, and the skewed extreme group outcomes, ordinal logistic regression for the entire sample population was the most appropriate for **H2a-f**.

The study data revealed that there is no moderating effect of affinity for technology on the PERMA elements of well-being utilizing ordinal regression. Thus, within the hypotheses of moderation **H2a-f**, the interaction between the PERMA elements of well-being, the moderating interaction of AFT, and the preferred post-post retirement residential alternative was not supported. In fact, as discussed in greater detail for each of the hypotheses below, AFT likely weakens the influence of the of PERMA elements on the preferred post-retirement alternative because of the negative correlation (albeit weak) and lower significance levels in regression, when considering the AFT hypotheses of moderation on the preferred post-retirement residential alternative.

Interpretation of Individual Hypotheses

Hypotheses 1a-f. In order to answer the study research questions that are based on the literature reviewed in Chapter 2, hypotheses were proposed regarding the PERMA elements of well-being and the preferred post-retirement residential alternative, which resulted in the related analysis outcomes (correlations and binary logistic regressions) detailed in Chapter 4. Because

the body of prior research led to the conclusion that there was no evidence to support postulating a positive or negative direction in the relationships, neutral hypotheses were utilized. Thus, each was tested as a null hypothesis, implying there is no relationship between the variables. These are summarized individually for each study hypothesis below:

H1a: *Baby boomers' perception of the importance of the "P" positive emotion element of well-being will influence their preferred post-retirement residential alternative.*

The "P" positive emotion element (r=.097) of PERMA was not significantly correlated with the preferred post-retirement residential alternative. Through binary logistic regression analysis, there was a statistically significant ($p < .05$) outcome for this element of PERMA wellbeing (p =.004). Thus, the null hypothesis (which implies lack of influence of this element) was rejected. Rejecting this null hypothesis supporting **H1a** means that the respondents' perception of the importance of the positive emotion element of PERMA significantly influences their preferred post-retirement residential alternative. The positive emotion element is synonymous with a general sense of happiness. With a coefficient of determination (r^2) of .185, the "P" positive emotion element of PERMA was deemed influential in this decision process as it explains 18.5% of the variance in the preferred post-retirement residential alternative. This finding is consistent with the findings of the *National Council on Aging's* Annual Aging Survey (2012) which cites, "liking where they live" as the primary reason seniors choose to age-in place as it evokes the most positive emotion in their preferred post-retirement residential alternative.

H1b: *Baby boomers' perception of the importance of the "E" engagement element of well-being will influence their preferred post-retirement residential alternative.*

The "E" engagement element of PERMA was positively and weakly correlated (r=.158) with the preferred post-retirement residential alternative. Through binary logistic regression

analysis, there was a statistically significant ($p < .05$) outcome for this element of PERMA well-being ($p = .034$). Thus, the null hypothesis (which implies lack of influence of this element) was rejected. Rejecting this null hypothesis supporting **H1b** means that the respondents' perception of the importance of the engagement element of PERMA significantly influences their preferred post-retirement residential alternative. The engagement element seeks to assess the extent to which people are being absorbed and kept interested in life. With a coefficient of determination (r^2) of .095, the "E" engagement element of PERMA was deemed influential in this decision process as it explains 9.5% of the variance in the preferred post-retirement residential alternative. Research about the baby boomers indicates they are more connected, self-reliant, and engaged than prior generations (Golant, 2017), which supports the importance of the engagement element in determining the preferred post-retirement residential alternative.

H1c: *Baby boomers' perception of the importance of the "R" relationship element of well-being will influence their preferred post-retirement residential alternative.*

The "R" relationship element ($r = .106$) of PERMA was not significantly correlated with the preferred post-retirement residential alternative. Through binary logistic regression analysis, there was a statistically significant ($p < .05$) outcome for this element ($p = .022$). Thus, the null hypothesis (which implies lack of influence of this element) was rejected. Rejecting this null hypothesis supporting **H1c** mean**s** that the respondents' perception of the importance between the relationship element of PERMA influences the preferred post-retirement residential alternative. The relationship element seeks to assess a person's positive involvement with others. With a coefficient of determination (r^2) of .108, the "R" relationship element of PERMA was deemed influential in this decision process by explaining 10.8% of the variance in the preferred post-retirement residential alternative. In the *National Council on Aging's* Annual Aging Survey

(2012) referenced earlier, besides liking where they live, the second most cited reason for preference in the post-retirement residential alternative, was having friends and family nearby, which supports the importance of the relationship element in this decision.

H1d: *Baby boomers' perception of the importance of the "M" meaning element of wellbeing will influence their preferred post-retirement residential alternative.*

The "M" meaning element (r=.121) of PERMA was not significantly correlated with the preferred post-retirement residential alternative. Through binary logistic regression analysis, there was a statistically significant ($p < .05$) outcome for this element (p =.007). Thus, the null hypothesis (which implies lack of influence of this element) was rejected. Rejecting this null hypothesis supporting **H1d** that the respondents' perception of the importance between the meaning element of PERMA influences the preferred post-retirement residential alternative. The meaning element is predicated upon a person's feelings about purpose and direction of his or her life. With a coefficient of determination (r^2) of .158, the "M" meaning element of PERMA was deemed influential in this decision process by explaining 15.8% of the variance in the preferred post-retirement residential alternative. This supports prior research by Carpenter-Aeby et al. (2017) who note that baby boomers derive meaning from the communities where they live, thus it is influential in determining their preferred post-retirement residential alternative.

H1e: *Baby boomers' perception of the importance of the "A" accomplishment element of well-being will influence their preferred post-retirement residential alternative.*

The "A" accomplishment element (r=.121) of PERMA was not significantly correlated with the preferred post-retirement residential alternative. Through binary logistic regression analysis, there was a statistically significant ($p < .05$) outcome for this element (p =.018). Thus, the null hypothesis (which implies lack of influence of this element) was rejected. Rejecting this

null hypothesis supporting **H1e** means that respondents' perception of the importance between the accomplishment element of PERMA influences the preferred post-retirement residential alternative. The accomplishment element is based on achievement and the realization of goals. With a coefficient of determination (r^2) of .121, the "A" accomplishment element of PERMA was deemed influential in this decision process by explaining 12.1% of the variance in the preferred post-retirement residential alternative. *The Wall Street Journal* reported many retirement community developers are building "aspirational" homes, reflective of what retirees have achieved in life, thus indicating the importance of the accomplishment element is a determinant in the preferred post-retirement residential alternative (Kusisto, 2019).

H1f: *Baby boomers' perception of the importance of the PERMA elements of well-being collectively, will influence their preferred post-retirement residential alternative.*

The elements of PERMA collectively were positively and weakly correlated (r=.129) with the preferred post-retirement residential alternative. Through binary logistic regression analysis, there was a statistically significant ($p < .05$) outcome for the combined PERMA elements (p =.005). Thus, the null hypothesis (which implies lack of influence of the collective elements) was rejected. Rejecting this null hypothesis supporting **H1f** means that respondents' perception of the importance between the collective elements of PERMA influences the preferred post-retirement residential alternative. With a coefficient of determination (r^2) of .164, the combined elements of PERMA are influential in this decision process as they collectively explain 16.4% of the variance in the preferred post-retirement residential alternative. Recent research by Anh, Kwon, and Kang (2020) indicated each individual well-being element is salient later in life, however, residential environments (including home and community) have proven

most crucial which supports the relationship between the combined elements of PERMA and the preferred post-retirement residential alternative.

The significant relationship between overall PERMA, or the combined elements of PERMA, and the preferred post-post retirement residential alternative is a key-finding supporting the hypothesis in this research study. While all the PERMA elements showed significance individually and collectively utilizing binary regression, the sample measure (extreme groups) was only a portion of the entire population (43.2% of respondents). Despite testing only the extreme groups instead of all respondents post-hoc, because of the binary two variable logistic regression analysis used, the statistical power was sufficient, resulting in the research outcomes supporting hypotheses **H1a** through **H1f**.

The outcomes of the study indicating a significant relationship of the PERMA elements of well-being in retirement are consistent with an earlier study by Asebedo and Seay (2014). These researchers' findings supported all the PERMA elements except for the "E" engagement element as being influential on satisfaction in retirement (Asebedo & Seay, 2014). The difference from this study, however, is that their study measured satisfaction in retirement (or a state of well-being) while this study was focused on the more specific preferred post-retirement residential alternative.

Hypotheses 2a-f. Based on the prior research detailed in Chapter 2, hypotheses were proposed to investigate the moderating impact of baby boomers' affinity for technology, on the PERMA elements of well-being on their choice of preferred post-retirement residential, which resulted in the related analysis outcomes (through ordinal logistic regressions) as presented in Chapter 4. Again, as was true for the earlier hypotheses, there was no reason to postulate a positive or negative direction. Consequently, each was tested as a null hypothesis implying there

is no relationship between the variables. These are summarized individually for each hypothesis below:

H2a: *Baby boomers' affinity for technology moderates how the "P" positive emotion element of well-being influences their preferred post-retirement residential alternative.*

Through ordinal logistic regression analysis, there was not a statistically significant ($p <$ .05) outcome for "P" positive emotion element (p =.798) hypothesis of moderation. Thus, for hypothesis **H2a**, the null hypothesis (which implies lack of influence of this element) cannot be rejected. Failing to reject this null hypothesis means that respondents' perception of the importance of the positive emotion element of PERMA, moderated by affinity for technology, does not significantly influence the preferred post-retirement residential alternative. For older adults, perception of the "emotional and psychological benefits" that stem from contact with others can hinder the adaption of technology, which, in turn, may limit its impact on determining the preferred post-retirement residential alternative (Lee, & Coughlin, 2015, p.750).

H2b: *Baby boomers' affinity for technology moderates how the "E" engagement element of well-being influences their preferred post-retirement residential alternative.*

Through ordinal regression, there was not a statistically significant ($p < .05$) outcome for the "E" engagement element (p =.231) hypothesis of moderation. Thus, for hypothesis **H2b,** the null hypothesis (which implies lack of influence of this element) cannot be rejected. Failing to reject this null hypothesis means that respondents' perception of the importance of the engagement element of PERMA, moderated by affinity for technology, does not significantly influence the preferred post-retirement residential alternative. Because the need for physical and social contact is so deeply ingrained, for many seniors utilizing technology to fulfill engagement

is insurmountable (Hough, 2004). Therefore, its role in determining their preferred post-retirement residential alternative may be limited.

H2c: *Baby boomers' affinity for technology moderates how the "R" relationship element of well-being influences their preferred post-retirement residential alternative.*

Through ordinal logistic regression analysis, there was not a statistically significant ($p < .05$) outcome for the "R" relationship element ($p = .617$) hypothesis of moderation. Thus, for hypothesis **H2c,** the null hypothesis (which implies lack of influence of this element) cannot be rejected. Failing to reject this null hypothesis means that respondents' perception of the importance of the relationship element of PERMA, moderated by affinity for technology, does not significantly influence the preferred post-retirement residential alternative. During the aging process, older adults become more concerned with relationships with friends and family and may have limited interest in learning and applying new technologies (Lorenz-Huber, et al., 2011). Thus, the importance of the relationship element later in life likely reduces technology's influence on the preferred post-retirement residential alternative.

H2d: *Baby boomers' affinity for technology moderates how the "M" meaning element of well-being influences their preferred post-retirement residential alternative.*

Through ordinal logistic regression analysis, there was not a statistically significant ($p < .05$) outcome for the "M" meaning element ($p = .236$) hypothesis of moderation. Thus, for hypothesis **H2d,** the null hypothesis (which implies lack of influence of this element) cannot be rejected. Failing to reject this null hypothesis means that respondents' perception of the importance of the meaning element of PERMA, moderated by affinity for technology, does not significantly influence the preferred post-retirement residential alternative. The meaning element of PERMA is relative to older adults' affinity for technology in that its application must

have perceived usefulness (Mitzner, et al., 2016). Unless technology can be utilized in a meaningful manner, it will have a limited influence on the preferred post-retirement residential alternative.

H2e: *Baby boomers' affinity for technology moderates how the "A" accomplishment element of well-being influences their preferred post-retirement residential alternative.*

Through ordinal logistic regression analysis, there was not a statistically significant ($p <$ .05) outcome for the "A" accomplishment element ($p = .630$) hypothesis of moderation. Thus, for hypothesis **H2e,** the null hypothesis (which implies lack of influence of this element) cannot be rejected. Failing to reject this null hypothesis means that respondents' perception of the importance of the accomplishment element of PERMA, moderated by affinity for technology, does not significantly influence the preferred post-retirement residential alternative. In their research, Peek et al. suggest that older adults may view utilizing technology for assistance during aging (e.g. monitoring devices) as a "badge of dishonor", which may lessen their sense of accomplishment, thus reducing its potential impact on their preferred post-retirement residential alternative (2014, p. 242).

H2f: *Baby boomers' affinity for technology moderates how the PERMA elements of well-being collectively influence their preferred post-retirement residential alternative.*

Through ordinal logistic regression analysis, there was not a statistically significant ($p <$ .05) outcome for the collective PERMA elements ($p = .402$) hypothesis of moderation. Thus, for hypothesis **H2f**, the null hypothesis (which implies lack of influence of this element) cannot be rejected. Failing to reject this null hypothesis means that respondents' perception of the

importance of the collective PERMA elements, moderated by affinity for technology, does not significantly influence the preferred post-retirement residential alternative.

The relationship between the individual elements of PERMA, and the collective PERMA elements, moderated by baby boomers' affinity for technology, influencing the preferred post-post retirement residential was a key relationship hypothesized in this study that was not supported by the research findings. These outcomes were not consistent with those hypothesized in the study as **H2a-f** due to the lack of correlational relationship (r = -.061) between affinity for technology and the preferred post-retirement residential alternative. Also, there was not statistical significance of any of the elements, individually or collectively when moderated by affinity for technology through ordinal logistic regression analysis.

The results are likely due to the lower than average respondent scores on the ATI Scale (3.24 participant mean vs. 3.5 scale mean). A recent *Pew Research* study indicated seniors (those over 65) generally have lower technological adoption rates than the general population (Anderson & Perrin, 2017). Since the average age of respondents was 66, the study outcomes are consistent with those of *Pew Research*.

In the same study, it was noted that adoption rates amongst older adults are highly dependent on income and education (Anderson & Perrin, 2017). Similarly, the creators of the ATI Scale (Franke, Attig, & Wessel, 2019), note that affinity for technology is also a function of personal and technological resources. Within the study population, 66% of respondents had a bachelor's or post-graduate degree, and 70% had incomes between $50K and $100K (the remaining 30% were above $100K). The *Pew Research* study referenced above of the, utilized a sample population with household income over $75K and found that technology adaption is

growing slightly amongst seniors, especially in the 65-69 year old segment (Anderson & Perrin) which was a key portion of this study's population.

An earlier *Pew Research* study with a similar sample population, indicated 77% of seniors surveyed felt they would need assistance in adapting a new technology to feel comfortable using it (Smith, 2014). This may be a plausible explanation for the lower than average affinity for technology scores obtained in this research study since the ATI Scale was designed to assess whether users actively approach new technologies or choose to avoid them (Franke, Attig, & Wessel, 2019).

Another reason the hypothesis of moderation of affinity for technology was not significant may related to its perceived emotional aspect. In their research, Lee and Coughlin (2014) found there is a potential threat to social connectivity and human interaction associated with the adoption of new technologies. Given the close parallel of these concerns with some of the elements of PERMA (positive emotion, engagement, and relationships), may be an explanation why there were not result significant outcomes for affinity for technology, when applied to the PERMA elements, to determine baby boomers' preferred post-retirement residential alternative.

Implications for Theory and Research

The implications of this study's findings are especially important given the forthcoming number of retirees in the baby boomer generation (those born between 1946 and 1964). While this cohort of seniors will decline in numbers as time passes, they currently represent the largest group of future retirees and, therefore, merit research. Establishing that there is a perceived relationship between the PERMA elements of well-being and the importance of affinity for

technology as a moderating influence, should help better understand baby boomers' preferences for their post-retirement residential alternatives.

Aging-in-place. The responses to the survey clearly show a preference amongst baby boomers to aging-in-place with 73.7% indicating 8.0 or higher on a ten-point scale. These numbers agree with a recent study by the American Association of Retired Persons (AARP) which found similar results as 76% of those over 50 responding indicated they preferred to remain in their current residence (Binette & Vasold, 2018). By comparison, however, an earlier 2014 AARP study addressing the same issue, indicated nearly 90% of those over 65 wanted to stay in their homes as they age (Breeding, 2019). The difference between the two AARP studies (and confirmed by this study's data) reveals a significant downward trend in the desire to age-in-place during retirement. As Giles et al. (2011) note, aging-in-place was once seen as an advantage in terms of attachment and connection to both the home and community, but now seniors are showing more pragmatic reasons for moving to post retirement residences where seniors can find what they want in retirement.

More recently, retirement community providers have indicated that they believe the Covid-19 crisis will move some seniors from living on their own in a traditional home situation and offer them the benefits of moving into a community and being surrounded by other seniors, as well as having access to assistance when needed (Wynder, 2020). Within this study, in instances where the possibility of relocation was suggested, 30.9% of respondents indicated a desire to either continue to reside in their existing community, or at least within at least 50 miles of their current residence, 32.1% indicated another location geographically further, and the remaining 37% responded they would not relocate. Therefore, even when offered the option of choosing relocation, more than two-thirds of this study's respondents (67.9%) indicated a desire

to remain where they currently live or reside within 50 miles of where they live now, which is essentially aging-in-place.

In terms of factors driving potential relocation away from their current residence in retirement, 19.8% of this study's respondents indicated a desire to reside in the same geographic location and another 30% responded they are not likely to move. The most compelling reason to move was a desire to be closer to family (28.4%). In their earlier work of elderly migration patterns, Wiseman and Roseman (1979) attribute familial reasons as a primary factor for relocation in retirement which is consistent with this study's findings and a method of fulfilling specific elements of PERMA well-being important to baby boomers in retirement.

Besides encompassing a housing decision, aging-in-place may be a broader concept internalized at a personal level of "meaning" (Giles, et al., 2011). Meaning, as one element of PERMA, was the element with the highest mean score (7.67) and median (8.0) amongst respondents preferring to live where they live now. This finding indicates respondents are more likely to associate meaning with where they currently reside. In supporting this conclusion, Ewen et al. (2014) suggested that aging adults have likely lived in their current housing longer, and thus have greater attachment to it. This greater attachment makes it more difficult to justify a change in their (post-retirement) residential alternative. This conclusion also is consistent with the study data which indicated 43% of those surveyed have lived in their current home for 20 years or longer. The meaning element had significance (the second most individual significance of the PERMA elements when analyzed with binary regression. This finding leads to the conclusion that those who are very certain about their choice of a post-retirement residential alternative are more likely to associate the meaning element with this decision.

Although retirement communities were defined in the questionnaire instrument and participants were given an opportunity answer openly in alternatives, there was not a single "write-in" response indicating a desire to reside in a retirement community. Further, 20.2% indicated that they had friends residing in a retirement community which suggests respondents may have heard from their friends things about these alternatives that could explain their reasons for not writing in this option as a potential post retirement alternative. Write-in responses in the "other" category of post-retirement residential options were varied and showed no consistent response patterns. Examples of the most commonly written-in included, "near family", "coastal locations", and "foreign countries". Therefore, while there was a low inclination toward post-retirement residential options other than aging-in-place (including retirement communities) there is not a clear preference towards other potential alternatives. Additionally, only 14.8% scored 5 or lower on the 0 – 10 scale to the "residing where I live now" question, indicating that there is only a limited group ($N = 36$) of respondents with a strong desire not to consider aging-in-place.

Lastly, 100% of respondents indicated they can live alone without outside assistance, further illustrating the desire and ability to age-in-place even though all are unpartnered. While this statistic is not entirely surprising given the implicit sample controls, it does raise the issue of what will these individuals choose in the future as they continue to age, and their corresponding level of health begins to decline. This is especially true for baby boomers as they are more typically unpartnered and have fewer children to lean on for support than their preceding generations (Blanchard, 2013). Combined with the rising costs of home health care, the decrease in available in-home caregivers may also create a decline in age-in-place preferences. Additional study on this topic is suggested in the future research section of this Chapter.

PERMA. Since one of the purposes of the research study was to determine if there is a relationship between the perception of the elements of PERMA, individually and collectively, and the preferred post-retirement residential alternative, the correlational outcome (utilizing Spearman) is noteworthy. Although only the individual "E" engagement element had correlational significance, there was a relationship between the PERMA elements collectively and the "reside where I live now (age-in-place)" preferred post-retirement residential alternative.

The fact that only the "E" engagement element and collective PERMA were correlated with the preferred post-retirement residential alternative is not surprising. As explained in developing The Well-Being Theory, Seligman (2011) noted that "no one element defines well-being, but each contributes to it" (p. 24). Therefore, the study results demonstrate the significant influence of the entire subset of PERMA elements individually and collectively on baby boomers' well-being and their preference in their post-retirement residential alternative. This outcome is consistent with Seligman's premise (above) that each element "counts toward" determining overall PERMA or individual sense of well-being by fulfilling and maximizing all five. The foundation of The Well-Being Theory (PERMA) is grounded in the under pinning of this multi-dimensional framework.

As discussed in Chapter 1, there has been considerable discussion in the well-being literature about the relationship between satisfaction with life and well-being as measured with PERMA. This study included measures of satisfaction with life to investigate whether it is a correlate of PERMA well-being. When compared with Diener's (1985) Satisfaction with Life Scale (SWLS), the collective PERMA average of 7.43 was nearly a full point higher than the mean score of the SWLS of 6.50 utilizing the same 0 strongly disagree, 10 strongly agree) Likert scoring.

The purpose for the comparison was to explore whether the measures utilized to assess PERMA well-being in positive psychology were appropriate since the introduction of the original multi-dimensional well-being model (Diener, 1984). The outcome of higher scoring from the PERMA model when compared with the SWLS illustrate the evolution of The Well-Being Theory as additional measures and elements have, and likely will continue to be, developed. As the creator of PERMA elements of well-being stated, "PERMA is merely a good start on the complex work-in-progress that will result in adequate theory of the elements of well-being" (Seligman, 2018, p. 3).

Affinity for technology as a moderator. Another key purpose of the study was to assess whether moderating effects of technology, interacting with the PERMA elements, influences baby boomers preferred post-retirement residential alternative. The results of baby boomers' affinity for technology (as measured by the Affinity for Technology Innovation (ATI) Scale) were below the mathematical average of the scale of 3.5. The mean affinity for technology score was 3.24, and the median was 3.22, both based on a 1 – 6 scale with 6 scoring the highest. Although lower than an average score of 3.5, the 3.24 mean score may be indicative of a lower affinity for technology amongst respondents. In addition, unlike the collective elements of PERMA, affinity for technology was not positively correlated with the preferred post-retirement residential alternative (in fact, it was slightly negatively correlated).

Given the amount of technological innovations available to allow retirees to age-in-place with greater ease and for a longer period of time, the responses amongst participants to the ATI questionnaire seem inconsistent with their desire to age-in-place. Not only was the mean score below the ATI Scale average, but the highest scoring questionnaire items were also the reverse scored items focused on the avoidance of technology. The two questions "I predominately deal

with technical systems because I have to" and "It is enough for me to know that a technical systems works, I don't care how and why" scored the highest on the ATI Scale (mean scores of 4.10 and 4.11 respectively). Because the scale was based on (1 completely disagree – 6 completely agree) Likert type scoring, respondents were forced to answer in a non-neutral manner. The response averages above four clearly indicate a desire amongst participants to minimize technological interventions as related to understanding and tolerating them only out of necessity, which may prove insightful for future research studies addressed later in the Chapter.

After surveying US baby boomers, Schulz et al. (2013) concluded their willingness to pay for technologies to improve their well-being may be limited and therefore must be highly adaptive so that third-party payors (e.g. insurance and Medicaid/Medicare) will pay for them . Further, when assessing technology for adaptive aging, as one's ability to operate in daily life changes it is important to consider factors such as cost, ease of use, reliability, and privacy to ensure the acceptance and success of new innovations (Pew & Van Hemel, 2004). While not directly addressed in the ATI questionnaire portion of the study survey, these variables may have influenced participant responses and are may offer a reasonable explanation for the unexpected outcome, because to a certain extent they are unknowns, and the factors involved (referenced above) are difficult to predict.

Regardless, given the speed of technological advances along with decreasing costs, adaptation, and acceptance of technological solutions may likely increase as younger baby boomers become more comfortable and competent with technology as they enter retirement. As the market for innovations in technology broadens, the senior segment will benefit from the efficiencies created by providers which could enhance both its acceptance and usage (Orlav, 2019). Given the strong preference amongst respondents of a desire to age-in-place, it is

reasonable to surmise embracing technological innovations, and developing a high affinity for such technologies, would be beneficial toward achieving the objective of providing more avenues to deliver the elements of well-being baby boomers desire. In their 2019 survey on senior autonomy, researchers at *Perkins Eastman* found that almost 80% of retirement community providers think technology will have the most impact on the senior living market. Because of the disruption it will provide in the delivery products and services, technological innovations should allow consumers to be more autonomous and proactive in their care (Perkins Eastman, 2019). In turn, enhanced self-sufficiency may result in an increase in the desire to age-in-place, as well as their ability to do so for a longer period.

Fundamentally, the technologies currently available for aging-in place, encompass four primary categories: "communication and engagement, learning and contribution, safety and security, and health and wellness" (Orlav, 2019, p. 9). Collectively, these categories represent the needed components of technological caregiving for seniors throughout the aging process. Much like the elements of PERMA, each of these segments are useful on their own, but can provide more comprehensive solutions when they are combined. As evidenced by the results of this study, when affinity for technology is low, its perceived influence on well-being and the preferred post-retirement residential alternative is not significant. Therefore, when providers consider technological innovations and products for seniors, they must be provided in a thoughtful and compelling manner that resonates with the elements of well-being most important to aging baby boomers in post-retirement.

Covid-19. Throughout a portion of this research study, and during the survey administration period, the 2020 coronavirus Covid-19 pandemic occurred. Because older adults are especially susceptible to the virus, and the death rates of those in retirement living have been

a source of special concern, its impact on post-retirement residential alternatives could not be ignored. Accordingly, a question was included in the survey addressing whether respondents' preferences regarding their post-retirement residential alternative would be impacted by Covid-19. This question asked was, "Based on what I have learned about Covid-19, I now prefer to live where I live now". The responses were comparable to the responses received from the primary dependent variable question of "When I retire, I prefer to live where I live now (age-in-place)". In fact, the 73.7% of those responding 8.0 or higher to the dependent variable question was higher than the 70.3% answering 8.0 or higher to the Covid-19 question. This indicates only a minimal impact of Covid-19 on the preferred post-retirement residential alternative decision, given that most respondents are already opting to age-in-place.

Despite this lack of significance in this sample's preferences, Covid-19 has impacted the reality of retirement community living. Based on data gathered from the Centers for Medicare and Medicaid Services (CMS), approximately 28% of Covid-19 related deaths have occurred in nursing homes (2020). As a result of the negative impact this had on new admissions, the Covid-19 pandemic interrupted a nearly 12-year growth cycle in the retirement community industry (JLL, 2020). That said, the same research report (JLL, 2020), noted that while damaging to the sector, the pandemic has accelerated the development of new innovations within technology to help better prepare for and anticipate needs and expectations of the expected forthcoming baby boomer demand. While this study's outcomes did not support the moderating impact of AFT influence on PERMA and the preferred post-retirement residential alternative, the usage of technology mandated by the Covid-19 crisis may change this result over time as technological adoptions increase out of practical necessity, rather than personal affinity, to cope with the "new normal". In contrast to the expectations of the retirement industry, the pandemic could result in

improved outcomes and advancements in telemedicine, video chats, and remote connection medical services. These innovations enable seniors to "age-in-place, promote independence, and cut costs" (Novotney, 2020, p. 3).

Another example of newly introduced technologies in response to the coronavirus includes "visitation packages" (i.e. wireless headsets, speakerphones, and video), allowing for safe advanced in-person communication between aging adults and their families (Bonvissuto, 2020). But even that may not be enough to deliver the elements of well-being important in aging. As reported in a recent *USA Today* article, because of Covid-19, more seniors will leave retirement communities and that families will generally move closer together (Horowitz, 2020). This statistic is congruent with the study outcome of 28.4% of those opting not to age-in-place desiring to be closer to their family and is also consistent and still supportive of the Wiseman and Roseman familial migration research (1979).

Limitations

This study inherently has certain implicit limitations, despite well-considered control variables, which are summarized below. While not all-encompassing, they are recognized as potential elements of further research consideration and recognition.

Study controls. While the designated study controls were specifically designed to ensure the participants were both eligible for residing in a retirement community and would not bias the sample, the specific criteria may have imposed certain limitations. The age criteria of 62-74 years old was selected based on minimum age requirements for retirement communities, as well as for Social Security eligibility. This range, however, excluded baby boomers ages 56-61. While this control may have better defined the sample population in terms of targeting those nearing retirement, it may have also impacted the affinity for technology scores based on the

premise that younger baby boomers may be more reliant on technological innovations than older ones. By choosing to survey "pre-retirement" baby boomers (those still working), the study sample did not include those already retired. The results of the survey may vary in post-retirement compared with pre-retirement as baby boomers influences and tendencies may change in terms of what they desire in terms of desired PERMA outcomes, their affinity for technology, and preference in residential alternatives. The qualifying question "are you currently unpartnered" eliminated couples from participating in the study. The rationale was for this qualifier was based on the idea that with another potential caregiver in place (partner), the elements of PERMA could better be fulfilled while aging in place. Moreover, residential health care needs post-retirement would also be better handled which is an additional reason to not leave the current residence. According to *Pew Research Center*, while the number of "unpartnered" baby boomers (32%) is on the rise, this criterion still excludes two-thirds of the baby boomer generation (2017). Finally, the screening criteria of "generally in good health" was utilized so that respondents were not choosing to reside elsewhere due to specific medical issues. As baby boomers continue to age in post-retirement, health will likely deteriorate, and may ultimately change their preference in the post-retirement residential alternative. Although mentioned as potential limitations, the study sample was intentionally defined such that the sample population met criteria specifically suited to address the research questions.

Survey and questionnaire. As with many research studies, after reviewing respondent outcomes and related statistical analyses, potential refinements and improvements upon the survey and questionnaire are often identified. While several minor issues were addressed after the pilot study, other potential instrument enhancements could be made to enhance future studies and additional research. While necessary given the binary statistical measurement method (used

for **H1a-f**), the use of a single question may have proven limiting in determining the preferred post-retirement residential alternative due to the similarity in the response patterns. While the research model indicated significance through binary regression methods as related to the individual and collective elements of PERMA, additional questions may have provided more specificity (residence type and location) and detail (motivation and rationale) as to baby boomers specific intentions for their preferred post-retirement residential alternative which was not derived through nominal regression from the study's additional analysis included in Chapter 4.

History effects. As mentioned earlier when addressing the impact of the Covid-19 pandemic on the study outcomes, the research was conducted during the coronavirus. While this did not seemingly impact results, the "history effects" surrounding the study cannot be ignored. The American Psychological Association (APA) defines history effects as "the influence of events or circumstances outside an experiment on an outcome variable of interest" (2020, p. 1). History effects have an impact on a research study as they may affect the internal validity of the outcomes. Given the fact that the data collection portion of the study occurred during the Covid-19 pandemic, there are no "pre-fest" and "post-test" outcomes that could be a threat to the research. Further, because the study questionnaire specifically addressed and tested the Covid-19 issue as non-significant, the impact of history effects should be negligible. Additional consideration of Covid-19 may be warranted, however, and is addressed in the future research section of this chapter.

Recommendations for Future Research

There are several recommendations for future research based on the findings of this study. First, the age range of study respondents could be expanded. Although the oldest baby

boomers were surveyed (those up to age 74), studying the "silent generation" of the preceding group of retirees (those born between 1928-1945) to determine whether that older segment differed significantly in their preferences for post-retirement residential alternatives may prove beneficial due to philosophical differences between the two generations. This generation, however, is by and large retired, so studying them in the same manner may prove difficult. Unlike the baby boomer generation who tend to be more independent (Golant, 2017), the silent generation nomenclature is predicated on the belief that they are more conservative and tend to not express their opinions publicly (Cambridge, 2020). Although the characteristics of this group may tend to make them more reserved in their responses, their greater age than the baby boomer generation would likely result in a higher level of needs in terms of their post-retirement housing alternatives as the required level of care to promote well-being has a tendency to increase while aging. In their extensive work studying the PERMA elements, Butler and Kern assert that future work in this area should assess different age groups at different times as well as adding objective measures to capture historical events and social context (2016).

Second, because the desire to age-in-place was so pronounced, and retirement communities were not preferred by most respondents, both independent variables (PERMA and the moderating independent variable of affinity of technology), should be compared between those two distinct populations of retirees. This could be done with bifurcate populations or as two separate studies designed as a quasi-experiment using non-equivalent groups. By comparing those who have actually retired and selected their retirement residence, differences in the elements of PERMA and affinity technology could be assessed to determine whether the distinctions between the two populations are correlated with their selected post-retirement residential alternative. The measurement outcomes of such a study would provide the

opportunity to compare the influence of the perception of well-being of those aging-in-place with those residing in a retirement community. Further the moderating impact of affinity for technology could also be tested in those residing in the two differentiated environments to determine which setting is the most impactful on both PERMA and AFT.

Third, it would be useful to study the influence of technology on well-being post-implementation of the adaption of a significant technological innovation to determine its effect (positive or negative) on the elements of well-being as well as on an individual's affinity for technology. Since the survey results demonstrate a lower than average affinity for technology amongst this study's respondents, there may be a perceived bias to a specific technology pre-implementation that could potentially decrease after utilization. Doing so will better assess the efficacy of applying technology after the fact rather than predicting the importance of a potential solution prior to implementation. This would be especially important as new technologies emerge that can deliver services in lieu of personal alternatives.

Fourth, given the general propensity of baby boomers' desire to age-in-place, additional research as to what factors are the most influential in their decision to reside other than where they live now (and in particular, retirement communities) warrants further study. Historically, the primary reason for seniors to not age-in-place has been due to cost factors, health-related issue(s), and illness or death of a partner (Anh, Kwon, & Kang, 2020). For purposes of this research study, however, these variables were specifically controlled. That said, as this profile of baby boomer chooses to age-in-place, monitoring the impact of such a decision on the PERMA elements of well-being may be beneficial to see if there is, in fact, a decline in psychological well-being. This would likely have to be done on a longitudinal basis to determine whether the

impact of the decision to age-in-place is truly detrimental to PERMA well-being, especially as technological innovations to prolong aging-in-place continue to be introduced.

Finally, the long-term implications of the Covid-19 pandemic on the US health care system, and more specifically its impact on the retirement community segment, is yet to be determined. A recent *Harvard Business Review* article suggested three potential coronavirus outcomes; a "dream" case where everything goes well, a "catastrophic" case where everything goes badly, and a "middle" case where some things go well and others do not (Blumenthal, et al., 2020). Concurrently, retirement communities are reporting occupancy levels at or nearing historical lows (Sudo, 2020). Regardless of which of the possible scenarios occurs, there will be a lasting impact on how future generations view their retirement decisions, particularly as it relates to residential alternatives. Therefore, the importance of future research in this area has instantly accelerated, and the reliance on technological alternatives and solutions to meet the related challenges has also become more important as research topics.

Rather than choosing technology as an option, technology has become a necessity (even for those with a low affinity for technology). The corresponding relationship with the elements of well-being will also be impacted. For example, another result of Covid-19 that is likely is that the older population will pull-back from engagement in society (Horowitz, 2020). In turn, such a withdrawal from traditional daily activities may impact the other elements of PERMA which include positive emotion, relationships, meaning and a sense of accomplishment, all critical to achieving a sense of well-being.

Due to the unprecedented nature of this crisis, research opportunities addressing the impact will be boundless. Specificity of studies on the influence on the senior demographic will be critical as this group represents those that are the most vulnerable. Regardless of the

technological changes that will occur, the need to address the elements of well-being most influential in retirement will likely remain consistent. Therefore, additional research initiatives should be mindful of the importance of both variables on both current and future generations of retirees.

The results of this study suggest there is a relationship between the PERMA elements of well-being, singly and collectively, and the preferred post-retirement residential alternative. Further, when considering the impact of affinity for technology on these two variables, the hypothesis of moderation was not significant. Future research in these two areas is warranted as technological innovations continue to impact the delivery of the elements of well-being, and as baby boomers move through their retirement years, to consider the potential impact on their preferred post-retirement alternatives.

References

Ahn, M., Kwon, H. J., & Kang, J. (2020). Supporting aging-in-place ell: findings from a cluster analysis of the reasons for aging-in-place and perceptions of well-being. *Journal of Applied Gerontology*, *39*(1), 3-15.

Allison, P. (2012). *Logistic Regression Using SAS®: Theory and Application* (2nd ed.). Cary, NC: SAS Publishing.

Anderson, M., & Perrin, A. (2017). Tech adoption climbs among older adults. *Pew Research Center*, *2017*, 1-22.

Antonucci, T. C., Ajrouch, K. J., & Manalel, J. A. (2017). Social relations and technology: Continuity, context, and change. *Innovation in Aging*, *1*(3), igx029.

APA. (2020). American Psychological Association Dictionary of Psychology. Retrieved from https://dictionary.apa.org/history-effect

Argentum (2018). *Senior Living Employment Industry Trends.* Analysis of Data from the U.S. Bureau of Labor Statistics. Senior Living Employment and Workforce Trends. Retrieved from http://www.argentum.org

Asebedo, S. D., & Seay, M. C. (2014). Positive psychological attributes and retirement satisfaction. *Journal of Financial Counseling and Planning*, *25*(2), 161.

Balogh, P., & Krasz, K. (2017). Development of the Work-Related Well-Being Questionnaire Based on Seligman's PERMA Model. *Periodica Polytechnica. Social and Management Sciences*, *25*(1), 56-63.

Baltes, M. M., Maas, I., Wilms, H. U., & Borchelt, M. (2001). Everyday Competence in Old and Very Old Age: Theoretical Considerations and Empirical Findings. In P. B. Baltes & K.

U. Mayer (Eds.), *The Berlin Aging Study: Aging from 70 to 100* (pp. 384-402). Cambridge University Press.

Beach, S., Schulz, R., Bruin, W., Bruine, D., Downs, J., Musa, D., & Matthews, J. (2008, October). Privacy attitudes and quality of life technology in disabled and non-disabled baby boomers and older adults. In *Gerontologist* (Vol. 48, pp. 23-24). Washington, DC: Gerontological Society of America.

Binette, J., Vasold, K. (2018). 2018 Home and Commuity Preferences: A National Survey of Adults Ages 18-Plus. *American Association of Retired Persons Research*. Washington, D.C. Retreived from https://doi.org/10.26419/res.00231.001

Blanchard, J. (2013). Aging in community: Communitarian alternative to aging in place, alone. *Generations*, *37*(4), 6-13.

Blanchflower, D. G., & Oswald, A. J. (2004). Well-being over time in Britain and the USA. *Journal of Public Economics*, *88*(7-8), 1359-1386.

Blaschke, C. M., Freddolino, P. P., & Mullen, E. E. (2009). Ageing and technology: A review of the research literature. *British Journal of Social Work*, *39*(4), 641-656.

Blumenthal, D., Schneider, E., Seervai, S., & Shah, A. (2020). 3 Scenarios for How the Pandemic Could Change U.S. Health Care. *Harvard Business Review*. Harvard Press. Cambridge, MA. July 24. Retrieved from https://hbr.org/2020/07/3-scenarios-for-how-the-pandemic-could-change-u-s-health-care

Bockerman, P., Johansson, E., & Saarni, S. (2012). Institutionalisation and subjective wellbeing for old-age individuals: Is life really miserable in care homes? *Ageing and Society*, *2*(7), 1176-1192. doi:10.1017/S0144686X1100081X.

Bolton, R.N., McColl-Kennedy, J.R., Cheung, L., Gallan, A., Orsingher, C., Witell, L. & Zaki, M. (2018). Customer experience challenges: bringing together digital, physical and social realms. *Journal of Service Management, Vol. 29 No. 5*, 776-808.

Bonvissuto, K. (2020). New technology aims to improve quality of life for socially isolated older adults during COVID-19 pandemic. McKinght's Senior Living. May 27. Retrieved from https://www.mcknightsseniorliving.com/home/news/product-news/new-technology-aims-to-improve-quality-of-life-for-socially-isolated-older-adults-during-covid-19-pandemic/

Breeding, B. (2019). Will Aging in Place Soon Become a Thing of the Past? Retrieved from https://www.mylifesite.net/blog/post/aging-place-thing-of-the-past/

Butler, J. (2011). *Measuring facets of human flourishing: Developing the well-being theory questionnaire.* (Unpublished master's thesis). University of Pennsylvania, Philadelphia, PA.

Butler, J., & Kern, M. L. (2016). The PERMA-Profiler: A brief multidimensional measure of flourishing. *International Journal of Wellbeing*, *6*(3).

Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social psychology*, *42*(1), 116.

Cambridge. (2020). *Silent majority*. Cambridge Advanced Learner's Dictionary. Retreived from://dictionary.cambridge.org/dictionary/british/silent-majority

Cambridge. (2020). *Generation X*. Cambridge Advanced Learner's Dictionary. Retreived from: https://dictionary.cambridge.org/dictionary/english/generation-x

Carpenter-Aeby, V., Castro, A., Newsome, S., & Teel, S. (2017). Exploring the quality of life for baby boomers using a systematic literature review. *Med Press*, *1*(1), 4-11.

Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional Selectivity Theory and the Regulation of Emotion in the Second Half of Life. *Motivation and Emotion, 27(2),* 103-123.

CBRE (2019). Senior Housing Market Insight. [pdf]. Retrieved from http://www.cbre.us/real-estate-services/real-estate-industries/seniors-housing

Centers for Disease Control and Prevention. (2013). *The State of Aging and Health in America 2013.* Atlanta, GA: US Dept of Health and Human Services.

Centers for Medicare and Medicaid Services. (2020). Covid-19 Nursing Home Data. June 28, 2020. Baltimore, MD. Retrieved from https://data.cms.gov/stories/s/COVID-19-Nursing-Home-Data/bkwz-xpvg/

Chang, T. Z. D., & Vowles, N. (2013). Strategies for improving data reliability for online surveys: A case study. *International Journal of Electronic Commerce Studies*, *4*(1), 121-130.

Christensen, L. B., Johnson, B., Turner, L. A., & Christensen, L. B. (2011). *Research Methods, Design, and Analysis*. Pearson.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155.

Colby, S., & Ortman, J. (2014) *The Baby Boom Cohort in the United States: 2012 to 2060.* (Current Population Reports, pp. 25-1141). Washington, DC: U.S. Census Bureau

Cordier, T., Song, Y., Cambon, J., Haugh, G. S., Steffen, M., Hardy, P., . . . Renda, A. (2018). A bold goal: More healthy days through improved community health. *Population Health Management, 21,* 202-208. doi:10.1089/pop.2017.0142

Costanza, R., Fisher, B., Ali, S., Beer, C., Bond, L., Boumans, R., & Gayer, D. E. (2007). Quality of life: An approach integrating opportunities, human needs, and subjective well-being. *Ecological Economics*, *61*(2-3), 267-276.

Danner, D. D., Snowdon, D. A., & Friesen, W. V. (2001). Positive emotions in early life and longevity: findings from the nun study. *Journal of Personality and Social Psychology, 80*(5), 804.

Davey, J., Nana, G., de Joux, V., & Arcus, M. (2004). Accommodation options for older people in Aotearoa/New Zealand. Wellington, New Zealand: NZ Institute for Research on Ageing/Business & Economic Research Ltd, for Centre for Housing Research Aotearoa/New Zealand.

Davis, F. D. (1985). *A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results* (Doctoral dissertation). Massachusetts Institute of Technology. Retrieved from mit.edu

Demiris, G., Rantz, M. J., Aud, M. A., Marek, K. D., Tyrer, H. W., Skubic, M., & Hussam, A. A. (2004). Older adults' attitudes towards and perceptions of 'smart home' technologies: a pilot study. *Medical Informatics and the Internet in Medicine, 29*(2), 87-94.

De Neve, J. E., Diener, E., Tay, L., & Xuereb, C. (2013). The objective benefits of subjective well-being. *World Happiness Report*.

Department of Housing and Urban Development. (2019). *Information for Senior Citizens, 2019.*

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*(3), 542.

Diener, E. (2012). New findings and future directions for subjective well-being research. *American Psychologist, 67*(8), 590.

Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49* (1), 71-75.

Diener, E., & Ryan, K. (2009). Subjective Well-Being: A General Overview. *South African Journal of Psychology, 39*(4), 391–406. https://doi.org/10.1177/008124630903900402

Douma, L., Steverink, N., Hutter, I., & Meijering, L. (2017). Exploring Subjective Well-being in Older Age by Using Participant-generated Word Clouds. *Gerontologist, 57*(2), 229-239.

Ehrhardt, J. J., Saris, W. E., & Veenhoven, R. (2000). Stability of life-satisfaction over time. *Journal of Happiness Studies, 1*(2), 177-205.

Essén, A., & Östlund, B. (2011). Laggards as innovators? Old users as designers of new services & service systems. *International Journal of Design*, *5*(3).

Evans, G. W., Kantrowitz, E., & Eshelman, P. (2002). Housing quality and psychological well-being among the elderly population. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences, 57, 4*, 381-383.

Ewen, H. H., Hahn, S. J., Erickson, M. A., & Krout, J. A. (2014). Aging in place or relocation? Plans of community-dwelling older adults. *Journal of Housing for the Elderly*, *28*(3), 288-309.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160.

Ferguson, S., & Goodwin, A. (2010). Optimism and Well-Being in Older Adults: The Mediating Role of Social Support and Perceived Control. *The International Journal of Aging and Human Development, 71*(1), 43-68.

Firth, D. (1993). Bias reduction of maximum likelihood estimates. Biometrika 80, 27–38. doi: 10.1093/biomet/80.1.27.

Franke, T., Attig, C., & Wessel, D. (2019). A personal resource for technology interaction: development and validation of the affinity for technology interaction (ATI) scale. *International Journal of Human–Computer Interaction*, *35*(6), 456-467.

Gallup-Healthways (2015). State of Well-Being Ranking for Older Americans. *State of American Well-Being,* 2.

George, L. (2009). Still Happy After All These Years: Research Frontiers on Subjective Well-being in Later Life. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 65B* (3), 331-339.

Golant, Stephen. (2017). Self-Reliant Older Baby Boomers: Are Now Better Connected to Goods, Services, and Care. *Generations* 41.2: 79-87. Web.

Goodman, F. R., Disabato, D. J., Kashdan, T. B., & Kauffman, S. B. (2018). Measuring well-being: A comparison of subjective well-being and PERMA. *The Journal of Positive Psychology, 13*(4), 321-332.

Grant, P. (2019). A Once-Hot Bet on Housing for Seniors Is Cooling Off. *The Wall Street Journal*. November 14. A1.

Hair J.F., Hult G.T., Ringle C.M., & Starstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (SEM)*. (2nd Ed.). Sage Publications.

Heisler, E., Evans, G. W., & Moen, P. (2003). Health and social outcomes of moving to a continuing care retirement community. *Journal of Housing for the Elderly, 18*(1), 5-23.

Herbers, D. J., & Mulder, C. H. (2017). Housing and subjective well-being of older adults in Europe. *Journal of Housing and the Built Environment, 32*(3), 533-558.

Herzog, A. R., & Rodgers, W. L. (1981). Age and satisfaction: Data from several large surveys. *Research on Aging, 3,* 142-165.

Herzog, A. R., Rodgers, W. L., & Woodworth, J. (1982). *Subjective well-being among different age groups*. Ann Arbor, MI: Survey Research Center, Institute for Social Research, University of Michigan.

Hettler, B. (1976). *The Six Dimensions of Wellness Model.* National Wellness Institute, Inc., MD.

Hirsch, T., Forlizzi, J., Hyder, E., Goetz, J., Stroback, J. & Kurtz, C. (2000). *The Elder Project: Social and Emotional Factors in the Design of Eldercare Technologies.* Proceedings of the 2000 Conference on Universal Usability, pp. 72–80. Virginia: ACM Press.

Hogan, H., Perez, D. & Bell, W (2008). *Who (Really) are the First Baby Boomers?* In Joint Statistical Meetings Proceedings, Social Statistics Section (pp. 1009-1016). Alexandria, VA: American Statistical Association.

Holden, R. J., & Karsh, B. T. (2010). The technology acceptance model: its past and its future in health care. *Journal of Biomedical Informatics, 43*(1), 159-172.

Holt-Lunstad, J., Smith, T., Layton, J., & Brayne, C. (2010). Social Relationships and Mortality Risk: A Meta-analytic Review (Social Relationships and Mortality). *PLoS Medicine, 7*(7), E1000316.

Horley, J., & Lavery, J. J. (1995). Subjective well-being and age. *Social Indicators Research, 34,* 275-282Horowitz, B. (2020). What a post-vaccine world looks like for seniors: It's time to learn telemed. Oh, and how you travel will change. *Kaiser Health News*. August.

Hough, M. G. (2004). Exploring Elder Consumers Interactions with Information Technology. *Journal of Business & Economics Research (JBER), 2*(6). https://doi.org/10.19030/jber.v2i6.2893.

Jan-Emmanuel, D. N., Diener, E., Tay, L., & Xuereb, C. (2013). *The Objective Benefits of Subjective Well-Being*. St. Louis, MO: Federal Reserve Bank of St Louis. Retrieved from http://ezproxy.rollins.edu:2048/login?url=https://search-proquest-com.ezproxy.rollins.edu/docview/1698361010?accountid=13584

Jayawickreme, E., Forgeard, M. J. C., & Seligman, M. E. P. (2012). The Engine of Well-Being. *Review of General Psychology*, *16*(4), 327–342. https://doi.org/10.1037/a0027990

JLL (2020). *Investor Survey and Trends – Covid 19 Update*. JLL Research Report – Senior Housing and Care. Spring. [pdf]. Retrieved from https://www.us.jll.com/en/industries/seniors-housing

Johanson, G. A., & Brooks, G. P. (2010). Initial scale development: sample size for pilot studies. *Educational and Psychological Measurement, 70*(3), 394-400.

Johnson, K. N., Johnson, J. H., & Sarafan, L. (2011). *The Handbook of Live-in Care: A Guide for Caregivers.* Home Care Press

Jolliffe, I. T. (1986). Principal components in regression analysis. In *Principal Component Analysis* (pp. 129-155). New York, NY: Springer

Kahneman, D., Diener, E., & Schwarz, N. (Eds.). (1999). *Well-being: Foundations of Hedonic Psychology*. Russell Sage Foundation.

Kahneman, D., & Krueger, A.B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives, 20,* 3-24.

Kark, K. Briggs, B., Terzioglu, A., Puranik, M. (2019). *Deloitte Insights: The Future of Work in Technology.* Deloitte Development LLC.

Kern, M. L., Waters, L. E., Adler, A., & White, M. A. (2015). A multidimensional approach to measuring well-being in students: Application of the PERMA framework. *The Journal of Positive Psychology*, *10*(3), 262-271.

Kim, J. E., & Moen, P. (2001). Is retirement good or bad for subjective well-being? *Current Directions in Psychological Science*, *10*(3), 83-86.

King G., & Zeng, L. (2001). “Logistic Regression in Rare Events Data.” *Political Analysis 9* 137-163.

Krosnick, J. A., & Presser, S. (2010). *Handbook of Survey Research*. P. V. Marsden & J. D. Wright (Eds.). Bingley, UK: Emerald Group Publishing.

Kun, A, Balogh, P., & Krasz, K. G. (2017). Development of the work-related well-being questionnaire based on Seligman's PERMA model. *Periodica Polytechnica. Social and Management Sciences, 25*(1), 56-63. doi: http://dx.doi.org.ezproxy.rollins.edu:2048/10.3311/PPso.9326

Kusisto, L. (2019). OK Boomer, Who’s Going to Buy Your 21 Million Homes? *The Wall Street Journal*. November 23. B1.

Larson, R. (1978). Thirty years of research on the subjective well-being of older Americans. *Journal of Gerontology, 33,* 109-125.

Lee, C., & Joseph F. Coughlin, J. F. (2015). Perspective: Older Adults' Adoption of Technology: An Integrated Approach to Identifying Determinants and Barriers. *Journal of Product Innovation Management* 32.5, 747-759.

Lightsey, O. R. Jr. (2006). Resilience, meaning, and well-being. *The Counseling Psychologist, 34*(1), 96-107.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*.

Lindert, J., Bain, P., Kubzansky, L., & Stein, C. (2010). Well-being measurement and the WHO health policy Health 2010: systematic review of measurement scales. *European Journal of Public Health, Volume 25, Issue 4, August 2015*, 731–740, https://doi.org/10.1093/eurpub/cku193

Lodi-Smith, J., & Roberts, B. W. (2012). Concurrent and prospective relationships between social engagement and personality traits in older adulthood. *Psychology and Aging, 27*(3), 720.

Lorenzen-Huber, L., Boutain, M., Camp, L., Shankar, J., & Connelly, K. (2011). Privacy, Technology, and Aging: A Proposed Framework. *Ageing International, 36*(2), 232-252.

Magnusson, L., Hanson, E., & Borg, M. (2004). A literature review study of information and communication technology as a support for frail older people living at home and their family carers. *Technology and Disability*, *16* (4), 223-235.

Maples, M. (2002). *Holistic Adult Development: A Spirituality Perspective*. Paper presented at the Connection of the Association for Counselor Education and Supervision. San Antonio, TX.

Mather Institute. (2019). *The Age Well Study: Comparing Wellness Outcomes in Life Plan Communities vs. the Community-at-Large*. October. Evanston, IL: Mather Lifeways.

Michaelson, J., Mahoney, S., & Schifferes, J. (2012). *Measuring Well Being: A Guide for Practitioners.* London, UK: New Economics Foundation.

Mirehie, M., & Gibson, H. J. (2020). The relationship between female snow-sport tourists' travel behaviors and well-being. *Tourism Management Perspectives*, *33*, 100613.

Mitzner, T. L., Rogers, W. A., Fisk, A. D., Boot, W. R., Charness, N., Czaja, S. J., & Sharit, J. (2016). Predicting older adults' perceptions about a computer system designed for seniors. *Universal Access in the Information Society*, *15*(2), 271-280.

Moen, P., & Erickson, M. A. (2001). Chapter 3 decision-making and satisfaction with a continuing care retirement community. *Journal of Housing for the Elderly, 14*(1-2), 53-69.

Mongrain, M., & Anselmo-Matthews, T. (2012). Do positive psychology exercises work? A replication of Seligman et al. *Journal of Clinical Psychology*, *68*(4).

Muldoon, M. F., Barger, S. D., Flory, J. D., & Manuck, S. B. (1998). What are quality of life measurements measuring? *BMJ*, *316*(7130), 542.

Murphy, S. L., Xu, J., Kochanek, K. D., & Arias, E. (2018). Mortality in the United States, 2017. *NCHS Data Brief*, (328), 1–8.

Nagelkerke, N. J. (1991). A note on a general definition of the coefficient of determination. *Biometrika*, *78*(3), 691-692.

National Academies of Science, Engineering, Medicine. (2019). *Artificial Intelligence Applications for Older Adults and People with Disabilities: Balancing Safety and Autonomy: Proceedings of a Workshop in Brief.* Washington, DC: The National Academies Press. https://doi.org/10.17226/25427

National Council on Aging (2012). *The United States of Aging Survey – National Survey.* Washington, DC: National Council of Aging

Nieboer, A., & Cramm, J. (2018). How Do Older People Achieve Well-being? Validation of the Social Production Function Instrument for the Level of Well-being–short (SPF-ILs). *Social Science & Medicine* 211: 304. Web.

Norrish, J. M., & Seligman, M. E. (2015). *Positive education: The Geelong Grammar School Journey*. Oxford Positive Psychology Series.

Novotney, J. (2020). Covid-19 may force positive changes, improved outcomes in senior living. McNight's Senior Living. August 21. Retrieved from https://www.mcknightsseniorliving.com/home/news/business-daily-news/covid-19-may-

force-positive-changes-improved-outcomes-in-senior-living/?mpweb=1326-11286-614178

O'Brien, C. J., Smith, J. L., & Beck, D. E. (2016). Real relationships in a virtual world: Social engagement among older adults in Second Life. *Gerontechnology*, *15*, 171-179.

Orlov, L. (2019). Technology for Aging in Place – 2019 Market Overview. *Aging in Place Technology Watch*. Retreived March 28, 2020 from http://www.ageinplacetech.com

Oswald, F., Wahl, H., Schilling, O., Nygren, C., Fange, A., Sixsmith, A., & Iwarsson, S. (2007). Relationships between housing and healthy aging in very old age. *The Gerontologist, 47, 1,* 96-107

Pang, G. (2011). Good strategies for wealth management and income production in retirement. *Retirement Income,* 163-177. doi:10.7551/mitpress/9780262016933.003.0007

Pavot, W., & Diener, E. (2008). The Satisfaction with Life Scale and the Emerging Construct of Life Satisfaction. *The Journal of Positive Psychology Vol. 3, No. 2, April*, 137-152.

Peek, S. T., Wouters, E. J., Van Hoof, J., Luijkx, K. G., Boeije, H. R., & Vrijhoef, H. J. (2014). Factors influencing acceptance of technology for aging in place: A systematic review. *International Journal of Medical Informatics*, *83*(4), 235-248.

Peek, S. T. M., Luijkx, K. G., Vrijhoef, H. J. M., Nieboer, M. E., Aarts, S., van der Voort, C. S., Wouters, E. J. M. (2017). Origins and consequences of technology acquirement by independent-living seniors: Towards an integrative model. *BMC Geriatrics*, *17*(1). Retrieved from http://link.galegroup.com.ezproxy.rollins.edu:2048/apps/doc/A511271407/AONE?u=wint47629&sid=AONE&xid=5719965a

Perkins Eastman. (2019). *They State of Senior Living: An Industry Grappling with Autonomy*. Perkins Eastman Research Report. [pdf]. Retrieved from https://www.

perkinseastman.com/publicationsPew Research Center. (2017). A growing share of Americans are ‘unparntered’. Current Population Survey, Annual Social and Economic Supplement. Retrieved from https://www.pewresearch.org/fact-tank/2017/10/11/the-share-of-americans-living-without-a-partner-has-increased-especially-among-young-adults/

Pew, R. W., Van Hemel, S. B., Cognitive National Research Council (US) Board on Behavioral (and s), & Pew, R. W. (2004). *Technology for adaptive aging*. Washington, DC: National Academies Press.

Pinquart, M. (2002). Creating and maintaining purpose in life in old age: A meta-analysis. *Ageing International*, *27*(2), 90-114.

Pinquart, M., & Schindler, I. (2007). Changes of Life Satisfaction in the Transition to Retirement: A Latent-Class Approach. *Psychology and Aging*, *22*(3), 442-455.

Preacher, K. J., Rucker, D. D., MacCallum, R. C., Nicewander, W. A. (2005). Use of the extreme groups approach: a critical reexamination and new recommendations. *Psychological methods*, *10*(2), 178.

Qualtrics^{XM}. (2020). https://www.qualtrics.com/research-services/

Rashid, T., & Seligman, M. P. (2018). *Positive Psychotherapy: Clinician Manual*. Oxford University Press.

Rowe, J. W., & Kahn, R. L. (1987). Human Aging: Usual and Successful. *Science*, *237 (4811)*, 143-149. http://dx.doi.org/10.1126/science.3299702

Russell, L. B. (1982). *The Baby Boom Generation and the Economy*. Washington, DC: Brookings Institution.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*(1), 141-166.

Ryff, C. (1989). Happiness Is Everything, or Is It? Explorations on the Meaning of Psychological Well-Being. *Journal of Personality and Social Psychology, 57*(6), 1069-1081.

Ryff, C. D., Heller, A. S., Schaefer, S. M., Van Reekum, C., & Davidson, R. J. (2016). Purposeful engagement, healthy aging, and the brain. *Current Behavioral Neuroscience Reports, 3*(4), 318-327

Schrum, M. L., Johnson, M., Ghuy, M., & Gombolay, M. C. (2020). Four Years in Review: Statistical Practices of Likert Scales in Human-Robot Interaction Studies. *arXiv preprint arXiv:2001.03231*.

Schulz, R., Beach, S. R., Matthews, J. T., Courtney, K., Devito Dabbs, A., Person Mecca, L., & Sankey, S. S. (2014). Willingness to pay for quality of life technologies to enhance independent functioning among baby boomers and the elderly adults. *The Gerontologist, 54*(3), 363-374.

Seligman, M. (2011). *Flourish: A Visionary New Understanding of Happiness and Well-Being* (1st Free Press hardcover ed.). New York: Free Press.

Seligman, M. (2018). PERMA and the building blocks of well-being. *The Journal of Positive Psychology 13.4*: 333-335.

Sixsmith, J., Sixsmith, A., Fänge, A. M., Naumann, D., Kucsera, C. S. A. B. A., Tomsone, S., Woolrych, R. (2014). Healthy Ageing and Home: The Perspectives of Very Old People in Five European Countries. *Social Science & Medicine, 106*, 1-9.

Slavin, S. J., Schindler, D., Chibnall, J. T., Fendell, G., & Shoss, M. (2012). PERMA: A model for institutional leadership and culture change. *Academic Medicine, 87*(11), 1481.

Small, B. J., Dixon, R. A., McArdle, J. J., & Grimm, K. J. (2012). Do changes in lifestyle engagement moderate cognitive decline in normal aging? Evidence from the Victoria Longitudinal Study. *Neuropsychology, 26*(2), 144.

Smith, A. (2014). Older Adults and Technology Use. *Pew Research Center*, April 3.

Snowdon, D. A., Greiner, L. H., Mortimer, J. A., Riley, K. P., Greiner, P. A., & Markesbery, W. R. (1997). Brain infarction and the clinical expression of Alzheimer disease: The Nun Study. *Jama*, *277* (10), 813-817.

Social Security Administration. (2015) Life Expectancy Calculator. *Retirement & Survivors Benefits.* Retrieved from https://www.ssa.gov/OACT/population/longevity.html.

Sokoler, T., & Svensson, M. (2007). Embracing ambiguity in the design of non-stigmatizing digital technology for social interaction among senior citizens. *Behavior and Information Technology, 26*(4), 297-307.

Solnet, D., Subramony, M., Ford, R. C., Golubovskaya, M., Kang, H. J., & Hancer, M. (2019). Leveraging human touch in service interactions: lessons from hospitality. *Journal of Service Management*.

Steger, M. F. (2012). Experiencing meaning in life: Optimal functioning at the nexus of spirituality, psychopathology, and wellbeing. In P. T. P. Wong (Ed.), *The Human Quest for Meaning* (2nd ed., pp. 165-184). New York, NY: Routledge.

Steptoe, A., & Wardle, J. (2011) Positive affect measured using ecological momentary assessment and survival in older men and women. *PNAS: Proceedings of National Academy of Sciences, 108(45),* 18244-18248.

Stock, W.A., Okun, M.A., Haring, M.J., & Witter, R.A. (1983). Age and subjective well-being: A meta-analysis. In R.J. Light (Ed.) *Evaluation Studies: Review Annual* (pp. 279-302). Beverly Hills, CA: Sage.

Stone, A. (2017). Managing the Biggest Community Expenses: Labor, Food, Energy. *Argentum, Expanding Senior Living*. Retrieved from https://www.argentum.org/magazine-articles/managing-food-labor-energy-costs-senior-living-communities/

Sun, J., Kaufman, S., & Smillie, L. (2018). Unique Associations Between Big Five Personality Aspects and Multiple Dimensions of Well-Being. *Journal of Personality, 86*(2), 158-172.

Sudo, C. (2020). Senior Housing Occupancy Falls At Fastest Since April. *Senior Housing News*. August. Retrieved from https://seniorhousingnews.com/2020/08/18/

Tay, L., Tan, K., Diener, E., & Gonzalez, E. (2012). Social Relations, Health Behaviors, and Health Outcomes: A Survey and Synthesis. *Applied Psychology: Health and Well-being, 5(1)*, 28-78. http://dx.doi.org/10.1111/aphw.12000

Testa, M. A., & Simonson, D. C. (1996). Assessment of quality-of-life outcomes. *New England Journal of Medicine*, *334*(13), 835-840.

Thomas, W., & Blanchard, J. (2009). Moving Beyond Place: Aging in Community. *Generations, 33*(2), 12-17.

Tomita, M. R., Mann, W. C., Stanton, K., Tomita, A. D., & Sundar, V. (2007). Use of currently available smart home technology by frail elders: process and outcomes. *Topics in Geriatric Rehabilitation*, *23*(1), 24-34.

Topol, E. (2019). *Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again.* New York: Basic Books.

U.S. Census Bureau. (2012). National Population Projections. Washington, DC. 2012a. www.census .gov/population/projections /data/national/2012.html, accessed May 20, 2013.

U.S. Census Bureau. (2017). Washington, D.C. <www.census.gov/popest/data /index.html>, accessed May 20, 2013.

Van Malderen, L., Mets, T., & Gorus, E. (2013). Interventions to Enhance the Quality of Life of Older People in Residential Long-Term Care: A Systematic Review. *Ageing Research Reviews, 12*(1), 141-150.

Van Teijlingen, E. R., & Hundley, V. (2001). The importance of pilot studies. *Social Research Update*, (35).

Walsh, K., & Callan, A. (2011). Perceptions, Preferences, and Acceptance of Information and Communication Technologies in Older-Adult Community Care Settings in Ireland: A Case-Study and Ranked-Care Program Analysis. *Ageing International*, *36*(1), 102-122.

Wiesmann, U., & Hannich, H. (2008). A Salutogenic View on Subjective Well-Being in Active Elderly Persons. *Aging & Mental Health, 12*(1), 56-65.

Wiles, J. L., Leibing, A., Guberman, N., Reeve, J., & Allen, R. E. (2012). The meaning of "aging in place" to older people. *The Gerontologist*, *52*(3), 357-366.

Williamson K, Bannister M, Makin L, Johanson G, Schauder D, Sullivan J. (2006). 'Wanting it now': baby boomers and the public library of the future. *Australian Library Journal. 55(1)*: 54-72. doi: 10.1080/00049670.2006.10721811

Wilson, W. (1967). Correlates of Avowed Happiness. *Psychological Bulletin, 67*(4), 294-306.

Wiseman, R. F., & Roseman, C. C. (1979). A typology of elderly migration based on the decision-making process. *Economic Geography*, *55*(4), 324-337.

Woolhead, G., Calnan, M., Dieppe, P., & Tadd, W. (2004). Dignity in older age: what do older people in the United Kingdom think? *Age and Ageing*, *33*(2), 165-170.

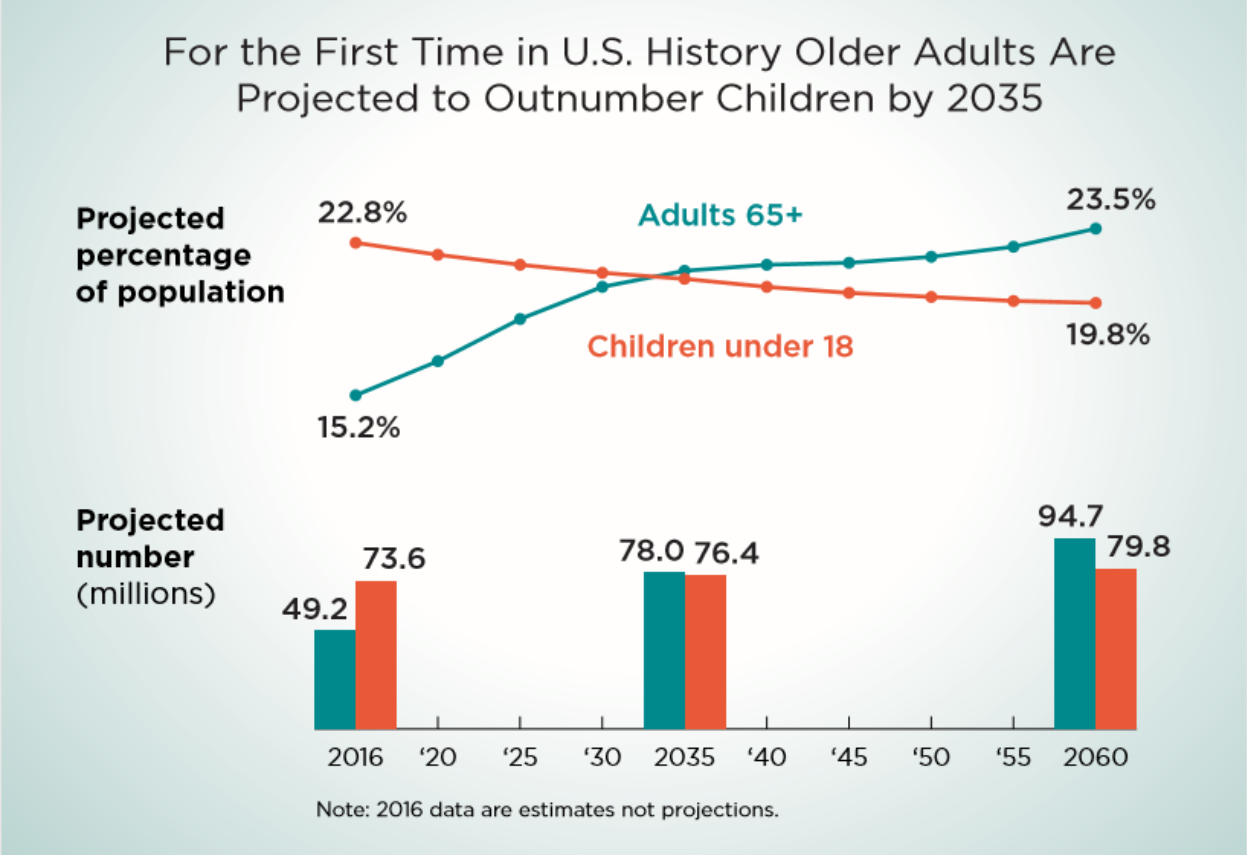
Wright, K. B. (2005). Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, *10*(3), JCMC1034. https://doi.org/10.1111/j.1083-6101.2005.tb00259.x

Wurm, S., & Benyamini, Y. (2014). Optimism buffers the detrimental effect of negative self-perceptions of ageing on physical and mental health. *Psychology & Health*, *29*, 832-848.

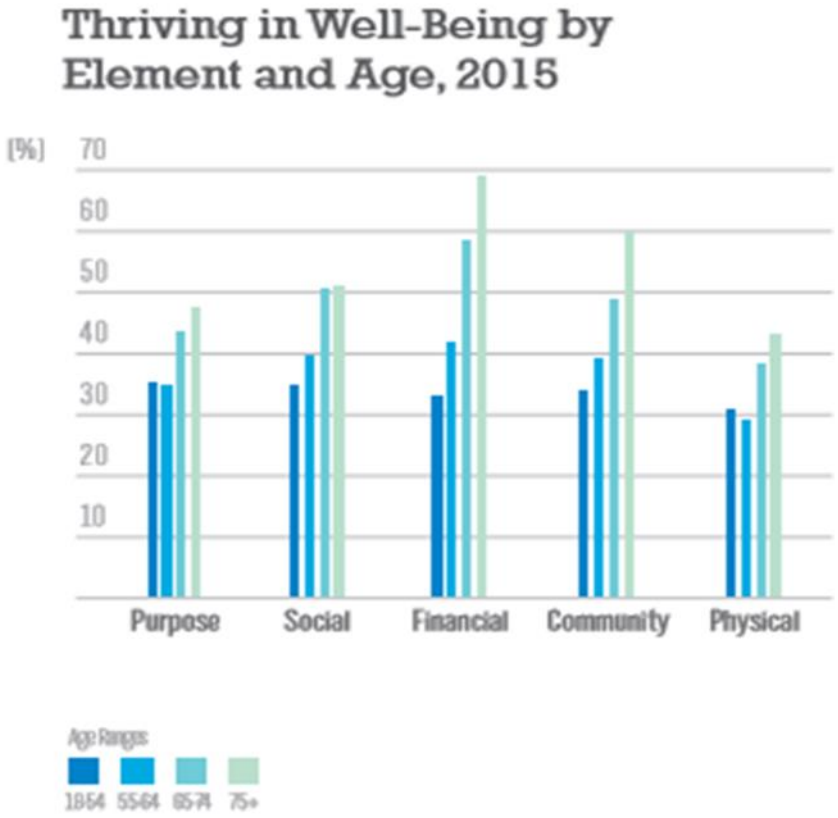
Wynder, E. COVID-19 pushes seniors toward independent living sites. *Grand Rapids Business Journal*. July 10.

Zion, A., Gardea, M., Jurgens, P., Hollman, T. (August 7, 2019). Does "Life Plan Community" Really Resonate with Prospects? *Zion & Zion.* Retrieved from https://www.zionandzion.com/research/does-life-plan-community-really-resonate-with-prospects/.

Appendix A – Senior Population Projections



Appendix B – Thriving in Well-Being by Element

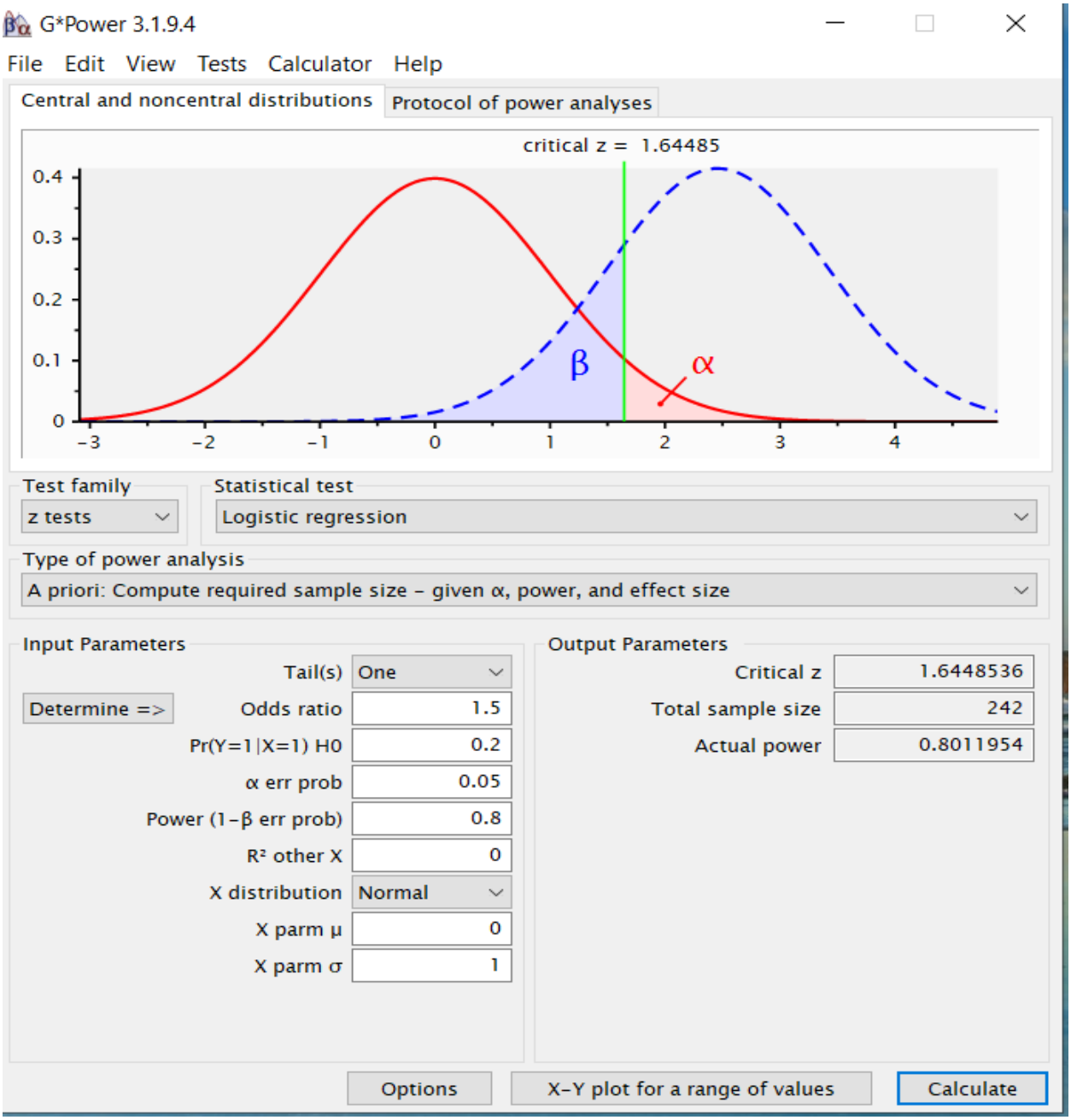


Appendix C – Classifications of Retirement Communities

	Multi-Family	Congregate Care			Healthcare
	Senior Apartments	Independent Living	Assisted Living	Memory Care	Nursing Care
Building Facility	Similar to apartments but may have special access and common area designs.	Similar to apartments but has commercial kitchen, dining room and additional common area amenities.	Most units do not have a full kitchen, only dorm room size refrigerator and microwave. Many units are studios.	Units do not have a full kitchen, only dorm room size refrigerator and microwave. Many units are studios.	Units resemble hotel rooms and many rooms have shared occupancy.
Ideal Building Size	60 to 200 Units	100 to 150 Units	80+ Units	24 to 36 Units	120 Beds (70 Units)
Resident Entry Age [1]	55 to 75	75 to 84 (avg. 80.6)	75 to 85 (avg. 87)	Included with assisted living	80 to 90
Percent Revenue from Services [2]	0%	45%	65%	Included with assisted living	75%
Typical Services Provided	Organized social activities.	Restaurant-style dining, social activities, weekly housekeeping, laundry and transportation.	Independent living services plus assistance with bathing, eating and dressing; medication reminders (no administration of medicine).	Assisted living services plus special behavior/memory care, secured access only.	Assisted living services plus administration of medications. 24 hour care by RA, RN licensed personnel.
Average Length of Stay [3]	5 to 12 Years	2.0 to 3.6 Years	1.2 to 3.0 Years	1.3 to 2.7 Years	30 Days to 2 Years
Average Monthly Rent [4]		$3,183	$4,820	$6,434	$9,632
Trailing 47 Quarter Avg. Stabilized Occupancy / Avg. Current Quarter Stabilized [4] Occupancy		90.3%/92.0%	90.4%/89.5%	90.3%/87.9%	89.0%/86.6%
Total Units/Beds in Inventory [4]		268,435	230,570	72,994	583,302
Number of Units/ Beds Under Construction [4]		11,358	14,740	7,862	3,721
Construction vs. Inventory [4]		4.2%	6.4%	10.8%	0.6%
Penetration Rate of 75+ Households [5] [6]		6.1% IL/4.5% CCRC	4.9%	Included with assisted living	11.0%

CBRE (2019)

Appendix D – Sample Size Calculation



Appendix E – Survey Questionnaire

PERMA Questions (Part I) (Butler & Kern, 2016). Eleven-point Likert.

1. A1 How much of the time do you feel you are making progress towards accomplishing your goals?
2. E1 How often do you become absorbed in what you are doing?
3. P1 In general, how often do you feel joyful?
4. A2 How often do you achieve the important goals you have set for yourself?
5. M1 In general, to what extent do you lead a purposeful and meaningful life?
6. R1 To what extent do you receive help and support from others when you need it?
7. M2 In general, to what extent do you feel that what you do in your life is valuable and worthwhile?
8. E2 In-general, to what extent do you feel excited and interested in things?
9. P2 In-general, how often do you feel positive?
10. A3 How often are you able to handle your responsibilities?
11. E3 How often do you lose track of time while doing something you enjoy?
12. R2 To what extent do you feel loved?
13. M3 To what extent do you generally feel you have a sense of direction in your life?
14. R3 How satisfied are you with your personal relationships?
15. P3 In-general, to what extent do you feel contented?

Tripartite Model of Well-Being (Part I) (Diener, 1984).

A. Satisfaction with Life Scale (SWLS) (Diener et al., 1985). Eleven-point Likert.

16. SWL In most ways my life is close to my ideal.
17. SWL The conditions of my life are excellent.
18. SWL I am satisfied with my life.
19. SWL So far, I have gotten the important things I want in life.
20. SWL If I could live my life over, I would change almost nothing.

B. Negative Affect (Part I) (Diener & Emmons, 1985). Eleven -point Likert.

21. NEG In-general, how often do you feel anxious?
22. NEG In-general, how often do you feel angry?
23. NEG In-general, how often do you feel sad?

C. Positive Affect (Part I) (Diener & Emmons, 1985). Eleven -point Likert.

24. POS Taking all things into consideration, how happy would you say you are?

Health (Part I) (Butler & Kern, 2016). Eleven-point Likert.

25. HEL In general, how would you say your health is?
26. HEL How satisfied are you with your physical health?
27. HEL Compared to others of your same age and sex, how is your health?

Technological Innovation (Part II) ATI Scale (Franke, Attig, & Wessel, 2019). Six-point Likert.

28. I like to occupy myself in greater detail with technical systems.
29. I like testing the functions of new technical systems.

30. I predominantly deal with technical systems because I have to.
31. When I have a new technical system in front of me, I try it out intensively.
32. I enjoy spending time becoming acquainted with a new technical system.
33. It is enough for me that a technical system works; I don't care how or why.
34. I try to understand how a technical system exactly works.
35. It is enough for me to know the basic functions of a technical system.
36. I try to make full use of the capabilities of a technical system.

Preferred Post-Retirement Residential Alternative (Part III)

37. When I retire, I plan to reside where I live now (age-in-place). Eleven-point Likert strongly disagree – strongly agree.

38. Based on what I've learned about Covid-19, I prefer to live where I live now. Eleven-point Likert strongly disagree – strongly agree.

39. My preferred place to live after retirement, is to reside a) in my current geographic location b) closer to my family c) in a retirement destination d) other (please specify)
40. My preferred place to live after retirement, is to reside a) in my current residence b) a different residence in my current neighborhood c) someplace different than where I reside now d) other (please specify)

Demographics (Part IV)

1. What is your gender? (M, F, Other)
2. What is your education level? (High-School, Some College, Bachelors, Postgraduate)
3. What is your HH income range? ($50K-100K, $100K-$150K, $150-200K, $200K+)
4. What race classification do you associate yourself with? (African American, Asian, Caucasian, Hispanic, other).
5. I have friends that live in a retirement community.
6. Do you plan on working after retirement?
7. If so, how do you plan to do so? (Part-time, Full-time, Same profession, Different Profession)
8. Are you able to drive a vehicle?
9. Are you able to live alone without any assistance from others?
10. How long have you lived in your current residence?
11. Do you own mortgage free, with a mortgage, lease/rent, other?
12. Are you involved in your community? (Extremely, Very, Moderately, Slightly, Not at all).
13. Do you currently own a pet?
14. How many pets do you own? (1-8 or more)
15. What type of pet do you own? (Large dog, Small dog, Cat, Fish, Rabbit)
16. About how many miles do you run/walk/bicycle ride each week?
17. Are you currently employed?
18. Are you currently unpartnered?
19. In what state do you reside?
20. What is your age?

In general... - How satisfied are you with your physical health?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	9	3.7	3.7	3.7
	5	23	9.5	9.5	13.2
	6	25	10.3	10.3	23.5
	7	57	23.5	23.5	46.9
	8	79	32.5	32.5	79.4
	9	36	14.8	14.8	94.2
	10	14	5.8	5.8	100.0
	Total	243	100.0	100.0	

In general... - How would you say your health is?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	5	2.1	2.1	2.1
	5	20	8.2	8.2	10.3
	6	29	11.9	11.9	22.2
	7	56	23.0	23.0	45.3
	8	73	30.0	30.0	75.3
	9	46	18.9	18.9	94.2
	10	14	5.8	5.8	100.0
	Total	243	100.0	100.0	

In general... - Compared to others of your same age and sex, how is your health?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	8	3.3	3.3	3.3
	5	18	7.4	7.4	10.7
	6	23	9.5	9.5	20.2
	7	31	12.8	12.8	32.9
	8	60	24.7	24.7	57.6
	9	64	26.3	26.3	84.0
	10	39	16.0	16.0	100.0
	Total	243	100.0	100.0	

In general... - How much of the time do you feel you are making progress towards accomplishing your goals?

		Frequency	Percent
Valid	0	1	.4
	3	6	2.5
	4	9	3.7
	5	29	11.9
	6	32	13.2
	7	60	24.7
	8	69	28.4
	9	29	11.9
	10	8	3.3
	Total	243	100.0

In general... - How often do you become absorbed in what you are doing?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	.4	.4	.4
	3	2	.8	.8	1.2
	4	4	1.6	1.6	2.9
	5	14	5.8	5.8	8.6
	6	36	14.8	14.8	23.5
	7	51	21.0	21.0	44.4
	8	68	28.0	28.0	72.4
	9	45	18.5	18.5	90.9
	10	22	9.1	9.1	100.0
	Total	243	100.0	100.0	

In general... - How often do you feel joyful?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.6	1.6	1.6
	2	7	2.9	2.9	4.5

	3	5	2.1	2.1	6.6
	4	11	4.5	4.5	11.1
	5	23	9.5	9.5	20.6
	6	34	14.0	14.0	34.6
	7	46	18.9	18.9	53.5
	8	61	25.1	25.1	78.6
	9	42	17.3	17.3	95.9
	10	10	4.1	4.1	100.0
	Total	243	100.0	100.0	

In general... - How often do you achieve the important goals you have set for yourself?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.4	.4	.4
	2	2	.8	.8	1.2
	3	5	2.1	2.1	3.3
	4	11	4.5	4.5	7.8
	5	21	8.6	8.6	16.5
	6	35	14.4	14.4	30.9
	7	55	22.6	22.6	53.5
	8	63	25.9	25.9	79.4
	9	40	16.5	16.5	95.9
	10	10	4.1	4.1	100.0
	Total	243	100.0	100.0	

In general... - To what extent do you lead a purposeful and meaningful life?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.6	1.6	1.6
	2	3	1.2	1.2	2.9
	3	3	1.2	1.2	4.1
	4	3	1.2	1.2	5.3
	5	18	7.4	7.4	12.8

	6	24	9.9	9.9	22.6
	7	43	17.7	17.7	40.3
	8	62	25.5	25.5	65.8
	9	56	23.0	23.0	88.9
	10	27	11.1	11.1	100.0
	Total	243	100.0	100.0	

In general... - To what extent do you receive help and support from others when you need it?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	10	4.1	4.1	4.1
	1	3	1.2	1.2	5.3
	2	9	3.7	3.7	9.1
	3	7	2.9	2.9	11.9
	4	15	6.2	6.2	18.1
	5	17	7.0	7.0	25.1
	6	30	12.3	12.3	37.4
	7	32	13.2	13.2	50.6
	8	40	16.5	16.5	67.1
	9	45	18.5	18.5	85.6
	10	35	14.4	14.4	100.0
	Total	243	100.0	100.0	

In general... - To what extent do you feel that what you do in your life is valuable and worthwhile?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.4	.4	.4
	2	5	2.1	2.1	2.5
	3	1	.4	.4	2.9
	4	3	1.2	1.2	4.1
	5	25	10.3	10.3	14.4
	6	20	8.2	8.2	22.6
	7	33	13.6	13.6	36.2

	8	51	21.0	21.0	57.2
	9	47	19.3	19.3	76.5
	10	57	23.5	23.5	100.0
	Total	243	100.0	100.0	

In general... - To what extent do you feel excited and interested in things?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.6	1.6	1.6
	2	3	1.2	1.2	2.9
	3	3	1.2	1.2	4.1
	4	6	2.5	2.5	6.6
	5	23	9.5	9.5	16.0
	6	18	7.4	7.4	23.5
	7	49	20.2	20.2	43.6
	8	64	26.3	26.3	70.0
	9	52	21.4	21.4	91.4
	10	21	8.6	8.6	100.0
	Total	243	100.0	100.0	

In general... - How often do you feel positive?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.4	.4	.4
	2	5	2.1	2.1	2.5
	3	6	2.5	2.5	4.9
	4	5	2.1	2.1	7.0
	5	16	6.6	6.6	13.6
	6	19	7.8	7.8	21.4
	7	42	17.3	17.3	38.7
	8	62	25.5	25.5	64.2
	9	62	25.5	25.5	89.7
	10	25	10.3	10.3	100.0
	Total	243	100.0	100.0	

In general... - How often are you able to handle your responsibilities?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	.4	.4	.4
	4	2	.8	.8	1.2
	5	2	.8	.8	2.1
	6	6	2.5	2.5	4.5
	7	22	9.1	9.1	13.6
	8	35	14.4	14.4	28.0
	9	97	39.9	39.9	67.9
	10	78	32.1	32.1	100.0
	Total	243	100.0	100.0	

In general... - How often do you lose track of time while doing something you enjoy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.4	.4	.4
	1	3	1.2	1.2	1.6
	2	4	1.6	1.6	3.3
	3	7	2.9	2.9	6.2
	4	8	3.3	3.3	9.5
	5	20	8.2	8.2	17.7
	6	13	5.3	5.3	23.0
	7	44	18.1	18.1	41.2
	8	71	29.2	29.2	70.4
	9	44	18.1	18.1	88.5
	10	28	11.5	11.5	100.0
	Total	243	100.0	100.0	

In general... - To what extent do you feel loved?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.2	1.2	1.2
	1	6	2.5	2.5	3.7
	2	4	1.6	1.6	5.3
	3	3	1.2	1.2	6.6
	4	13	5.3	5.3	11.9
	5	10	4.1	4.1	16.0
	6	24	9.9	9.9	25.9
	7	35	14.4	14.4	40.3
	8	47	19.3	19.3	59.7
	9	41	16.9	16.9	76.5
	10	57	23.5	23.5	100.0
	Total	243	100.0	100.0	

In general... - To what extent do you generally feel you have a sense of direction in your life?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.4	.4	.4
	1	2	.8	.8	1.2
	2	1	.4	.4	1.6
	3	4	1.6	1.6	3.3
	4	8	3.3	3.3	6.6
	5	20	8.2	8.2	14.8
	6	15	6.2	6.2	21.0
	7	39	16.0	16.0	37.0
	8	65	26.7	26.7	63.8
	9	52	21.4	21.4	85.2
	10	36	14.8	14.8	100.0
	Total	243	100.0	100.0	

In general... - How satisfied are you with your personal relationships?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	2.1	2.1	2.1
	1	6	2.5	2.5	4.5
	2	2	.8	.8	5.3
	3	7	2.9	2.9	8.2
	4	11	4.5	4.5	12.8
	5	22	9.1	9.1	21.8
	6	29	11.9	11.9	33.7
	7	45	18.5	18.5	52.3
	8	49	20.2	20.2	72.4
	9	38	15.6	15.6	88.1
	10	29	11.9	11.9	100.0
	Total	243	100.0	100.0	

In general... - To what extent do you feel contented?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.4	.4	.4
	1	2	.8	.8	1.2
	2	6	2.5	2.5	3.7
	3	5	2.1	2.1	5.8
	4	7	2.9	2.9	8.6
	5	19	7.8	7.8	16.5
	6	25	10.3	10.3	26.7
	7	51	21.0	21.0	47.7
	8	56	23.0	23.0	70.8
	9	50	20.6	20.6	91.4
	10	21	8.6	8.6	100.0
	Total	243	100.0	100.0	

In general... - In most ways my life is close to my ideal.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.2	1.2	1.2

	1	7	2.9	2.9	4.1
	2	9	3.7	3.7	7.8
	3	10	4.1	4.1	11.9
	4	7	2.9	2.9	14.8
	5	45	18.5	18.5	33.3
	6	36	14.8	14.8	48.1
	7	49	20.2	20.2	68.3
	8	48	19.8	19.8	88.1
	9	22	9.1	9.1	97.1
	10	7	2.9	2.9	100.0
	Total	243	100.0	100.0	

In general... - The conditions of my life are excellent.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.6	1.6	1.6
	1	3	1.2	1.2	2.9
	2	4	1.6	1.6	4.5
	3	13	5.3	5.3	9.9
	4	10	4.1	4.1	14.0
	5	30	12.3	12.3	26.3
	6	33	13.6	13.6	39.9
	7	57	23.5	23.5	63.4
	8	46	18.9	18.9	82.3
	9	32	13.2	13.2	95.5
	10	11	4.5	4.5	100.0
	Total	243	100.0	100.0	

In general... - I am satisfied with my life.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.2	1.2	1.2
	1	5	2.1	2.1	3.3
	2	6	2.5	2.5	5.8
	3	9	3.7	3.7	9.5
	4	6	2.5	2.5	11.9

	5	28	11.5	11.5	23.5
	6	27	11.1	11.1	34.6
	7	47	19.3	19.3	53.9
	8	55	22.6	22.6	76.5
	9	36	14.8	14.8	91.4
	10	21	8.6	8.6	100.0
	Total	243	100.0	100.0	

In general... - So far, I have gotten the important things I want in life.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	2.9	2.9	2.9
	2	9	3.7	3.7	6.6
	3	5	2.1	2.1	8.6
	4	7	2.9	2.9	11.5
	5	21	8.6	8.6	20.2
	6	18	7.4	7.4	27.6
	7	43	17.7	17.7	45.3
	8	69	28.4	28.4	73.7
	9	40	16.5	16.5	90.1
	10	24	9.9	9.9	100.0
	Total	243	100.0	100.0	

In general... - If I could live my life over, I would change almost nothing.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	18	7.4	7.4	7.4
	1	13	5.3	5.3	12.8
	2	20	8.2	8.2	21.0
	3	15	6.2	6.2	27.2
	4	19	7.8	7.8	35.0
	5	41	16.9	16.9	51.9
	6	25	10.3	10.3	62.1

	7	32	13.2	13.2	75.3
	8	27	11.1	11.1	86.4
	9	24	9.9	9.9	96.3
	10	9	3.7	3.7	100.0
	Total	243	100.0	100.0	

In general... - How often do you feel anxious?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	17	7.0	7.0	7.0
	1	23	9.5	9.5	16.5
	2	42	17.3	17.3	33.7
	3	33	13.6	13.6	47.3
	4	23	9.5	9.5	56.8
	5	39	16.0	16.0	72.8
	6	21	8.6	8.6	81.5
	7	25	10.3	10.3	91.8
	8	12	4.9	4.9	96.7
	9	6	2.5	2.5	99.2
	10	2	.8	.8	100.0
	Total	243	100.0	100.0	

In general... - How often do you feel angry?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	20	8.2	8.2	8.2
	1	50	20.6	20.6	28.8
	2	53	21.8	21.8	50.6
	3	36	14.8	14.8	65.4
	4	24	9.9	9.9	75.3
	5	32	13.2	13.2	88.5
	6	9	3.7	3.7	92.2
	7	13	5.3	5.3	97.5
	8	6	2.5	2.5	100.0
	Total	243	100.0	100.0	

In general... - How often do you feel sad?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	11	4.5	4.5	4.5
	1	55	22.6	22.6	27.2
	2	39	16.0	16.0	43.2
	3	40	16.5	16.5	59.7
	4	26	10.7	10.7	70.4
	5	25	10.3	10.3	80.7
	6	23	9.5	9.5	90.1
	7	13	5.3	5.3	95.5
	8	7	2.9	2.9	98.4
	9	2	.8	.8	99.2
	10	2	.8	.8	100.0
	Total	243	100.0	100.0	

Taking all things into consideration... - How happy would you say you are?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	.8	.8	.8
	1	4	1.6	1.6	2.5
	2	3	1.2	1.2	3.7
	3	7	2.9	2.9	6.6
	4	6	2.5	2.5	9.1
	5	19	7.8	7.8	16.9
	6	33	13.6	13.6	30.5
	7	50	20.6	20.6	51.0
	8	69	28.4	28.4	79.4
	9	43	17.7	17.7	97.1
	10	7	2.9	2.9	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I like to occupy myself in greater detail with technical systems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	28	11.5	11.5	11.5
	2	35	14.4	14.4	25.9
	3	54	22.2	22.2	48.1
	4	71	29.2	29.2	77.4
	5	39	16.0	16.0	93.4
	6	16	6.6	6.6	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I like testing the functions of new technical systems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	47	19.3	19.3	19.3
	2	48	19.8	19.8	39.1
	3	51	21.0	21.0	60.1
	4	50	20.6	20.6	80.7
	5	35	14.4	14.4	95.1
	6	12	4.9	4.9	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I predominantly deal with technical systems because I have to.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	33	13.6	13.6	13.6
	2	45	18.5	18.5	32.1
	3	55	22.6	22.6	54.7
	4	60	24.7	24.7	79.4
	5	40	16.5	16.5	95.9
	6	10	4.1	4.1	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - When I have a new technical system in front of me, I try it out intensively.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	29	11.9	11.9	11.9
	2	49	20.2	20.2	32.1
	3	61	25.1	25.1	57.2
	4	57	23.5	23.5	80.7
	5	35	14.4	14.4	95.1
	6	12	4.9	4.9	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I enjoy spending time becoming acquainted with a new technical system.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	37	15.2	15.2	15.2
	2	47	19.3	19.3	34.6
	3	54	22.2	22.2	56.8
	4	50	20.6	20.6	77.4
	5	41	16.9	16.9	94.2
	6	14	5.8	5.8	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - It is enough for me that a technical system works; I don't care how or why.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	13	5.3	5.3	5.3
	2	25	10.3	10.3	15.6
	3	41	16.9	16.9	32.5
	4	57	23.5	23.5	56.0
	5	59	24.3	24.3	80.2
	6	48	19.8	19.8	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I try to understand how a technical system exactly works.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	48	19.8	19.8	19.8
	2	48	19.8	19.8	39.5
	3	53	21.8	21.8	61.3
	4	57	23.5	23.5	84.8
	5	27	11.1	11.1	95.9
	6	10	4.1	4.1	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - It is enough for me to know the basic functions of a technical system.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	4.5	4.5	4.5
	2	23	9.5	9.5	14.0
	3	38	15.6	15.6	29.6
	4	62	25.5	25.5	55.1
	5	74	30.5	30.5	85.6
	6	35	14.4	14.4	100.0
	Total	243	100.0	100.0	

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I try to make full use of the capabilities of a technical system.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	7.0	7.0	7.0
	2	28	11.5	11.5	18.5
	3	62	25.5	25.5	44.0
	4	70	28.8	28.8	72.8
	5	47	19.3	19.3	92.2
	6	19	7.8	7.8	100.0
	Total	243	100.0	100.0	

How much do you agree or disagree with the following statement? "Retirement communities" refers to organized establishments available for residential senior care."Age-in-place" refers to remaining living in the community, with some level of independence, rather than in residential care. - When I retire, my preferred place to live is where I live now (age-in-place).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	3.7	3.7	3.7
	1	6	2.5	2.5	6.2
	2	4	1.6	1.6	7.8
	3	2	.8	.8	8.6
	4	6	2.5	2.5	11.1
	5	9	3.7	3.7	14.8
	6	12	4.9	4.9	19.8
	7	16	6.6	6.6	26.3
	8	35	14.4	14.4	40.7
	9	48	19.8	19.8	60.5

	10	96	39.5	39.5	100.0
	Total	243	100.0	100.0	

How much do you agree or disagree with the following statement?
“Retirement communities” refers to organized establishments available for residential senior care."Age-in-place" refers to remaining living in the community, with some level of independence, rather than in residential care. - Based on what I have learned about Covid-19, I now prefer to reside where I currently live when I retire.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	11	4.5	4.5	4.5
	1	5	2.1	2.1	6.6
	2	6	2.5	2.5	9.1
	3	1	.4	.4	9.5
	4	9	3.7	3.7	13.2
	5	13	5.3	5.3	18.5
	6	7	2.9	2.9	21.4
	7	20	8.2	8.2	29.6
	8	25	10.3	10.3	39.9
	9	47	19.3	19.3	59.3
	10	99	40.7	40.7	100.0
	Total	243	100.0	100.0	

If you decide to move someplace besides where you live now when you retire, which factor is MOST important in deciding where you would prefer to reside: - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Someplace nearby in my current geographic location	48	19.8	19.8	19.8
	A location that is closer to my family	69	28.4	28.4	48.1
	Another location/state/city considered to be good for retirees	41	16.9	16.9	65.0
	Other (please specify)	12	4.9	4.9	70.0
	I am not likely to move / Not applicable to me	73	30.0	30.0	100.0
	Total	243	100.0	100.0	

If you decide to move someplace besides where you live now when you retire, which factor is MOST important in deciding where you would prefer to reside: - Other (please specify) - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		231	95.1	95.1	95.1
	Better weather in the winter	1	.4	.4	95.5
	another state where I own property	1	.4	.4	95.9
	close to a hockey team	1	.4	.4	96.3
	I’m going to move closer to the ocean	1	.4	.4	96.7
	in a larger suburb	1	.4	.4	97.1
	On a lakeside home	1	.4	.4	97.5
	Someplace safe	1	.4	.4	97.9
	someplace with endless summers	1	.4	.4	98.4

	somewhere that has more open land	1	.4	.4	98.8
	Weather	1	.4	.4	99.2
	Whatever I decide when I decide and I won't know that until it's time to decide.	1	.4	.4	99.6
	Where opportunity calls	1	.4	.4	100.0
	Total	243	100.0	100.0	

If I decide to move someplace besides where I live now when I retire, I am likely to move to: - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Another residence in my current neighborhood/community	32	13.2	13.2	13.2
	A new residence but less than 50 miles from where I live now	43	17.7	17.7	30.9
	A new residence but more than 50 miles from where I live now	43	17.7	17.7	48.6
	Someplace geographically distant from where I live now (please specify)	35	14.4	14.4	63.0
	I am not likely to move when I retire / Not applicable to me	90	37.0	37.0	100.0
	Total	243	100.0	100.0	

If I decide to move someplace besides where I live now when I retire, I am likely to move to: - Someplace geographically distant from where I live now (please specify) - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		208	85.6	85.6	85.6
	a home in the mountains with a lake and river	1	.4	.4	86.0
	another state	1	.4	.4	86.4
	Bahamas	1	.4	.4	86.8
	california	2	.8	.8	87.7
	California	1	.4	.4	88.1
	Cape Cod MA	1	.4	.4	88.5
	Closer to family	1	.4	.4	88.9
	Closer to the ocean	1	.4	.4	89.3
	Don’t know	1	.4	.4	89.7
	Either PA or SC	1	.4	.4	90.1
	europe	1	.4	.4	90.5
	Florida	1	.4	.4	90.9
	gulf coast	1	.4	.4	91.4
	Idaho	1	.4	.4	91.8
	Louisiana	1	.4	.4	92.2
	maybe move to Mexico with friends	1	.4	.4	92.6
	Minnesota	1	.4	.4	93.0
	nc	1	.4	.4	93.4
	Near family	1	.4	.4	93.8
	Near my daughter	1	.4	.4	94.2
	Same as above, I can't know that until I decide and so far I've made no decisions.	1	.4	.4	94.7
	Southern state	1	.4	.4	95.1
	Tahiti	1	.4	.4	95.5
	tennessee	1	.4	.4	95.9
	Texas	2	.8	.8	96.7
	The beach	1	.4	.4	97.1

	to another state	1	.4	.4	97.5
	Trinity County, California	1	.4	.4	97.9
	undecided	1	.4	.4	98.4
	Warmer weather	1	.4	.4	98.8
	West Coast	1	.4	.4	99.2
	Wish to move to another state with lower taxes/cost of living	1	.4	.4	99.6
	Would consider another state to be by my children	1	.4	.4	100.0
	Total	243	100.0	100.0	

I have friends who currently live in a retirement community.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	49	20.2	20.2	20.2
	No	194	79.8	79.8	100.0
	Total	243	100.0	100.0	

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	62	25.5	25.5	25.5
	Female	181	74.5	74.5	100.0
	Total	243	100.0	100.0	

What is your education level?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Some College	67	27.6	27.6	27.6
	Bachelors	89	36.6	36.6	64.2
	Postgraduate	71	29.2	29.2	93.4
	High-School	16	6.6	6.6	100.0
	Total	243	100.0	100.0	

What is your household income range?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$50K - $100K	170	70.0	70.0	70.0
	$100K - $150K	42	17.3	17.3	87.2
	$150K - $200K	10	4.1	4.1	91.4
	$200K+	5	2.1	2.1	93.4
	Prefer not to answer	16	6.6	6.6	100.0
	Total	243	100.0	100.0	

What race classification describes you best? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	African American	15	6.2	6.2	6.2
	Asian	2	.8	.8	7.0
	Caucasian	215	88.5	88.5	95.5
	Hispanic	9	3.7	3.7	99.2
	Other (please specify)	1	.4	.4	99.6

	Do not wish to answer	1	.4	.4	100.0
	Total	243	100.0	100.0	

What race classification describes you best? - Other (please specify) - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		242	99.6	99.6	99.6
	Mixed B&W.	1	.4	.4	100.0
	Total	243	100.0	100.0	

Do you have any children, step-children, and/or grandchildren?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	153	63.0	63.0	63.0
	No	90	37.0	37.0	100.0
	Total	243	100.0	100.0	

Do you plan on working after retirement?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	172	70.8	70.8	70.8
	No	71	29.2	29.2	100.0
	Total	243	100.0	100.0	

How do you plan on working after retirement? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Full-time in same profession/vocation	29	11.9	16.9	16.9

	Part-time in same profession/vocation (less than 20 hours weekly)	64	26.3	37.2	54.1
	Part-time in same profession/vocation (more than 20 hours but not full-time)	28	11.5	16.3	70.3
	Part-time in different profession/vocation	45	18.5	26.2	96.5
	Other (please specify)	6	2.5	3.5	100.0
	Total	172	70.8	100.0	
Missing	System	71	29.2		
Total		243	100.0		

How do you plan on working after retirement? - Other (please specify) - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		237	97.5	97.5	97.5
	Coaching high school baseball and statistics for other sports	1	.4	.4	97.9
	Full time at the company I own and run	1	.4	.4	98.4
	Not sure yet	1	.4	.4	98.8
	Self employed	1	.4	.4	99.2
	self-employed rancher	1	.4	.4	99.6
	work until I die	1	.4	.4	100.0
	Total	243	100.0	100.0	

Are you able to drive yourself in a personal vehicle?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	242	99.6	99.6	99.6
	No	1	.4	.4	100.0
	Total	243	100.0	100.0	

Do you consider yourself self-sufficient in your current residence?

		Frequency	Percent
Missing	System	243	100.0

Are you able to live alone without assistance from others?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	243	100.0	100.0	100.0

How long have you lived in your current residence?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 years	33	13.6	13.6	13.6
	6-10 years	41	16.9	16.9	30.5
	11-15 years	27	11.1	11.1	41.6
	16-20 years	37	15.2	15.2	56.8
	More than 20	105	43.2	43.2	100.0
	Total	243	100.0	100.0	

In regard to your current residence, do you: - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Own mortgage free	100	41.2	41.2	41.2
	Own with mortgage	95	39.1	39.1	80.2
	Rent/lease	43	17.7	17.7	97.9
	Other (please specify)	5	2.1	2.1	100.0
	Total	243	100.0	100.0	

In regard to your current residence, do you: - Other (please specify) - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		238	97.9	97.9	97.9
	currently rent free	1	.4	.4	98.4
	help someone	1	.4	.4	98.8
	I live with my sister.	1	.4	.4	99.2
	Live with son and his family	1	.4	.4	99.6
	Rent in MS, own 3 homes in MN	1	.4	.4	100.0
	Total	243	100.0	100.0	

How accurately does the following statement describe you:
I am very involved in my community.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely accurately	1	.4	.4	.4
	Very accurately	21	8.6	8.6	9.1
	Moderately accurately	62	25.5	25.5	34.6
	Slightly accurately	90	37.0	37.0	71.6
	Not accurately at all	69	28.4	28.4	100.0
	Total	243	100.0	100.0	

Do you currently own a pet?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	129	53.1	53.1	53.1
	No	114	46.9	46.9	100.0
	Total	243	100.0	100.0	

How many pets do you currently own?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	65	26.7	50.4	50.4
	2	33	13.6	25.6	76.0
	3	15	6.2	11.6	87.6
	4	5	2.1	3.9	91.5
	5	3	1.2	2.3	93.8
	6	2	.8	1.6	95.3
	7	2	.8	1.6	96.9
	8 or more	4	1.6	3.1	100.0
	Total	129	53.1	100.0	
Missing	System	114	46.9		
Total		243	100.0		

What type of pet (s) do you own? - Selected Choice Large dog (50 lbs. or more)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Large dog (50 lbs. or more)	35	14.4	100.0	100.0
Missing	System	208	85.6		
Total		243	100.0		

What type of pet(s) do you own? - Selected Choice Small dog (less than 50 lbs.)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Small dog (less than 50 lbs.)	62	25.5	100.0	100.0
Missing	System	181	74.5		
Total		243	100.0		

What type of pet(s) do you own? - Selected Choice Cat

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Cat	65	26.7	100.0	100.0
Missing	System	178	73.3		
Total		243	100.0		

What type of pet(s) do you own? - Selected Choice Fish

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fish	10	4.1	100.0	100.0
Missing	System	233	95.9		
Total		243	100.0		

What type of pet(s) do you own? - Selected Choice Bird

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bird	7	2.9	100.0	100.0
Missing	System	236	97.1		
Total		243	100.0		

What type of pet(s) do you own? - Selected Choice Rabbit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rabbit	3	1.2	100.0	100.0
Missing	System	240	98.8		
Total		243	100.0		

What type of pet(s) do you own? - Selected Choice Other (please specify)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other (please specify)	101	41.6	100.0	100.0
Missing	System	142	58.4		
Total		243	100.0		

What type of pet(s) do you own? - Other (please specify) - Text

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		142	58.4	58.4	58.4
	no pets made mistake	1	.4	.4	58.8
	2 horses	1	.4	.4	59.3
	Cat died	1	.4	.4	59.7
	Didn't I just tell you, NONE!!	1	.4	.4	60.1
	Don't own a pet	1	.4	.4	60.5
	guinea pig	1	.4	.4	60.9
	Horse	1	.4	.4	61.3
	i do not own a pet	1	.4	.4	61.7
	I don't own a pet	1	.4	.4	62.1
	i own no pets	1	.4	.4	62.6
	LICENSED albino Anaconda.	1	.4	.4	63.0
	n/a	1	.4	.4	63.4
	N/a	1	.4	.4	63.8
	na	1	.4	.4	64.2
	no I et	1	.4	.4	64.6
	no pet	3	1.2	1.2	65.8
	No pet	2	.8	.8	66.7
	no pets	2	.8	.8	67.5
	No pets	6	2.5	2.5	70.0
	none	33	13.6	13.6	83.5
	None	34	14.0	14.0	97.5
	None, my ex got the dogs	1	.4	.4	97.9
	One dog less than 10lbs, two dogs weighing 12-15 lbs	1	.4	.4	98.4
	Raptor	1	.4	.4	98.8
	TARANTULA	1	.4	.4	99.2
	Turtle	1	.4	.4	99.6
	You are not paying attention	1	.4	.4	100.0
	Total	243	100.0	100.0	

About how many miles do you run/walk/bicycle ride each week?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	42	17.3	17.3	17.3
	1.00	14	5.8	5.8	23.0
	2.00	14	5.8	5.8	28.8
	3.00	9	3.7	3.7	32.5
	4.00	7	2.9	2.9	35.4
	5.00	40	16.5	16.5	51.9
	6.00	10	4.1	4.1	56.0
	7.00	6	2.5	2.5	58.4
	8.00	3	1.2	1.2	59.7
	9.00	2	.8	.8	60.5
	10.00	27	11.1	11.1	71.6
	12.00	3	1.2	1.2	72.8
	14.00	3	1.2	1.2	74.1
	15.00	11	4.5	4.5	78.6
	18.00	3	1.2	1.2	79.8
	20.00	20	8.2	8.2	88.1
	22.00	1	.4	.4	88.5
	24.00	1	.4	.4	88.9
	25.00	5	2.1	2.1	90.9
	28.00	1	.4	.4	91.4
	30.00	6	2.5	2.5	93.8
	32.00	1	.4	.4	94.2
	33.00	1	.4	.4	94.7
	35.00	5	2.1	2.1	96.7
	36.00	1	.4	.4	97.1
	40.00	3	1.2	1.2	98.4
	50.00	4	1.6	1.6	100.0
	Total	243	100.0	100.0	

Appendix G – Survey Questionnaire Statistics

Statistics

		In general... - How satisfied are you with your physical health?	In general... - How would you say your health is?	In general... - Compared to others of your same age and sex, how is your health?	In general... - How much of the time do you feel you are making progress towards accomplishing your goals?	In general... - How often do you become absorbed in what you are doing?
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean		8.39	8.51	8.91	8.01	8.56
Median		9.00	9.00	9.00	8.00	9.00
Mode		9	9	10	9	9
Std. Deviation		1.452	1.401	1.615	1.615	1.516
Skewness		-.435	-.390	-.666	-.733	-.545
Std. Error of Skewness		.156	.156	.156	.156	.156
Kurtosis		-.234	-.316	-.340	.937	.373
Std. Error of Kurtosis		.311	.311	.311	.311	.311
Minimum		5	5	5	1	3
Maximum		11	11	11	11	11

Statistics

		In general... - How often do you feel joyful?	In general... - How often do you achieve the important goals you have set for yourself?	In general... - To what extent do you lead a purposeful and meaningful life?	In general... - To what extent do you receive help and support from others when you need it?	In general... - To what extent do you feel that what you do in your life is valuable and worthwhile?
N	Valid	243	243	243	243	243

	Missing	0	0	0	0	0
Mean		7.93	8.11	8.56	7.86	8.83
Median		8.00	8.00	9.00	8.00	9.00
Mode		9	9	9	10	11
Std. Deviation		1.973	1.693	1.868	2.649	1.953
Skewness		-.928	-.742	-1.209	-.929	-1.004
Std. Error of Skewness		.156	.156	.156	.156	.156
Kurtosis		.646	.534	1.887	.217	1.012
Std. Error of Kurtosis		.311	.311	.311	.311	.311
Minimum		2	2	2	1	1
Maximum		11	11	11	11	11

Statistics

		In general... - To what extent do you feel excited and interested in things?	In general... - How often do you feel positive?	In general... - How often are you able to handle your responsibilities?	In general... - How often do you lose track of time while doing something you enjoy?	In general... - To what extent do you feel loved?
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean		8.40	8.58	9.82	8.38	8.53
Median		9.00	9.00	10.00	9.00	9.00
Mode		9	9[a]	10	9	11
Std. Deviation		1.877	1.862	1.250	2.030	2.361
Skewness		-1.131	-1.142	-1.727	-1.149	-1.180
Std. Error of Skewness		.156	.156	.156	.156	.156
Kurtosis		1.521	1.223	4.693	1.266	1.108
Std. Error of Kurtosis		.311	.311	.311	.311	.311
Minimum		2	2	3	1	1
Maximum		11	11	11	11	11

Statistics

		In general... - To what extent do you generally feel you have a sense of direction in your life?	In general... - How satisfied are you with your personal relationships ?	In general... - To what extent do you feel contented?	In general... - In most ways my life is close to my ideal.	In general... - The conditions of my life are excellent.
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean		8.65	7.99	8.27	7.25	7.60
Median		9.00	8.00	9.00	8.00	8.00
Mode		9	9	9	8	8
Std. Deviation		1.897	2.319	1.973	2.157	2.121
Skewness		-1.135	-1.012	-1.063	-.767	-.857
Std. Error of Skewness		.156	.156	.156	.156	.156
Kurtosis		1.545	.913	1.208	.360	.701
Std. Error of Kurtosis		.311	.311	.311	.311	.311
Minimum		1	1	1	1	1
Maximum		11	11	11	11	11

Statistics

		In general... - I am satisfied with my life.	In general... - So far, I have gotten the important things I want in life.	In general... - If I could live my life over, I would change almost nothing.	In general... - How often do you feel anxious?	In general... - How often do you feel angry?
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean		7.88	8.14	6.25	4.97	3.93
Median		8.00	9.00	6.00	5.00	3.00
Mode		9	9	6	3	3
Std. Deviation		2.226	2.192	2.807	2.441	2.056
Skewness		-.954	-1.096	-.284	.257	.630

Std. Error of Skewness		.156	.156	.156	.156	.156
Kurtosis		.721	.804	-.873	-.789	-.398
Std. Error of Kurtosis		.311	.311	.311	.311	.311
Minimum		1	2	1	1	1
Maximum		11	11	11	11	9

Statistics

		In general... - How often do you feel sad?	Taking all things into consideration ... - How happy would you say you are?	In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I like to occupy myself in greater detail with technical systems.	In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I like testing the functions of new technical systems.	In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I predominantly deal with technical systems because I have to.
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean		4.31	8.02	3.44	3.06	3.24
Median		4.00	8.00	4.00	3.00	3.00
Mode		2	9	4	3	4
Std. Deviation		2.246	1.924	1.396	1.484	1.398
Skewness		.642	-1.278	-.125	.176	-.010

Std. Error of Skewness		.156	.156	.156	.156	.156
Kurtosis		-.322	1.912	-.731	-.996	-.904
Std. Error of Kurtosis		.311	.311	.311	.311	.311
Minimum		1	1	1	1	1
Maximum		11	11	6	6	6

Statistics

		In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - When I have a new technical system in front of me, I try it out intensively.	In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I enjoy spending time becoming acquainted with a new technical system.	In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - It is enough for me that a technical system works; I don't care how or why.	In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I try to understand how a technical system exactly works.	In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - It is enough for me to know the basic functions of a technical system.
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean		3.23	3.22	4.10	2.99	4.11
Median		3.00	3.00	4.00	3.00	4.00
Mode		3	3	5	4	5
Std. Deviation		1.374	1.471	1.447	1.430	1.348

Skewness	.098	.089	-.421	.184	-.530
Std. Error of Skewness	.156	.156	.156	.156	.156
Kurtosis	-.782	-.982	-.702	-.890	-.427
Std. Error of Kurtosis	.311	.311	.311	.311	.311
Minimum	1	1	1	1	1
Maximum	6	6	6	6	6

Statistics

		In general... “technical systems” refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I try to make full use of the capabilities of a technical system.	How much do you agree or disagree with the following statement? “Retirement communities” refers to organized establishments available for residential senior care."Age-in-place" refers to remaining living in the community, with some level of independence, rather than in residential care. - When I retire, my preferred place to live is where I live now (age-in-place).		How much do you agree or disagree with the following statement? “Retirement communities” refers to organized establishments available for residential senior care."Age-in-place" refers to remaining living in the community, with some level of independence, rather than in residential care. - Based on what I have learned about Covid-19, I now prefer to reside where I currently live when I retire.	If you decide to move someplace besides where you live now when you retire, which factor is MOST important in deciding where you would prefer to reside: - Selected Choice
N	Valid	243	243		243	243
	Missing	0	0		0	0
Mean		3.65	9.00		8.88	2.97
Median		4.00	10.00		10.00	3.00
Mode		4	11		11	5
Std. Deviation		1.319	2.679		2.830	1.528

Skewness		-.181	-1.674		-1.518	.224
Std. Error of Skewness		.156	.156		.156	.156
Kurtosis		-.524	2.051		1.359	-1.454
Std. Error of Kurtosis		.311	.311		.311	.311
Minimum		1	1		1	1
Maximum		6	11		11	5

Statistics

		If you decide to move someplace besides where you live now when you retire, which factor is MOST important in deciding where you would prefer to reside: - Other (please specify) - Text	If I decide to move someplace besides where I live now when I retire, I am likely to move to: - Selected Choice	If I decide to move someplace besides where I live now when I retire, I am likely to move to: - Someplace geographically distant from where I live now (please specify) - Text	I have friends who currently live in a retirement community.	What is your gender?
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean			3.96		1.80	1.74
Median			5.00		2.00	2.00
Mode			6		2	2
Std. Deviation			1.926		.402	.437
Skewness			-.225		-1.496	-1.130
Std. Error of Skewness			.156		.156	.156
Kurtosis			-1.583		.241	-.728

Std. Error of Kurtosis			.311		.311	.311
Minimum			1		1	1
Maximum			6		2	2

Statistics

		What is your education level?	What is your household income range?	What race classification describes you best? - Selected Choice	What race classification describes you best? - Other (please specify) - Text	Do you have any children, step-children, and/or grandchildren?
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean		3.15	1.58	2.93		1.37
Median		3.00	1.00	3.00		1.00
Mode		3	1	3		1
Std. Deviation		.901	1.116	.584		.484
Skewness		.249	2.128	-1.242		.540
Std. Error of Skewness		.156	.156	.156		.156
Kurtosis		-.844	3.583	8.856		-1.722
Std. Error of Kurtosis		.311	.311	.311		.311
Minimum		2	1	1		1
Maximum		5	5	6		2

Statistics

		Do you plan on working after retirement?	How do you plan on working after retirement? - Selected Choice	How do you plan on working after retirement? - Other (please specify) - Text	Are you able to drive yourself in a personal vehicle?	Do you consider yourself self-sufficient in your current residence?
N	Valid	243	172	243	243	0
	Missing	0	71	0	0	243
Mean		1.29	3.08		1.00	

Median		1.00	2.00		1.00	
Mode		1	2		1	
Std. Deviation		.456	1.606		.064	
Skewness		.920	.209		15.588	
Std. Error of Skewness		.156	.185		.156	
Kurtosis		-1.164	-1.507		243.000	
Std. Error of Kurtosis		.311	.368		.311	
Minimum		1	1		1	
Maximum		2	6		2	

Statistics

		Are you able to live alone without assistance from others?	How long have you lived in your current residence?	In regard to your current residence, do you: - Selected Choice	In regard to your current residence, do you: - Other (please specify) - Text	How accurately does the the following statement describe you: I am very involved in my community.
N	Valid	243	243	243	243	243
	Missing	0	0	0	0	0
Mean		1.00	3.58	1.81		13.84
Median		1.00	4.00	2.00		14.00
Mode		1	5	1		14
Std. Deviation		.000	1.507	.797		.949
Skewness			-.516	.608		-.413
Std. Error of Skewness		.156	.156	.156		.156
Kurtosis			-1.277	-.467		-.623
Std. Error of Kurtosis		.311	.311	.311		.311
Minimum		1	1	1		11
Maximum		1	5	4		15

Statistics

		Do you currently own a pet?	How many pets do you currently own?	What type of pet(s) do you own? - Selected Choice Large dog (50 lbs. or more)	What type of pet(s) do you own? - Selected Choice Small dog (less than 50 lbs.)	What type of pet(s) do you own? - Selected Choice Cat
N	Valid	243	129	35	62	65
	Missing	0	114	208	181	178
Mean		1.47	2.09	1.00	1.00	1.00
Median		1.00	1.00	1.00	1.00	1.00
Mode		1	1	1	1	1
Std. Deviation		.500	1.658	.000	.000	.000
Skewness		.124	2.127			
Std. Error of Skewness		.156	.213	.398	.304	.297
Kurtosis		-2.001	4.414			
Std. Error of Kurtosis		.311	.423	.778	.599	.586
Minimum		1	1	1	1	1
Maximum		2	8	1	1	1

Statistics

		What type of pet(s) do you own? - Selected Choice Fish	What type of pet(s) do you own? - Selected Choice Bird	What type of pet(s) do you own? - Selected Choice Rabbit	What type of pet(s) do you own? - Selected Choice Other (please specify)	What type of pet(s) do you own? - Other (please specify) - Text
N	Valid	10	7	3	101	243
	Missing	233	236	240	142	0
Mean		1.00	1.00	1.00	1.00	
Median		1.00	1.00	1.00	1.00	
Mode		1	1	1	1	
Std. Deviation		.000	.000	.000	.000	
Skewness						
Std. Error of Skewness		.687	.794	1.225	.240	

Kurtosis					
Std. Error of Kurtosis	1.334	1.587		.476	
Minimum	1	1	1	1	
Maximum	1	1	1	1	

		About how many miles do you run/walk/bicycle ride each week?
N	Valid	243
	Missing	0
Mean		9.8066
Median		5.0000
Mode		.00
Std. Deviation		10.90377
Skewness		1.609
Std. Error of Skewness		.156
Kurtosis		2.417
Std. Error of Kurtosis		.311
Minimum		.00
Maximum		50.00

a. Multiple modes exist. The smallest value is shown

Appendix H – Factor Analysis and Component Matrix

Component Matrix[a]

	Component					
	1	2	3	4	5	6
In general... - How much of the time do you feel you are making progress towards accomplishing your goals?	.684					
In general... - How often do you become absorbed in what you are doing?	.463			.541		
In general... - How often do you feel joyful?	.833					
In general... - How often do you achieve the important goals you have set for yourself?	.713					
In general... - To what extent do you lead a purposeful and meaningful life?	.857					
In general... - To what extent do you receive help and support from others when you need it?	.625					
In general... - To what extent do you feel that what you do in your life is valuable and worthwhile?	.795					
In general... - To what extent do you feel excited and interested in things?	.851					

In general... - How often do you feel positive?	.837					
In general... - How often are you able to handle your responsibilities?	.487					
In general... - How often do you lose track of time while doing something you enjoy?				.514		
In general... - To what extent do you feel loved?	.751					
In general... - To what extent do you generally feel you have a sense of direction in your life?	.846					
In general... - How satisfied are you with your personal relationships?	.722					
In general... - To what extent do you feel contented?	.831					
In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I like to occupy myself in greater detail with technical systems.		.685				

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I like testing the functions of new technical systems.		.810				
In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - When I have a new technical system in front of me, I try it out intensively.		.759				
In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I enjoy spending time becoming acquainted with a new technical system.		.796				

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I try to understand how a technical system exactly works.		.731				
In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I try to make full use of the capabilities of a technical system.		.686				
RevTech3			.775			
RevTech6		.520	.646			
RevTech8		.508	.622			

Extraction Method: Principal Component Analysis.[a]
a. 6 components extracted.

Communalities

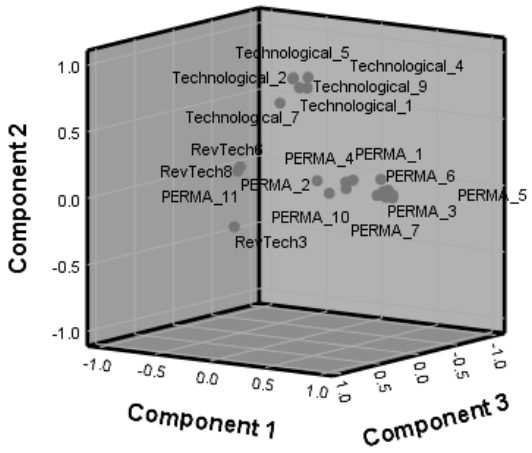
	Extraction
In general... - How much of the time do you feel you are making progress towards accomplishing your goals?	.715
In general... - How often do you become absorbed in what you are doing?	.742
In general... - How often do you feel joyful?	.775
In general... - How often do you achieve the important goals you have set for yourself?	.750
In general... - To what extent do you lead a purposeful and meaningful life?	.800
In general... - To what extent do you receive help and support from others when you need it?	.727
In general... - To what extent do you feel that what you do in your life is valuable and worthwhile?	.734
In general... - To what extent do you feel excited and interested in things?	.772
In general... - How often do you feel positive?	.750

In general... - How often are you able to handle your responsibilities?	.602
In general... - How often do you lose track of time while doing something you enjoy?	.638
In general... - To what extent do you feel loved?	.742
In general... - To what extent do you generally feel you have a sense of direction in your life?	.774
In general... - How satisfied are you with your personal relationships?	.675
In general... - To what extent do you feel contented?	.810
In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I like to occupy myself in greater detail with technical systems.	.640

In general... “technical systems” refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I like testing the functions of new technical systems.	.806
In general... “technical systems” refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - When I have a new technical system in front of me, I try it out intensively.	.793
In general... “technical systems” refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I enjoy spending time becoming acquainted with a new technical system.	.790

In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I try to understand how a technical system exactly works.	.673
In general... "technical systems" refers to apps and other software applications, as well as entire digital devices (e.g. mobile phone, computer, TV, car navigation). - I try to make full use of the capabilities of a technical system.	.693
RevTech3	.807
RevTech6	.746
RevTech8	.742

Extraction Method: Principal Component Analysis.



Total Variance Explained

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.692	36.216	36.216	7.481	31.170	31.170
2	4.289	17.872	54.088	4.392	18.301	49.471
3	1.739	7.246	61.334	1.983	8.265	57.736
4	1.226	5.110	66.445	1.396	5.818	63.553
5	.900	3.750	70.195	1.265	5.272	68.826
6	.850	3.541	73.736	1.178	4.910	73.736

Extraction Method: Principal Component Analysis.

Scale: Health

Case Processing Summary

		N	%
Cases	Valid	243	100.0
	Excluded[a]	0	.0
	Total	243	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.927	3

Scale: Tech

Case Processing Summary

		N	%
Cases	Valid	243	100.0
	Excluded[a]	0	.0
	Total	243	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.857	9

Scale: Positive Emotion

Case Processing Summary

		N	%
Cases	Valid	243	100.0
	Excluded[a]	0	.0
	Total	243	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.915	3

Case Processing Summary

		N	%
Cases	Valid	243	100.0
	Excluded[a]	0	.0
	Total	243	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.579	3

Scale: Relationships

Case Processing Summary

		N	%
Cases	Valid	243	100.0
	Excluded[a]	0	.0
	Total	243	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.800	3

Scale: Meaning

Case Processing Summary

		N	%
Cases	Valid	243	100.0
	Excluded[a]	0	.0
	Total	243	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.899	3

Scale: Accomplishment

Case Processing Summary

		N	%
Cases	Valid	243	100.0
	Excluded[a]	0	.0
	Total	243	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.723	3

Appendix J – Parameter Estimates

Binary

Parameter Estimates – P

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
52.441[a]	0.082	0.185

	B	S.E.	Wald	df	Sig.	Exp(B)
PAverage	0.506	0.174	8.446	1	0.004	1.659
Constant	-1.447	1.250	1.342	1	0.247	0.235

Binary Parameter Estimates – E

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
56.916[a]	0.042	0.095

	B	S.E.	Wald	df	Sig.	Exp(B)
EAverage	0.489	0.230	4.514	1	0.034	1.630
Constant	-1.609	1.812	0.788	1	0.375	0.200

Binary Parameter Estimates – R

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
56.257[a]	0.048	0.108

	B	S.E.	Wald	df	Sig.	Exp(B)
RAverage	0.311	0.135	5.276	1	0.022	1.365
Constant	0.071	0.971	0.005	1	0.942	1.073

Binary Parameter Estimates – M

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
57.369[a]	0.038	0.086

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	MAverage	0.436	0.161	7.312	1	0.007	1.546
	Constant	-1.052	1.213	.752	1	0.386	0.349

Binary Parameter Estimates – A

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
55.631[a]	0.054	0.121

	B	S.E.	Wald	df	Sig.	Exp(B)
AAverage	0.632	0.267	5.608	1	0.018	1.881
Constant	-2.869	2.136	1.804	1	0.179	0.057

Binary Parameter Estimates – PERMA

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
53.485[a]	0.073	0.164

	B	S.E.	Wald	df	Sig.	Exp(B)
PERMAAverage	0.560	0.200	7.817	1	0.005	1.750
Constant	-2.030	1.506	1.816	1	0.178	0.131

Binary Parameter Estimates – P – Tech

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
57.508[a]	0.037	0.083

		B	S.E.	Wald	df	Sig.	Exp(B)
	PAverage by TechAverage	0.072	0.039	3.380	1	0.066	1.075
	Constant	0.660	0.897	0.541	1	0.462	1.935

Binary Parameter Estimates – E – Tech

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
59.930[a]	0.014	0.032

		B	S.E.	Wald	df	Sig.	Exp(B)
	EAverage by TechAverage	0.044	0.038	1.337	1	0.248	1.045
	Constant	1.224	0.987	1.539	1	0.215	3.402

Binary Parameter Estimates – R – Tech

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
58.466[a]	0.028	0.063

		B	S.E.	Wald	df	Sig.	Exp(B)
	RAverage by TechAverage	0.056	0.035	2.612	1	0.106	1.058
	Constant	1.052	0.805	1.709	1	0.191	2.863

Binary Parameter Estimates – M – Tech

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
57.369[a]	0.038	0.086

	MAvermage by TechAverage	0.070	0.038	3.462	1	0.063	1.073
	Constant	0.656	0.887	0.548	1	0.459	1.928

Binary Parameter Estimates – A – Tech

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
59.929[a]	0.014	0.032

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	AAverage by TechAverage	0.044	0.038	1.352	1	0.245	1.045
	Constant	1.203	0.999	1.449	1	0.229	3.330

Binary Parameter Estimates – PERMA - Tech

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
58.523[a]	0.027	0.062

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	PERMAAverage by TechAverage	0.063	0.039	2.537	1	0.111	1.065
	Constant	0.820	0.949	0.747	1	0.388	2.270

Ordinal

Pseudo R-Square

Cox and Snell	.012
Nagelkerke	.012
McFadden	.003

Link function: Logit.

Parameter Estimates - P

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval Lower Bound
Threshold	[PRA.1_1 = 1]	-2.353	.617	14.548	1	.000	-3.563
	[PRA.1_1 = 2]	-1.812	.581	9.732	1	.002	-2.951
	[PRA.1_1 = 3]	-1.557	.570	7.472	1	.006	-2.673
	[PRA.1_1 = 4]	-1.447	.565	6.550	1	.010	-2.555
	[PRA.1_1 = 5]	-1.168	.557	4.393	1	.036	-2.260
	[PRA.1_1 = 6]	-.837	.550	2.315	1	.128	-1.916
	[PRA.1_1 = 7]	-.490	.546	.805	1	.369	-1.560
	[PRA.1_1 = 8]	-.117	.544	.046	1	.830	-1.183
	[PRA.1_1 = 9]	.540	.545	.982	1	.322	-.528
	[PRA.1_1 = 10]	1.347	.550	5.992	1	.014	.269
Location	PAverage	.111	.064	2.970	1	.085	-.015

Pseudo R-Square

Cox and Snell	.023
Nagelkerke	.024
McFadden	.006

Link function: Logit.

Parameter Estimates - E

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval Lower Bound
Threshold	[PRA.1_1 = 1]	-1.556	.780	3.975	1	.046	-3.086
	[PRA.1_1 = 2]	-1.016	.753	1.822	1	.177	-2.492
	[PRA.1_1 = 3]	-.761	.745	1.046	1	.306	-2.221
	[PRA.1_1 = 4]	-.652	.742	.773	1	.379	-2.106
	[PRA.1_1 = 5]	-.373	.736	.257	1	.612	-1.816

	[PRA.1_1 = 6]	-.043	.732	.004	1	.953	-1.478
	[PRA.1_1 = 7]	.306	.730	.176	1	.675	-1.124
	[PRA.1_1 = 8]	.684	.729	.879	1	.348	-.746
	[PRA.1_1 = 9]	1.351	.733	3.400	1	.065	-.085
	[PRA.1_1 = 10]	2.169	.741	8.572	1	.003	.717
Location	EAverage	.205	.086	5.705	1	.017	.037

Pseudo R-Square

Cox and Snell	.010
Nagelkerke	.010
McFadden	.003

Link function: Logit.

Parameter Estimates - R

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval Lower Bound
Threshold	[PRA.1_1 = 1]	-2.524	.554	20.786	1	.000	-3.609
	[PRA.1_1 = 2]	-1.983	.513	14.946	1	.000	-2.988
	[PRA.1_1 = 3]	-1.727	.500	11.940	1	.001	-2.706
	[PRA.1_1 = 4]	-1.617	.495	10.670	1	.001	-2.587
	[PRA.1_1 = 5]	-1.337	.485	7.593	1	.006	-2.288
	[PRA.1_1 = 6]	-1.006	.477	4.444	1	.035	-1.941
	[PRA.1_1 = 7]	-.658	.472	1.943	1	.163	-1.582
	[PRA.1_1 = 8]	-.284	.469	.366	1	.545	-1.202
	[PRA.1_1 = 9]	.374	.469	.636	1	.425	-.545
	[PRA.1_1 = 10]	1.179	.474	6.186	1	.013	.250
Location	RAverage	.092	.056	2.707	1	.100	-.018

Pseudo R-Square

Cox and Snell	.009
Nagelkerke	.009
McFadden	.003

Link function: Logit.

Parameter Estimates - M

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval Lower Bound
Threshold	[PRA.1_1 = 1]	-2.362	.654	13.031	1	.000	-3.645
	[PRA.1_1 = 2]	-1.821	.620	8.614	1	.003	-3.037
	[PRA.1_1 = 3]	-1.565	.610	6.588	1	.010	-2.760
	[PRA.1_1 = 4]	-1.455	.606	5.768	1	.016	-2.643
	[PRA.1_1 = 5]	-1.175	.598	3.860	1	.049	-2.348
	[PRA.1_1 = 6]	-.844	.592	2.035	1	.154	-2.005
	[PRA.1_1 = 7]	-.497	.588	.715	1	.398	-1.649
	[PRA.1_1 = 8]	-.123	.586	.044	1	.834	-1.271
	[PRA.1_1 = 9]	.535	.587	.832	1	.362	-.615
	[PRA.1_1 = 10]	1.340	.592	5.126	1	.024	.180
Location	MAvermage	.104	.066	2.472	1	.116	-.026

Pseudo R-Square

Cox and Snell	.016
Nagelkerke	.016
McFadden	.004

Link function: Logit.

Parameter Estimates - A

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval Lower Bound
Threshold	[PRA.1_1 = 1]	-1.666	.867	3.693	1	.055	-3.366
	[PRA.1_1 = 2]	-1.126	.842	1.788	1	.181	-2.777
	[PRA.1_1 = 3]	-.871	.835	1.088	1	.297	-2.507
	[PRA.1_1 = 4]	-.761	.832	.837	1	.360	-2.392
	[PRA.1_1 = 5]	-.482	.827	.339	1	.560	-2.102
	[PRA.1_1 = 6]	-.152	.823	.034	1	.854	-1.764
	[PRA.1_1 = 7]	.194	.821	.056	1	.813	-1.414
	[PRA.1_1 = 8]	.568	.820	.479	1	.489	-1.040
	[PRA.1_1 = 9]	1.231	.823	2.237	1	.135	-.382
	[PRA.1_1 = 10]	2.044	.829	6.074	1	.014	.419
Location	AAverage	.186	.094	3.900	1	.048	.001

Pseudo R-Square

Cox and Snell	.018
Nagelkerke	.018
McFadden	.005

Link function: Logit.

Parameter Estimates - PERMA

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval Lower Bound
Threshold	[PRA.1_1 = 1]	-1.797	.749	5.764	1	.016	-3.264
	[PRA.1_1 = 2]	-1.254	.720	3.038	1	.081	-2.665
	[PRA.1_1 = 3]	-.998	.711	1.971	1	.160	-2.391
	[PRA.1_1 = 4]	-.888	.708	1.574	1	.210	-2.275
	[PRA.1_1 = 5]	-.608	.702	.751	1	.386	-1.983
	[PRA.1_1 = 6]	-.277	.697	.158	1	.691	-1.644
	[PRA.1_1 = 7]	.071	.695	.010	1	.919	-1.291

	[PRA.1_1 = 8]	.445	.694	.411	1	.521	-.915
	[PRA.1_1 = 9]	1.107	.697	2.522	1	.112	-.259
	[PRA.1_1 = 10]	1.918	.704	7.424	1	.006	.538
Location	PERMAAverage	.176	.082	4.632	1	.031	.016

Pseudo R-Square

Cox and Snell	.016
Nagelkerke	.017
McFadden	.004

Link function: Logit.

Parameter Estimates – P-Tech

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[PRA.1_1 = 1]	-3.051	1.528	3.985	1	.046
	[PRA.1_1 = 2]	-2.510	1.513	2.751	1	.097
	[PRA.1_1 = 3]	-2.255	1.509	2.234	1	.135
	[PRA.1_1 = 4]	-2.146	1.507	2.027	1	.155
	[PRA.1_1 = 5]	-1.867	1.504	1.542	1	.214
	[PRA.1_1 = 6]	-1.537	1.501	1.050	1	.306
	[PRA.1_1 = 7]	-1.190	1.498	.630	1	.427
	[PRA.1_1 = 8]	-.815	1.497	.297	1	.586
	[PRA.1_1 = 9]	-.155	1.495	.011	1	.918
	[PRA.1_1 = 10]	.657	1.496	.193	1	.660
Location	TechAverage	-.235	.464	.255	1	.613
	PAverage	.074	.179	.170	1	.680
	TechAverage * PAverage	.014	.054	.065	1	.798

Pseudo R-Square

Cox and Snell	.034
Nagelkerke	.035
McFadden	.009

Link function: Logit.

Parameter Estimates – E-Tech

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[PRA.1_1 = 1]	-4.293	2.136	4.041	1	.044
	[PRA.1_1 = 2]	-3.755	2.124	3.125	1	.077
	[PRA.1_1 = 3]	-3.501	2.120	2.726	1	.099
	[PRA.1_1 = 4]	-3.392	2.119	2.563	1	.109
	[PRA.1_1 = 5]	-3.114	2.116	2.166	1	.141
	[PRA.1_1 = 6]	-2.784	2.113	1.737	1	.188
	[PRA.1_1 = 7]	-2.431	2.110	1.328	1	.249
	[PRA.1_1 = 8]	-2.049	2.108	.945	1	.331
	[PRA.1_1 = 9]	-1.372	2.105	.425	1	.514
	[PRA.1_1 = 10]	-.545	2.104	.067	1	.796
Location	TechAverage	-.886	.638	1.931	1	.165
	EAverage	-.064	.246	.068	1	.795
	TechAverage * EAverage	.088	.073	1.435	1	.231

Pseudo R-Square

Cox and Snell	.014
Nagelkerke	.015
McFadden	.004

Link function: Logit.

Parameter Estimates – R-Tech

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[PRA.1_1 = 1]	-3.461	1.318	6.898	1	.009
	[PRA.1_1 = 2]	-2.922	1.301	5.046	1	.025
	[PRA.1_1 = 3]	-2.667	1.295	4.240	1	.039
	[PRA.1_1 = 4]	-2.557	1.293	3.912	1	.048
	[PRA.1_1 = 5]	-2.279	1.289	3.127	1	.077
	[PRA.1_1 = 6]	-1.949	1.285	2.300	1	.129
	[PRA.1_1 = 7]	-1.600	1.282	1.558	1	.212
	[PRA.1_1 = 8]	-1.225	1.280	.916	1	.338
	[PRA.1_1 = 9]	-.564	1.277	.195	1	.659
	[PRA.1_1 = 10]	.247	1.277	.037	1	.847
Location	TechAverage	-.295	.390	.571	1	.450
	RAverage	.019	.154	.016	1	.899
	TechAverage * RAverage	.023	.046	.250	1	.617

Pseudo R-Square

Cox and Snell	.019
Nagelkerke	.019
McFadden	.005

Link function: Logit.

Parameter Estimates – M-Tech

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[PRA.1_1 = 1]	-4.655	1.780	6.835	1	.009
	[PRA.1_1 = 2]	-4.115	1.767	5.421	1	.020
	[PRA.1_1 = 3]	-3.859	1.763	4.794	1	.029
	[PRA.1_1 = 4]	-3.750	1.761	4.534	1	.033
	[PRA.1_1 = 5]	-3.471	1.758	3.899	1	.048
	[PRA.1_1 = 6]	-3.140	1.754	3.205	1	.073

	[PRA.1_1 = 7]	-2.792	1.751	2.541	1	.111
	[PRA.1_1 = 8]	-2.415	1.749	1.907	1	.167
	[PRA.1_1 = 9]	-1.749	1.745	1.004	1	.316
	[PRA.1_1 = 10]	-.935	1.743	.288	1	.591
Location	TechAverage	-.754	.546	1.910	1	.167
	MAvermage	-.110	.196	.316	1	.574
	TechAverage * MAvermage	.071	.060	1.407	1	.236

Pseudo R-Square

Cox and Snell	.022
Nagelkerke	.023
McFadden	.006

Link function: Logit.

Parameter Estimates – A-Tech

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[PRA.1_1 = 1]	-3.041	2.360	1.660	1	.198
	[PRA.1_1 = 2]	-2.501	2.350	1.133	1	.287
	[PRA.1_1 = 3]	-2.247	2.347	.916	1	.338
	[PRA.1_1 = 4]	-2.137	2.346	.830	1	.362
	[PRA.1_1 = 5]	-1.859	2.344	.629	1	.428
	[PRA.1_1 = 6]	-1.529	2.342	.427	1	.514
	[PRA.1_1 = 7]	-1.183	2.340	.256	1	.613
	[PRA.1_1 = 8]	-.808	2.339	.119	1	.730
	[PRA.1_1 = 9]	-.138	2.338	.004	1	.953
	[PRA.1_1 = 10]	.682	2.338	.085	1	.770
Location	TechAverage	-.488	.723	.456	1	.499
	AAverage	.084	.268	.098	1	.754
	TechAverage * AAverage	.039	.081	.232	1	.630

Pseudo R-Square

Cox and Snell	.025
Nagelkerke	.026
McFadden	.007

Link function: Logit.

Parameter Estimates – PERMA-Tech

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[PRA.1_1 = 1]	-3.626	1.898	3.651	1	.056
	[PRA.1_1 = 2]	-3.085	1.885	2.678	1	.102
	[PRA.1_1 = 3]	-2.830	1.881	2.262	1	.133
	[PRA.1_1 = 4]	-2.720	1.880	2.094	1	.148
	[PRA.1_1 = 5]	-2.441	1.877	1.692	1	.193
	[PRA.1_1 = 6]	-2.112	1.874	1.270	1	.260
	[PRA.1_1 = 7]	-1.763	1.872	.887	1	.346
	[PRA.1_1 = 8]	-1.386	1.870	.550	1	.458
	[PRA.1_1 = 9]	-.719	1.868	.148	1	.700
	[PRA.1_1 = 10]	.101	1.868	.003	1	.957
Location	TechAverage	-.609	.581	1.098	1	.295
	PERMAAverage	.011	.220	.002	1	.961
	TechAverage * PERMAAverage	.056	.067	.704	1	.402

Case Processing Summary

		N	Marginal Percentage
How much do you agree or disagree with the following statement? "Retirement communities" refers to organized establishments available for residential senior care."Age-in-place" refers to remaining living in the community, with some level of independence, rather than in residential care. - Based on what I have learned about Covid-19, I now prefer to reside where I currently live when I retire.	0	11	4.5%
	1	5	2.1%
	2	6	2.5%
	3	1	0.4%
	4	9	3.7%
	5	13	5.3%
	6	7	2.9%
	7	20	8.2%
	8	25	10.3%
	9	47	19.3%
	10	99	40.7%
Valid		243	100.0%
Missing		0	
Total		243	

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	893.277			
Final	878.445	14.831	10	.138