

Do financial knowledge, financial risk tolerance, and uncertainty regarding future long-term care need influence long-term care insurance ownership by baby boomers?

by

NaRita G. Anderson

B.B.A., University of Central Oklahoma, 1986

M.B.A., Oklahoma City University, 1996

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

School of Family Studies and Human Services

College of Human Ecology

Kansas State University

Manhattan, Kansas

2019

Abstract

Using constructs derived from expected utility theory and data from the RAND American Life Panel 2012 Well Being 186 and 193 surveys, this study explored the extent to which financial knowledge, financial risk tolerance, and the uncertainty regarding the future need for long-term care were associated with long-term care insurance (LTCI) ownership by baby boomers ($N = 1,152$). Although extensive studies have been conducted regarding long-term care (LTC) issues facing baby boomers in the United States (U.S.), no studies have been found that investigate whether or not these specific factors were predictive of LTCI ownership by baby boomers. Regression analysis was used to estimate the relationship between the dependent and the independent variables in this study.

Consistent with the hypotheses of this study, LTCI knowledge was statistically significantly associated with LTCI ownership by baby boomers. Subjective financial knowledge regarding LTCI had the greatest influence on LTCI ownership. An examination of items used to measure uncertainty regarding the future need of LTC indicated that merely thinking about needing LTC at some point in the future positively influenced LTCI ownership. Baby boomers with higher household income were also more likely to own LTCI.

Results of this study may contribute to the existing literature on LTCI ownership among baby boomers. As the need for, and cost of, LTC are expected to increase as the U.S. population ages, study results may also provide information for financial advisors and other stakeholders to better engage baby boomers in ways that promote comprehensive risk management decision making in retirement planning. More specifically, study results may provide stakeholders with information to better understand factors that influence LTCI ownership by baby boomers.

Do financial knowledge, financial risk tolerance, and uncertainty regarding future long-term care need influence long-term care insurance ownership by baby boomers?

by

NaRita G. Anderson

B.B.A., University of Central Oklahoma, 1986

M.B.A., Oklahoma City University, 1996

A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

School of Family Studies and Human Services

College of Human Ecology

Kansas State University

Manhattan, Kansas

2019

Approved by:

Co-Major Professor
D. Elizabeth Kiss

Approved by:

Co-Major Professor
Dorothy Durband

Copyright

© NaRita Anderson 2019.

Abstract

Using constructs derived from expected utility theory and data from the RAND American Life Panel 2012 Well Being 186 and 193 surveys, this study explored the extent to which financial knowledge, financial risk tolerance, and the uncertainty regarding the future need for long-term care were associated with long-term care insurance (LTCI) ownership by baby boomers ($N = 1,152$). Although extensive studies have been conducted regarding long-term care (LTC) issues facing baby boomers in the United States (U.S.), no studies have been found that investigate whether or not these specific factors were predictive of LTCI ownership by baby boomers. Regression analysis was used to estimate the relationship between the dependent and the independent variables in this study.

Consistent with the hypotheses of this study, LTCI knowledge was statistically significantly associated with LTCI ownership by baby boomers. Subjective financial knowledge regarding LTCI had the greatest influence on LTCI ownership. An examination of items used to measure uncertainty regarding the future need of LTC indicated that merely thinking about needing LTC at some point in the future positively influenced LTCI ownership. Baby boomers with higher household income were also more likely to own LTCI.

Results of this study may contribute to the existing literature on LTCI ownership among baby boomers. As the need for, and cost of, LTC are expected to increase as the U.S. population ages, study results may also provide information for financial advisors and other stakeholders to better engage baby boomers in ways that promote comprehensive risk management decision making in retirement planning. More specifically, study results may provide stakeholders with information to better understand factors that influence LTCI ownership by baby boomers.

Acknowledgments

I want to thank my dissertation committee co-chairpersons—Drs. D. Elizabeth Kiss and Dorothy Durband—along with committee members Drs. Clifford Robb, Stuart Heckman, and Sally Yahnke. Thank you, Dr. Kiss, for your guidance, support, and steadfast encouragement. Thank you Dr. Durband for your willingness to co-chair my committee so late in the process, and for your counsel early in my proposal writing when I was uncertain as to whether or not I wanted to continue pursuing a Ph.D. at Kansas State. Thank you, Dr. Robb, for serving as my initial committee chairperson. Your guidance helped me to identify an area of research that I could care about for the remainder of my career. Thank you, Dr. Heckman, for holding my feet to the proverbial statistical methods fire. Thank you, Dr. Yahnke, for serving as my outside committee chairperson. I appreciate your kindness and words of encouragement from the very beginning.

Mama. Prins Ella Anderson. What can I say? You have truly been the foundation on which I've built my entire life. Thank you for showing me how to be brave and resilient. Even though God called you home on December 30, 2017, you continue to be a cherished source of inspiration, influence, and strength for both me and Sean. We miss you so much and are eternally grateful for having been loved, and cared for, by you. We proudly carry your legacy with us as we strive to create our own.

Sean Anderson Beals. My son. My greatest gift from God. You've had a front row seat to the good, the bad, and the ugly of my academic pursuits. Thank you for being you while I was busy being me. When you said "Mom, I don't remember a time in my life when you weren't working on your Ph.D.," you confirmed what I already knew—that my sacrifices were often your sacrifices too. I've made you many promises throughout this journey and you have my word that I plan is to honor all of them. Here we go, Son!

Thank you, Anderson Nation. I stand on the shoulders of our forefathers and mothers who made it their life's mission to create pathways and opportunities for the rest of us to build upon. For me to build upon. I also stand in the present, surrounded by a family like no other. Anderson Nation could be a dissertation in, and of, itself. While there are too many of you to name, I want to especially thank just a few. Thank you to my mother's sisters and brothers: Aunt Ghita, Aunt Ephelders, Aunt Gloria, Uncle Oria, Uncle Cornelius, Aunt Jean, Aunt Helen, and Aunt Claudette. Thank you, cousins Richard, Rodney, Cheryl, Brigeeta, Tony, Sherri Lynn, Delois, Sharon, Greg, Andrew, Tyson, and Omari for holding us down. Thank you to my mom's dearest friend, Florene. Thank you to my sister, Joyce Ann.

Thanks to my dearest friends Jamie Lynn, Marie, Chiquita, Marva, Cliff, Allison, and Traci. Thank you to my friends and colleagues at the University of Central Oklahoma, namely Steve, Julie, Bambi, Randy, Myron, and Sue. Finally, thank you to my shooting stars—Yvette, Tonya, and Margarete. Although your time on this earth was brief, your impact on my life lives on.

My life has afforded me many prestigious titles that all mean a great deal to me. First and foremost, I am a child of God. Second, I am the proud mother of Sean Anderson Beals. Third, I am the blessed and highly favored daughter of Prins Ella Anderson. Fourth, I am the 32nd grandchild of the blessed and highly favored Oria Earl and Louise Beulah Anderson. Finally, I am NaRita Gail Anderson, a Doctor of Philosophy.

Table of Contents

List of Figures	x
List of Tables	xi
Chapter 1 - Introduction.....	1
Statement of Problem.....	2
Purpose of the Study	3
Significance of the Study	3
Limitations	4
Organization of the Dissertation	4
Chapter 2 - Theoretical Framework and Related Literature	5
Expected Utility Theory.....	5
Baby Boomers.....	7
Financial Knowledge	9
Financial Risk Tolerance	10
Uncertainty Regarding Future Long-Term Care Needs	11
Retirement Planning	12
Risk Management	13
Long-Term Care	13
Long-Term Care Insurance.....	17
Demographic Characteristics	20
Hypotheses	21
Summary	21
Chapter 3 - Methodology	22
Data.....	22
Sample Characteristics.....	23
Dependent Variable	23
Independent Variables	25
Summary.....	28
Chapter 4 - Results.....	30
Data Analysis	30

Factor Analysis (Financial Knowledge)	30
Binary Logistic Regression.....	32
Summary.....	36
Chapter 5 - Discussion	38
Analysis of Findings	38
Implications of Findings	40
Limitations	43
Recommendations for Future Research.....	43
Summary.....	46
References.....	48
Appendix A – Survey Instrument	57
Part 1 – Demographics.....	57
Part 2 – Survey Questions.....	74
Part 3 – Survey Questions.....	83
Variable Key	86
Appendix B – Statistical Output (IBM SPSS Version 24.0)	90
Appendix C – Statistical Output (IBM SPSS Version 24.0)	102
Appendix D – VITA	109

List of Figures

Figure 3.1 Conceptual Framework	29
---------------------------------------	----

List of Tables

Table 3.1 Sample Characteristics ($N = 1,152$).....	24
Table 3.2 Financial Knowledge Items ($N = 1,152$)	26
Table 3.3 Uncertainty Regarding Future Need Items ($N = 1,152$)	27
Table 3.4 Control Variables ($N = 1,152$).....	28
Table 4.1 Principal Component for Financial Knowledge ($N = 1,152$)	32
Table 4.2 Summary of Binary Logistic Regression for Variables Predicting Long-Term Care Insurance Ownership: Descriptive Statistics ($N = 1,152$)	32
Table 4.3 Summary of Binary Logistic Regression for Variables Predicting Long-Term Care Insurance Ownership by Baby Boomers ($N = 1,152$).....	36

Chapter 1 - Introduction

Financial decisions associated with long-term care (LTC) are becoming increasingly important in retirement planning. Many baby boomers have firsthand knowledge of, or experience with, LTC from a caregiver perspective (Brown, Goda, & McGarry, 2012). Non-paid familial caregivers provide approximately 70% of all LTC in the United States (Bodnar, 2016). An estimated 90% of older LTC recipients rely on at least one family member to provide some or all of their LTC needs (Siegel & Rinsky, 2015). Data suggest that the number of baby boomers who will need professional LTC in the future will be significant, as baby boomers are likely to experience decreasing levels of non-paid LTC and increasing levels of paid care (McGarry, Temkin-Greener, Chapman, Grabowski, & Li, 2016).

In 2016, an estimated \$275 billion was spent on LTC in the United States (U.S.) with nearly one-half of those costs being assumed by Medicaid (Bodnar, 2016). By 2040, LTC expenditures are projected to reach \$346 billion annually (Frank, 2012). Because the need for LTC is expected to increase as the population ages, it is important for baby boomers to make retirement planning decisions that include financial provisions in anticipation of the likelihood of needing to purchase LTC at some point in the future (Bojazi & Tacchino, 2016).

In 2017, the U.S. Congressional Budget Office published a report on the adequacy of income in retirement (Congressional Budget Office, 2017). Results of the study found that approximately 50% of single households and 25% of married households of adults age 65 and older had insufficient financial resources in retirement, not including the potential costs associated with LTC. People who do not qualify for LTC through Medicaid may have alternatives such as self-funding, reverse mortgages, life insurance options, annuities, community service programs, non-paid familial care, and long-term care insurance (LTCI). The majority will

rely on some combination of these alternative methods for receiving and paying for LTC if needed (Broyles et al., 2016). The gap between projected LTC need and LTC financial planning provided an opportunity to examine factors that influence LTCI ownership by baby boomers. Using expected utility theory as its foundation, this study explored whether financial knowledge, financial risk tolerance, and the uncertainty regarding the future need for LTC were associated with LTCI ownership by baby boomers in this study.

Statement of Problem

The U.S. population is aging. In 2014, the percentage of the population age 65 and older was approximately 15% (Mather, Jacobsen, & Pollard, 2015). This segment of the population will continue to increase with each successive decade so that by 2050, people age 65 and older will represent approximately 19% of the total U.S. population (Pew Research Center, 2006). In other words, nearly one out of five people will be age 65 or older by 2050. As baby boomers age, the need for, and cost of, long-term care (LTC) are expected to increase significantly to the extent that LTC could become a financial burden for many of them and their families (McGarry et al., 2016). Costs associated with LTC have been shown to be correlated with increased poverty, increased financial hardship, and a reduced quality of life in retirement (Cutler, 2016; Hopkins et al., 2014; Kemper, Komisar, & Alexih, 2005). Women have fewer financial resources in retirement than men, live longer, and need LTC for longer periods of time (Colby & Ortman, 2014).

A prevailing misconception is that Medicaid, the national government funded health program for low-income individuals and families, pays for LTC for the general population (Frank, 2012). Medicaid is intended to be a short-term safety net for people who have exhausted all other options and lack sufficient financial resources or assets to pay for needed care (Brown,

Goda, & McGarry, 2016). As the population ages, more people with limited financial resources will rely on government programs to pay for needed LTC. However, the projected need for LTC will likely exceed resources allocated for LTC expenditures by Medicaid in the near future (Bodnar, 2016; Hopkins, Kurlowicz, & Woehrl, 2014). As the need for LTC increases, government subsidization will likely provide for fewer services for shorter periods of time, while simultaneously imposing greater qualifying restrictions on those seeking services (Kelly et al., 2012).

Long-term care planning is an area of financial planning that is of particular interest to a broad spectrum of stakeholders concerned with the costs and provision of care. An aging population, the uncertain future of Social Security retirement benefits, an uncertain investment environment, and the unprecedented number of baby boomers turning 65 years old each day is cause for concern for individuals and their families, financial planning professionals, insurance and healthcare industries, and federal and state governments (Grable & Joo, 2005).

Purpose of the Study

The purpose of this study was to explore whether or not financial knowledge, financial risk tolerance, and the uncertainty regarding future need for long-term care influenced long-term care insurance ownership by baby boomers.

Significance of the Study

Baby boomers make up a significant portion of the aging U.S. population and are anticipated to consume considerable long-term care (LTC) resources as they age (Bojazi & Tacchino, 2016). Exploring how baby boomers view and understand long-term care is important given the increasing likelihood of needing LTC at some point in the future. Long-term care insurance is one of the most comprehensive yet underutilized methods of insuring against high

costs associated with LTC. Fewer than eight million people in the U.S. had LTCI in 2014 (Cohen, 2016). In 2016, fewer than 3% of baby boomers had LTCI (McGarry et al., 2016). Although an increasing amount of research has focused on baby boomers and LTC, this study may contribute to the growing knowledge base on the impact of financial knowledge, financial risk tolerance, and uncertainty of future LTC need on LTCI ownership by baby boomers.

Limitations

Results from this study may not be generalizable beyond the specific population from which the sample was drawn. Sample characteristics such as income, education, net worth, and LTCI ownership were higher than those of the general baby boomer population. Also, the measures of financial knowledge and financial risk tolerance can be sensitive to how the concepts are framed and the types of financial risks under consideration. In spite of these limitations, this study may fill a gap in the personal financial planning field in the area of risk management decision making by baby boomers by specifically examining LTCI ownership.

Organization of the Dissertation

Chapter 1 presented the introduction to the study, the statement of the problem, the purpose of the study, the significance of the study, and limitations of the study. Chapter 2 contains the review of related literature and research on factors previously shown to influence LTCI purchasing decisions. The methodology and data used in the study are presented in Chapter 3. The results of the analyses are presented in Chapter 4. Chapter 5 summarizes and discusses the findings of the study, presents conclusions drawn from those findings, and offers recommendations for further study.

Chapter 2 - Theoretical Framework and Related Literature

This chapter begins with an overview of expected utility theory, followed by a summary of the literature on the targeted population of the study, and the common predictors of long-term care insurance (LTCI) ownership. The study's hypotheses conclude the chapter.

Expected Utility Theory

Expected utility theory (EUT) is one of the primary normative models used to describe how risk tolerance and risk-taking behaviors are conceptually linked (Grable, 2008; 2016). EUT constructs help explain decision making under uncertainty and risk, in the absence of perfect information (Von Neumann, & Morgenstern, 1944). The theory premise is that people make rational decisions under uncertain conditions based on their expected utilization of a product or service, their risk tolerance, and their preferences (Grable, 2008). EUT also provides a process for evaluating the risk itself by engaging in probability assessments to characterize the nature and extent of individual risk exposure (Chavas, 2004). By doing so, researchers can estimate the probability of some event occurring or not occurring, at which point researchers can better predict the decision a person is likely to make. Planning financially for the likelihood of needing long-term care (LTC) at some point in the future is challenging and involves making long-term decisions and financial commitments in the absence of perfect information.

The von Neumann-Morgenstern axioms are four truisms regarding preferences (Chavas, 2004). They are: completeness, transitivity, independence, and continuity. Completeness assumes that people have clear preferences. Transitivity assumes that people make decisions based on their well-defined preferences. Independence assumes that the order of preferences between two options will not change, even when an irrelevant third option is introduced.

Continuity assumes that when three options exist if a person prefers the first option to the second, and the second option to the third, that person will also prefer the first option to the third.

Expected utility theory allows the mapping of preferences by using numbers that can be manipulated in ways that potentially broaden the ability of researchers to predict actual behavior (Chavas, 2004). If the axioms are satisfied, there is an assumption of rationality allowing preferences to be represented by a utility function. In essence, the most desired outcome will be chosen according to the preference with the highest expected utility, not the highest expected value (Chavas, 2004). In other words, people should make the same financial choices based on their preferences, regardless of the risk associated with the choices under consideration (Grable, 2016; Okasha, 2011). Utilizing EUT constructs, this study posited that baby boomers are risk averse and therefore should decline a gamble, like LTCI ownership since the expected utility of paid LTC in the United States (U.S.) is roughly 70% (Bodnar, 2016). Preferences in the current study were measured based on survey participant's financial knowledge regarding LTC and LTCI, their financial risk tolerance, and the uncertainty associated with the future need for LTC.

The ability to make decisions under uncertainty can be complex. Factors that influence how information is processed can be complicated and difficult to measure (Chavas, 2004). As a general rule, a person's utility function is assumed to be rational and resemble a constant aversion to risk (Grable, 2016). EUT is an efficient way to summarize information regarding preferences among risky choices. The rational choice, calculated by multiplying probabilities and utilities and summing the results, should lead to the choice that maximizes expected utility (Grable, 2000). Resnik (2004) used the principles of EUT to explore strategies for doctor-patient decision-making in the absence of evidence related to potential outcomes associate with various medical interventions while simultaneously taking reasonable precautions to avoid genuine,

plausible harm. Even though EUT is one of the primary models used to measure financial risk tolerance, there is no standardized measure of financial risk tolerance (Grable, 2008).

The level of exposure to risk is a key consideration in financial decision-making. However, people also make decisions based on preferences, and preferences determine utility according to EUT (Chavas, 2004). For example, Bodnar (2016) found that 44% of study participants considered LTCI ownership important, but they preferred to use their discretionary funds on other priorities like increasing their retirement savings, even when LTCI was a better value. Baby boomers, as part of a general societal trend, are accustomed to experiencing immediate value and utility from their purchases or investments. Delayed consumption is inherent to LTCI ownership and may be less preferred because it is purchased years prior to the likelihood of needing LTC.

In this study, preferences for LTCI ownership were based on financial knowledge, financial risk tolerance, and the uncertainty of the future need for LTC. The degree to which baby boomers view LTCI as a preferred method for mitigating the financial risks associated with the cost of LTC is of interest to numerous constituencies, including care recipients and their families, financial planning professionals, the insurance industry, the healthcare industry, and federal and state governments,

Baby Boomers

There are an estimated 70 million baby boomers—individuals born between 1946 and 1964—in the U.S. (Colby & Ortman, 2014). Baby boomers are said to be responsible for ushering in changes in the aging structure of the U.S. population from birth. In 2011, baby boomers began turning 65 years old at an estimated rate of 10,000 – 11,000 per day—a trend that will continue through the year 2030 (U.S. Census Bureau, 2010). This trend of an increasingly

older population is projected to endure until 2056 at which time the U.S. population 65 years and older will exceed the population of those 18 years and under (Colby & Ortman, 2014).

Women, on average, live longer than men, experience higher levels of fragility, both physically and financially, as they age, and are likely to have fewer financial resources during retirement (DeVaney, 2008; Hershey & Jacobs-Lawson, 2012). In 2012, the average life expectancy for men and women who reached age 65 was 82.7 and 85.3 years, respectively (Colby & Ortman, 2014). Women also need LTC for longer periods of time than men do: 3.7 years for women compared to 2.2 years for men (Hopkins et al., 2014; Timmermann, S. (2000).

While the anticipated need for LTC is projected to impact nearly 70% of baby boomers during their lifetimes, 97% of baby boomers do not have LTCI (Bodnar, 2016). Some will rely on personal assets and other resources to pay for LTC should the need arise. The segment of the U.S. population classified as low income, lack the financial resources required to pay for LTC or LTCI (Brown et al., 2016). It is worth noting that more than 80% of people who are classified as low income have limited assets and rely on Social Security as their primary source of income (Wolff, Spillman, Freedman, & Kasper, 2016). Wealthier baby boomers will likely have the financial resources needed to pay for LTC should the need arise (Bodnar, 2016).

Middle class baby boomers are considered to be the primary target market for LTCI for several reasons. As they age, baby boomers will likely experience decreasing availability of informal, non-paid LTC than previous generations (Karapiperis & Nordman, 2016). Without LTCI, a significant portion of middle-class baby boomers will likely spend most, if not all, of their retirement savings and financial resources on LTC should LTC be needed (Cohen, 2016). Although LTCI is considered by many to be expensive, cost is not always a deterrent. It is

estimated that less than 10% of people who have the financial resources to afford LTCI—or the ability to meet underwriting qualifications—own LTCI (Cohen, 2016).

Financial Knowledge

There seems to be a general lack of financial knowledge regarding costs and risks associated with LTC in the U.S. (Frank, 2012). The economics associated with LTC are complex and filled with uncertainty. The affordability of LTC, now and in the future, are matters of concern for many baby boomers as they consider their options for funding LTC should the need arise (Cohen, 2016). Long-term care insurance, though comprehensive, can be a substantial investment for an extended period of time. Publicly accessible information only provides general, estimated costs of LTCI. Information regarding individual factors that influence insurability and premium costs is less readily available. As baby boomers work to secure their financial resources in retirement, they are more likely to avoid investments they perceive as unnecessary, difficult to understand, or involving uncertainty (Broyles et al., 2016).

A common misconception is that Medicare and Medicaid pay a significant portion of the expenses associated with LTC for the general U.S. population (Hopkins, 2016). Medicare covers health care for retirees and disabled individuals. Medicaid is a program jointly funded by state and federal governments that provides for the care of low-income and indigent populations. States have some degree of latitude in establishing eligibility and types of services to subsidize, including LTC (Bodnar, 2016).

The cost of LTC is undoubtedly one of the most significant financial risks facing the baby boomer population (Siegel & Rimsky, 2015). To mitigate adverse financial outcomes associated with the cost of LTC, baby boomers need reliable methods for estimating the financial risk associated with LTC (Gilliam, Chatterjee, & Grable, 2010).

Financial Risk Tolerance

There are very few financial decisions in the retirement planning process that do not have some level of uncertainty or financial risk (Karapiperis & Nordman, 2016). Grable and Joo (2004) defined financial risk tolerance as “the maximum amount of uncertainty someone is willing to accept when making a financial decision” (p. 11). Assessing financial risk tolerance is difficult because of the subjective nature of risk taking (Joo & Grable, 2005). Factors such as attained education, gender, age, net worth, marital status, occupation, financial knowledge, and household income have been associated with financial risk tolerance and have been shown in numerous empirical studies to influence financial decisions and shape financial behaviors (Grable & Joo, 2004; Grable, 2008; 2016). Those who were male, married, had high net worth, and had high levels of financial knowledge exhibited higher levels of financial risk tolerance (Grable, 2008). Gilliam, Chatterjee, and Zhu (2010), using age, gender, income, and education as control variables to test associations with risky asset ownership, reported similar results.

Grable and Rabbani (2014) examined financial risk tolerance in every day money decisions and found that risk taking and risk tolerance do not appear to vary dramatically from one area of a person’s life to another. The authors used a “latent risk tolerance construct consisting of seven items—driving, financial, occupational, health, interpersonal, romantics, and major life change—to establish a risk tolerance portrait for people nearing retirement age” (p. 174). They concluded that, while a person may deviate from their general pattern of risk taking from time to time, a portrait of a person’s risk tolerance could be developed using methods that are reliable and useful in describing a person’s general willingness to take risk, and that a person’s time horizon does not necessarily influence their risk tolerance.

Uncertainty Regarding Future Long-Term Care Needs

In retirement planning, there appears to be greater uncertainty regarding issues of LTC than any other area of the planning process. Changing family dynamics, increased longevity, and rising healthcare costs are projected to have a significant impact on the adequacy of financial resources of many baby boomers in retirement (Hopkins et al., 2014). The likelihood of baby boomers needing LTC at some point in the future is not known with certainty. Because the need for LTC is individual-specific, it is difficult to gain a consensus about the need for, and value of, LTCI. Retirement accounts like IRAs and 401(k)s are popular in retirement planning because the return on investment is less uncertain (Batsell, 2013). As previously mentioned, an estimated 70% of baby boomers will likely need LTC at some point in the future (Bodnar, 2016). This also means that approximately 30% of baby boomers will not need LTC. Long-term care insurance ownership allows baby boomers to plan for the known and the unknown that could occur with age and longevity (Bojazi & Tacchino, 2016).

In 2006, the *Harvard Health Letter* reported declining disability rates among older Americans compared to previous generations, contributing to the uncertainty of future need for LTC. Medical advancements and high-quality healthcare in the U.S. are key contributing factors to the increased quality of life older populations currently enjoys (Brown et al., 2012). Even so, longevity is a concern in retirement planning, as greater savings are required to support and sustain longer lives. Longevity increases the likelihood of needing LTC in later years. In the U.S., long life is often synonymous with increasing demand for costly care for more extended periods of time (Bodnar, 2016). Care recipients can expect to assume greater financial responsibility for costs associated with LTC than in years past (Hopkins, 2014; Frank, 2012).

Retirement Planning

In the United States, savings, income, risk management, and estate planning are essential components of a comprehensive retirement plan (Guina, 2010). According to the U.S. Census Bureau (2010), baby boomers are projected to live nearly 20 years past full retirement age. Effective retirement planning requires that financial decisions be made in the present that have long-term implications for financial security well into the future. For this study, financial security is defined as having the ability to maintain one's current standard of living in retirement (Doherty & Dzielak, 2006).

People age 65 and older in the U.S. typically receive income from four primary sources (DeVaney, 2008; Fisher, Chaffee, & Sonnega, 2016). More than 90% receive Social Security retirement benefits (Gelvin, 2005). An estimated 67% receive income from their assets and interest from private savings. Approximately 40% receive income from an employer-sponsored pension plan, and 20% derive income from employment (DeVaney, 2008; Gelvin, 2005).

The Employee Benefit Research Institute conducts an annual study in the U.S. to determine how confident workers are that they will be financially secure in retirement. In 2017, 18% of surveyed workers reported being very confident that they would be secure in retirement (Greenwald, Copeland, Van Derhei, & Employee Benefit Research Institute, 2017). This represents a decline in confidence from 2016 when 21% of workers reported being very confident in their retirement security. This confidence was associated with higher household income and participation in retirement plans offered through employers. The 2017 study reported that 42% of workers felt somewhat confident that they would have sufficient financial resources in retirement while 24% were not at all confident that they would have sufficient financial resources in retirement. Approximately 50% of workers surveyed who did not participate in their

company's retirement plan reported that they were not at all confident about their financial security in retirement (Greenwald et al., 2017).

Risk Management

Risk management is defined as the forecasting and evaluation of financial risks followed by the implementation of a financial plan to avoid or minimize their impact (Chiappelli, Koepke, & Cherry, 2005). The ability to obtain, measure, control, and process information is essential in decision making that involves risk (Chavas, 2004). According to the Institute of Risk Management (n.d.), effective risk management requires “an informed understanding of relevant risks, an assessment of their relative priority, and a rigorous approach to monitoring and controlling those risks in ways that maximize financial sustainability” (p. 1).

Long-term care costs have the potential to impact retirement resources with devastating consequences if not adequately prepared for financial (Bodnar, 2016). Incorporating risk management into the retirement planning process provides an avenue for identifying opportunities and barriers that have the potential to impact overall financial security. Risk management encompasses a vast array of products and services designed to protect individuals, families, and their assets. This protection is often associated with insurance products like long-term care insurance. The population of interest for this study is baby boomers. However, the need for LTC and LTCI is not restricted by age.

Long-Term Care

Long-term care services assist individuals with the execution of activities of daily living, often for an expected period of more than 90 days (Kemper et al., 2005). Activities of daily living include eating, toileting, transferring, bathing, dressing, and continence, and can vary from simple verbal reminders to full physical assistance (Kemper et al., 2005). Instrumental activities

of daily living include other activities that impact independence, such as shopping and cooking (Wettstein & Zulkarnain, 2017). The eligibility threshold established by the Federal Health Insurance Portability and Accountability Act of 1996, known as HIPPA, requires that a person have at least two activities of daily living limitations to be classified as needing LTC (Karapiperis & Nordman, 2016). In the U.S., the possibility of incurring sizeable LTC expenses is one of the biggest fears associated with retirement (Bodnar, 2016). It is estimated that self-funding will likely provide, on average, one-third of the financial resources needed to cover LTC expenditures should the need for LTC arise (Brown et al., 2012; Lown & Palmer, 2004; Siegel & Rimskey, 2016).

The role of family and community caregivers in providing LTC cannot be overstated. Brown et al. (2016) found that approximately 68% of people over age 65 will become cognitively impaired or unable to complete at least two activities of daily living over their lifetimes. Family members provide an estimated 70% of all LTC services, mostly in the form of informal and unpaid care in the care recipient's home (Hopkins et al., 2014). Nearly 23% of people aged 65 years and older will rely solely on informal care for at least two years, and 6% will rely on informal care for more than five years (Kemper et al., 2005).

The burden of providing LTC is not only financial. In 2013, an estimated 40 million family caregivers provided approximately 37 billion hours of non-paid LTC with an estimated value of \$470 billion (Reinhard, Feinberg, Choula, & Houser, 2015). The estimated economic impact of unpaid familial care in 2009 was \$450 billion (The SCAN Foundation, 2013). That represents a 20% increase from 2007. More than half of family caregivers have full-time jobs while providing an average of 19 hours of LTC every week (Hopkins et al., 2014). Nearly 70% of family caregivers reported that providing LTC negatively impacted their own physical and

mental health, their employment and employment benefits, their wages and job performance, and their ability to save money for their own future (Hopkins, 2014; Wettstein & Zulkarnain, 2017).

Baby boomers may not be able to rely on a similar level of informal, unpaid care as that received by earlier generations. In 1930, the average family size in the U.S. was six persons (Kemper et al., 2005). In 2010, the average household size was 2.58 persons—an indication that baby boomers' familial support systems will be much smaller (Colby & Ortman, 2014). In their study of family dynamics, Coe, Goda, and Van Houtven (2015) found that people who had LTCI utilized significantly less informal familial care. They also found that children of care recipients with LTCI were more likely to be employed full-time, were more geographically dispersed than previous generations, and had lower out-of-pocket LTC expenses for care provision.

Just as the likelihood of needing LTC increases with age, so do the costs of care (Kemper et al., 2005). In 2002, 59% of all LTC costs in the U.S. were paid for by Medicaid and Medicare—45% and 14%, respectively (Kim & DeVaney, 2005). In 2012 the Medicaid program spent nearly 50% of its budget, \$120 billion, on LTC expenses (Siegel & Rimsky, 2015). In 2014, 62% of the \$239 billion spent on LTC expenditures were paid by Medicaid and Medicare (Bodnar, 2016). In 2014, payments from LTCI policies were \$7 billion, or 3%, of the total LTC expenditures in the U.S. Out-of-pocket, other insurances, and other financial resources spent on LTC were \$49 billion, \$14 billion, and \$19 billion, respectively.

Medicaid's coverage of LTC was designed with a bias for institutional care, which mandates that states cover nursing home care for eligible beneficiaries (Brown & Finkelstein, 2009). Although Medicaid does assist low-income and low-wealth Americans with LTC costs, care recipients are responsible for majority of costs associated with LTC (Brown & Finkelstein, 2009; DeVaney, 2008). In other words, Medicaid is not intended to cover a significant portion of

the expenses associated with LTC but rather to provide a safety net for those who need LTC and have exhausted the majority of their financial resources (Hopkins, 2014).

Medicaid is currently the largest payer of LTC, but increasing demand and costs of care are expected to be a tremendous strain on federal and state budgets in the future as the number of baby boomers who will lack the financial capability to pay for LTC enter retirement (Karapiperis & Nordman, 2016). Due to the anticipated demand for LTC in the future, the government will likely impose greater qualification restrictions while simultaneously imposing greater limitations on the types and levels of LTC it will subsidize (Bodnar, 2016).

Several factors influence the costs of LTC including age, health, type and duration of care received, inflation, and the state where care is received (Hopkins et al., 2014). In 2017, the national median costs for nursing-home care was \$97,452 annually for a private room, and \$85,776 annually for a semi-private room (Genworth, 2017). The cost of home care in 2017 was valued at \$49,188 and residency in an assisted living facility was \$45,000. Adult day care centers' average costs were \$18,204 annually based on 52 weeks of care (Genworth, 2017). In 2015, the annual national median rates for nursing-home care for private and semi-private rooms were \$92,378 and \$82,125 respectively (Genworth, 2015). Residency in an assisted living facility, and home care in 2015 were \$43,539 and \$46,322 respectively. Adult day care centers' average costs were \$17,680 annually based on 52 weeks of care (Genworth, 2015).

The majority of LTC recipients are age 65 and older (Hopkins et al., 2014). In 2012, nine million people age 65 and older needed LTC. That number is predicted to increase to 12 million by 2020, as the U.S. population ages (Hopkins et al., 2014). Most LTC is provided in the care recipient's home and lasts for 2.85 years, on average (Hopkins, 2014). Twenty percent of LTC

recipients require care in a formal setting with an average length of stay of 2.29 years (Hopkins, 2014).

Aging is often accompanied by increased fragility. Numerous conditions, diseases, physical limitations, and cognitive limitations contribute to the increased need for LTC. For example, it is estimated that Alzheimer's disease will affect one in eight people over age 65 (Hopkins et al., 2014). The projection increases to one in every two people over age 85. As women tend to live longer than men, more women than men are likely to suffer from debilitating diseases (Brucker & Leppel, 2013). LTC recipients and their families will likely have to assume a significant portion of the expense for LTC as the amount of financial support that Medicaid will be able to provide for the costly care associated with Alzheimer's and other chronic conditions is uncertain.

Long-Term Care Insurance

The U.S. Department of Health and Human Services defines long-term care insurance as insurance designed to help provide for the cost of long-term care beyond a predetermined period, usually 90 days (longtermcare.gov, n.d.). Long-term care insurance has been available for purchase for more than 40 years. When initially made available to the market, LTCI premiums were structured to be level for the life of the policy. However, several converging factors caused significant disruptions in the market, dating back to the mid-2000s (Karapiperis & Nordman, 2016). These disruptions included lower than expected mortality rates, lower than expected policy lapses, increasing claim submissions, and fewer insurers in the market.

In 2000, approximately 125 insurers in the marketplace reported selling at least 2,500 LTCI policies annually (Karapiperis & Nordman, 2016). In 2010, there were fewer than 20 participating insurers, and by 2012, the number had dropped to 11 (Bodnar, 2016). The result has

been significant financial shortfalls for insurers and rising premium costs for LTCI policyholders. When combined with recent policy changes that allow existing insurers to adjust their pricing strategies to align with actual market performance, LTCI has become an expensive proposition for the targeted baby boomer market (Karapiperis & Nordman, 2016).

Fewer than eight million people owned private LTCI policies in the U.S. in 2014 (Bodnar, 2016). These policies represent roughly 2.5% of the total population and 10% of the population ages 65 and older (Hopkins et al., 2014). Seventy percent of these policies are group policies offered primarily through current or former employers (Hopkins et al., 2014). Employer participation is estimated to be 34,000 firms, which is less than .05% of U.S. businesses (Karapiperis & Nordman, 2016). The remaining 30% of LTCI owners have individual policies not associated with employment (Karapiperis & Nordman, 2016).

The average age of LTCI policyholders on the coverage start date is 59, which is the age considered by many in the LTCI industry to be the threshold for insurability and coverage affordability. America's Health Insurance Plans (2016) reported that nearly 60% of people interested in LTCI reported cost as the primary reason they did not purchase LTCI.

In 2015, the average annual premium for a LTCI policy was \$2,772. Similar coverage cost \$2,283 in 2010, and \$1,918 in 2005 (Karapiperis & Nordman, 2016). As previously noted, age does influence the cost of LTCI. In 2015, the average annual premium was approximately \$1,831 for people ages 55 and younger, and \$3,421 for people ages 70 to 74 (Genworth, 2015). The average policy, in 2015, provided a daily benefit of roughly \$159 for four-to-five years of coverage in the policyholder's home or in an institutional setting (Cohen, 2016). The \$159 daily benefit covered approximately 70% of nursing home care costs, 150% of assisted living costs, or

eight hours of home care daily (Cohen, 2016). Long-term care insurance policies typically have a 90-day waiting period and include an automatic compound inflation-protection rate of 5%.

Portability is an area of concern for baby boomers who consider purchasing LTCI (Cutler, 2016). The majority of LTCI policies are enforceable only in the states where the policies are purchased because of regulatory, industry, and provider restrictions. These restrictions require potential policyholders to know where they intend to reside during their retirement years and then purchase LTCI in that particular state (Bodnar, 2016).

In 2005, the federal government passed the Deficit Reduction Act of 2005, which included legislation that expanded the State Long-term Care Partnership Program in an effort to incentivize the purchase of private LTCI and reduce reliance on government-sponsored programs that finance LTC (Hopkins et al., 2014). The State Long-term Care Partnership Program allows for Medicaid asset protection, which provides for the exemption of assets from Medicaid consideration equal to the amount of LTC benefits paid from a qualified LTCI contract (Hopkins et al., 2014). For example, if a LTCI policy provides \$100,000 in LTC benefits, the policyholder can exclude \$100,000 in assets from consideration when seeking Medicaid LTC subsidization, thereby preserving financial resources and still meeting Medicaid eligibility requirements. Otherwise, LTC recipients must spend down their assets and be declared impoverished to qualify for Medicaid LTC subsidies and any assets that are not expended to cover LTC are subject to estate recovery to reimburse the state's Department of Welfare for expenses paid by Medicaid (Hopkins et al., 2014; Medicaid.gov, 2016).

Forty-one states have approved State Long-term Care Partnership Programs, but very few states have successfully implemented them (Hopkins et al., 2014). Hawaii and Illinois have pending partnership program applications, and Massachusetts has submitted an application

proposal according to the most current report from the American Association for Long-Term Care Insurance (2014). These states do not have state partnership programs: Alaska, Massachusetts, Michigan, Mississippi, New Mexico, Utah, Vermont, and the District of Columbia. At the time of the current study, this continues to be the most current, publicly available information on State Long-term Care Partnership Programs.

In more recent years, the availability of hybrid LTCI policies has grown. These products combine LTC benefits with life insurance or annuities so that unused LTC benefits are payable as death benefits to the beneficiaries of policyholders (Karapiperis & Nordman, 2016). Traditional LTCI policies offer no death benefit and unused benefits are forfeited.

Demographic Characteristics

In 2016, the National Association of Insurance Commissioners, in partnership with the Center for Insurance Policy and Research (CIPR), published *The State of Long-Term Care Insurance: The Market, Challenges and Future Innovations*. The study results are as follows. The average age of policyholders, at the policy start date, was 59. And, 69% of LTCI policyholders were married and were employed with a median income of \$87,500 and median assets of \$325,000.

In 2015, LifePlans, in partnership with America's Health Insurance Plans, conducted a study on LTCI ownership. The majority of LTCI purchasers in that study were between the age of 55-64, married, college graduates, had income of at least \$50,000, and liquid assets of at least \$100,000 (LifePlans, 2017). The current study used age, gender, education, marital status, homeownership, household income, and the likelihood of reliance of family caregivers as control variables.

Hypotheses

Based on the review of the literature, a number of hypotheses may be stated. Given the likelihood that 70% of baby boomers are projected to need LTC at some point in their lives, this study considered the following:

H₁: Financial knowledge regarding LTC is positively associated with LTCI ownership by baby boomers.

H₂: Financial knowledge regarding LTCI is positively associated with LTCI ownership by baby boomers.

H₃: Baby boomers with lower levels of financial risk tolerance are more likely to own LTCI.

H₄: Higher levels of uncertainty regarding the future need for LTC are positively associated with lower levels of LTCI ownership by baby boomers.

Summary

In retirement planning, choosing the optimal allocation of financial resources can be challenging. Some expenses are straightforward, like rent and utilities. Others are difficult to predict, like those associated with LTC. Few people have the ability to foresee the level of care they might need 10 to 20 years in the future. Such ambiguity can make it difficult to see the value in certain investments, like LTCI. Chapter 2 is a summary of relevant literature and research related to factors previously shown to influence LTCI ownership. Expected utility theory was used to conceptualize the hypothesized relationship between financial knowledge, financial risk tolerance risk, and the uncertainty regarding future LTC need.

Chapter 3 - Methodology

The current study builds on existing empirical literature that explored long-term care insurance (LTCI) ownership by baby boomers. Using expected utility theory as the theoretical foundation, this study explored whether or not baby boomers' ownership of LTCI was associated with three factors: financial knowledge regarding long-term care (LTC) and LTCI, financial risk tolerance, and the uncertainty regarding the future need for LTC.

Data

Data for this study were from the RAND Corporation (RAND), a nonprofit institution whose objective is to help improve policy and decision making through research and analysis (RAND Corporation, 2012). The RAND American Life Panel (ALP) is a nationally representative probability-based panel of over 6,000 participants ages 18 and older who are regularly surveyed by way of the internet. RAND data are publicly available and have been used in articles, research papers, presentations, and blog posts.

Well Being 186–Long-term Care Insurance survey was administered from May 20, 2011 through March 18, 2013, by investigators Jeffrey Brown, Gopi Goda, and Kathleen McGarry (RAND Corporation, 2012). Well Being 193–Long-term Care Insurance v2 survey was administered from May 20, 2011 through March 21, 2013, by investigators Gopi Goda and Kathleen McGarry. The surveys were administered to two separate populations but asked the same questions with the following exceptions. Well Being 186–Long-term Care Insurance survey was administered for three additional days and asked eight additional questions that were associated with the concepts of financial knowledge and financial risk tolerance (see Appendix A – Part 3). Due to the low response rates for these questions, they were deleted. With the deletion of these eight questions the two surveys were identical.

The data for this study were collected from survey participants based primarily on age and socioeconomic factors associated with income, education, net worth, and marital status. The population for this study was baby boomers who responded to one of these two surveys ($N = 1,637$). Both surveys were administered to ALP participants who were at least 50 years old at the survey start date. Based on birth year, 1,170 of the sample were baby boomers born between 1941 and 1964. Further analysis of the data revealed that 18 survey participants failed to complete the surveys and were omitted from the study resulting in a final sample size ($N = 1,152$). There were no identifiable patterns of missing data in the omitted cases.

Sample Characteristics

Table 3.1 describes the sample used in this study. Survey respondents reported having more education, higher incomes, and greater wealth than the general baby boomer population. They were also more likely to be White and to report being in good health. Approximately 69% of those surveyed were married, 59% were women, 82% were homeowners, and 56% had a net worth of at least \$100,000. Seventy-five percent had some LTCI knowledge, and 43% had thought about the possibility of needing LTC at some point in the future. The LTCI ownership rate of 14.5% for survey respondents was much higher than the national average of approximately 3% reported by Bodnar (2016) for the same demographic (see Table 3.1). Consistent with the national average, 70% of those surveyed in this study reported purchasing their LTCI policies through a current or past employer (Bodnar, 2016; RAND Corporation, 2012).

Dependent Variable

Long-term care insurance ownership served as the dependent variable. The survey question asked “Do you have a long-term care insurance policy?” with response options (1) yes,

(2) no, and (3) I don't know. "Yes" responses were coded 1, "no" and "I don't know" were coded 0.

Table 3.1 Sample Characteristics ($N = 1,152$)

Variables	n	%
Have Long-Term Care Insurance (LTCI)		
Yes	168	14.58
No	890	77.26
I don't know	94	8.16
Gender		
Male	471	40.89
Female	681	59.11
Race/Ethnicity		
White/Caucasian	1,040	90.28
Other	112	9.72
Family Income		
Less than \$25,000	154	13.37
\$25,000 to \$49,999	302	26.22
\$50,000 to \$74,999	242	21.01
\$75,000 or more	454	39.41
Age (Baby boomers)		
50 - 54	388	33.68
55 - 59	409	35.50
60 - 65	355	30.82
Marital Status		
Married	791	68.66
Other	361	13.34
Education		
High school or less	206	17.88
College through bachelor's degree	708	61.46
Graduate/professional degree	236	20.49
Homeownership		
Yes	945	82.03
No	207	17.97

Note. Data source: RAND American Life Panel Well Being 186 – Long-term Care Insurance survey, and Well Being 193 – Long-term Care Insurance v2 survey (2012).

Independent Variables

The independent variables for this study were comprised of survey questions intended to measure financial knowledge regarding LTC and LTCI, financial risk tolerance, and the role of uncertainty of future LTC need on LTCI ownership by survey participants, primarily using a five-point Likert-type scale with responses ranging from (1) strongly disagree to (5) strongly agree.

Financial Knowledge

The surveys used for this study asked a number of financial knowledge questions: some were subjective in nature while others were objective in nature. This study used survey questions designed to assess subjective financial knowledge, objective financial knowledge, and perceptions specifically associated with LTC and LTCI (see Table 3.2). The question used to measure subjective financial knowledge, asked “Which of the following describes your current knowledge about long-term care insurance?” The response options were (1) a lot, (2) a little, and (3) nothing at all. The responses were reverse coded so that higher scores represented higher levels of subjective LTCI knowledge.

Three survey questions were used to measure objective financial knowledge associated with LTC. The questions, presented in a statement format, were “Medicare covers the extended use of long-term care for those over age 65”, “Medicare covers the extended use of long-term care for those who qualify”, and “Most ordinary private health insurance policies cover extended stays in long-term care facilities” (see Table 3.2). The responses were reverse coded so that higher scores represented higher levels of objective financial knowledge.

Four questions were used to examine participants perceptions about LTCI and LTCI companies. Three of the questions assumed some level of bias by asking participants to rate their

level of concern regarding LTCI and the companies that offer LTCI. The responses were coded so that higher scores represented higher levels of concern regarding LTCI and LTCI companies.

Table 3.2 Financial Knowledge Items (N = 1,152)

Variables	<i>M</i>	<i>SD</i>	Range
Long-term care insurance knowledge	2.20	.51	1 – 3
Believe Medicare covers long-term care	2.72	1.20	1 – 5
Believe Medicaid covers long-term care	3.25	1.15	1 – 5
Believe private insurance covers long-term care	2.24	1.07	1 – 5
Believe long-term care insurance is appropriately priced	2.86	.80	1 – 5
Concerned long-term care insurance won't be honored	3.35	.95	1 – 5
Concerned about long-term care insurance premium increases	3.59	.93	1 – 5
Concerned about long-term care insurance company going out of business	3.40	.96	1 – 5
Long-term care insurance contracts are complex and difficult to understand	3.46	.88	1 – 5

Note. Data source: RAND American Life Panel Well Being 186 – Long-term Care Insurance survey, and Well Being 193 – Long-term Care Insurance v2 survey (2012).

Financial Risk Tolerance

The RAND surveys incorporated a financial risk tolerance question developed for the Survey of Consumer Finances that is commonly used to measure financial risk tolerance (Brown et al., 2012; Gilliam, Chatterjee, & Zhu, 2010; Grable, 2008). The question asked “Which of the following statements comes closest to describing the amount of risk that you are willing to take when you save or make investments?” The responses were categorical ranging from (1) zero financial risk tolerance to (4) very high levels of financial risk tolerance ($M = 2.97$, $SD = .77$). The responses were reverse coded so that higher scores represented higher levels of financial risk tolerance.

Uncertainty of Future Need for Long-Term Care

Uncertainty regarding the future need for LTC was measured using two survey questions that were presented in a statement format using a five-point Likert-type scale with responses ranging from (1) strongly disagree to (5) strongly agree. The statements are shown in Table 3.3. The responses were coded so that higher scores represented higher degrees of uncertainty regarding future LTC need.

Table 3.3 Uncertainty Regarding Future Need Items ($N = 1,152$)

Variables	<i>M</i>	<i>SD</i>	Range
Have thought a lot about the possibility of needing long-term care	3.02	1.12	1 – 5
Likelihood of remaining independent in the future	3.23	.99	1 – 5

Note. Data source: RAND American Life Panel Well Being 186 – Long-term Care Insurance survey, and Well Being 193 – Long-term Care Insurance v2 survey (2012).

Control Variables

Table 3.4 describes the control variables used in this study. Participants' birth year was measured as a continuous variable. Gender, marital status, and homeownership were dummy coded. Specifically, those who were male, married, or homeowners, were coded 1, otherwise they were coded as 0. Education and household income were measured on an interval level.

One additional survey question was used to examine whether or not survey participants were likely to rely on an alternate method of receiving LTC should the need arise (see Table 3.4). The question stated: "My spouse, or another family member will be able to take care of me if I need long-term care." Responses were coded so that higher scores represented greater likelihood of reliance on family members to provide LTC should the need arise.

Table 3.4 Control Variables (N = 1,152)

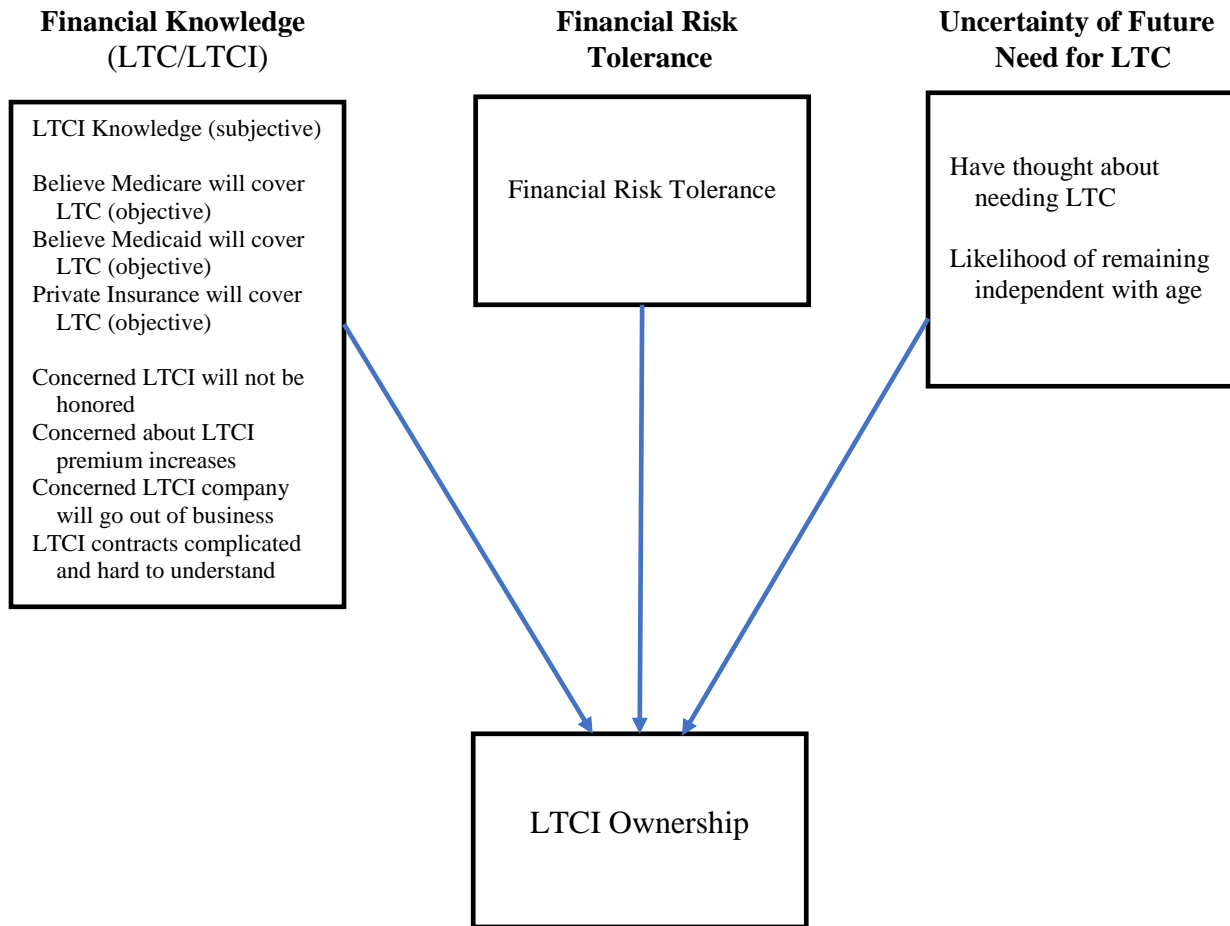
Variables	<i>M</i>	<i>SD</i>	Range
Age	56.87	4.34	50 – 65
Gender	.41	.49	0 – 1
Education	11.57	2.15	3 – 16
Marital status	.69	.46	0 – 1
Homeownership	.82	.38	0 – 1
Household income	11.43	3.10	1 – 14
My spouse, or another family member will be able to take care of me if I need long-term care.	2.82	1.01	1 – 5

Note. Data source: RAND American Life Panel Well Being 186 – Long-term Care Insurance survey, and Well Being 193 – Long-term Care Insurance v2 survey (2012).

Summary

Data for this study were from the RAND American Life Panel 2012 Well Being 186–Long-term Care Insurance and Well Being 193–Long-term Care Insurance v2 surveys (RAND Corporation, 2012). The population for this study was baby boomers who were at least 50 years old at the survey start date ($N = 1,152$). The dependent variable for the study was LTCI ownership. The independent variables were financial knowledge, financial risk tolerance, and uncertainty regarding future LTC need. Control variables were birth year, gender, marital status, and homeownership education, household income, and the likelihood of reliance on family or friends for LTC should the need arise. Table 3.1 presents the sample characteristics. Figure 3.1 represents the conceptual framework of the study.

Figure 3.1 Conceptual Framework



Note. Data source: RAND American Life Panel Well Being 186 – Long-term Care Insurance survey, and Well Being 193 – Long-term Care Insurance v2 survey (2012).

Chapter 4 - Results

This study explored the extent to which financial knowledge, financial risk tolerance, and uncertainty regarding the future need for LTC influenced LTCI ownership by baby boomers. Using constructs derived from expected utility theory (EUT) and data from the RAND American Life Panel 2012 Well Being 186–Long-term Care Insurance and Well Being 193–Long-term Care Insurance v2 surveys, the study examined whether or not the independent variables were predictive of LTCI ownership by baby boomers (RAND Corporation, 2012).

Data Analysis

A combination of principal component analysis and binary logistic regression analysis were used to test the research hypotheses of this study (see Appendix B). The dependent variable was LTCI ownership. The independent variables were subjective financial knowledge regarding LTCI, objective knowledge regarding LTC, concerns regarding LTCI and LTCI companies, financial risk tolerance, and uncertainty regarding future need for LTC (see Figure 3.1). The control variables were age, gender, education, marital status, homeownership, household income, and other LTC resources (see Table 3.4).

Factor Analysis (Financial Knowledge)

One objective of this analysis was to assess the LTC and LTCI knowledge of those surveyed. Six items were chosen to represent financial knowledge associated with LTC and LTCI and were subjected to principal component factoring as the first step in the analysis (see Table 4.1). These items were on a five-point Likert scale with responses ranging from (1) strongly disagree to (5) strongly agree. Two of the questions measured the accuracy of the participants' objective financial knowledge regarding the role of Medicare and Medicaid in paying for LTC: higher scores represented greater objective financial knowledge. The other four

questions were presented as statements and were used to measure the participants' financial knowledge regarding LTCI products and companies that sell LTCI. These questions were coded so that higher scores represented higher levels of financial knowledge.

A principal component analysis was conducted using IBM SPSS Version 24 to determine if one or more factors could be identified when financial knowledge items were subjected to this data reduction methodology ($N = 1,152$). Using an eigenvalue greater than 1, with 25 iterations criteria, two factors were derived explaining 62.37% of the cumulative variance in financial knowledge associated with LTC and LTCI. Data were rotated using varimax rotation. The diagonals of the correlation matrix were all over .5, supporting the inclusion of each item in the analysis. The communalities were all above .3, further confirming that each item shared some common variance with other items. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was moderate (0.722), and Bartlett's test of sphericity was significant with an associated p value $< .001$ (see Table 4.1).

Items loaded at a 0.60 or higher on both factors (see Table 4.1). Substantively, two clear patterns of response were identified. The two tendencies were independent of one other. Factor 1, comprised of items associated with concerns regarding LTCI, explained 39.19% of the variance. Factor 2, comprised of items associated with objective LTC financial knowledge, explained 23.18% of the variance. Factors 1 and 2 represent LTCI concerns and objective LTC financial knowledge, respectively, in the regression model that follows. A second principal component analysis was conducted using an oblimin rotation criterion. It was thought that the initial results may have been due to the relatively high inter-correlations among the six items. However, results from the follow-up analysis were exactly the same, adding credence to the

argument that financial knowledge regarding LTC and LTCI can be estimated for this sample (see Appendix C).

Table 4.1 Principal Component for Financial Knowledge ($N = 1,152$)

Items	Factor		Communalities
	1	2	
Concerned about long-term care insurance premium increases	.80		.65
Concerned about long-term care insurance company going out of business	.77		.62
Concerned long-term care insurance company might deny reasonable claims	.74		.55
Long-term care insurance contracts are complex and difficult to understand	.72		.52
Believe Medicare covers long-term care		.83	.70
Believe Medicaid covers long-term care		-.81	.70
Eigenvalues	2.35	1.39	
Variance explained (%)	39.19	23.18	62.37

Kaiser-Meyer-Olkin = .722

Bartlett's Test of Sphericity: Chi-square = 1304.19 df = 15 p = .001

Note. Data source: RAND American Life Panel Well Being 186 – Long-term Care Insurance survey, and Well Being 193 – Long-term Care Insurance v2 survey (2012).

Binary Logistic Regression

Binary logistic regression techniques were used to further analyze the data and test the study hypotheses. The dependent variable was LTCI ownership. Table 4.2 is a summary of the descriptive statistics of the independent variables used to predict LTCI ownership.

Table 4.2 Summary of Binary Logistic Regression for Variables Predicting Long-Term Care Insurance Ownership: Descriptive Statistics ($N = 1,152$)

Variables	<i>M</i>	<i>SD</i>	Range
Subjective long-term care insurance knowledge	2.20	.51	1 - 3
Financial risk tolerance	2.97	.77	1 - 4
Have thought a lot about the possibility of needing long-term care	3.02	1.12	1 - 5
Likelihood of remaining independent in the future	3.23	.99	1 - 5

Will rely on spouse or family member for long-term care	2.82	1.01	1 - 5
Private health insurance policies cover extended stays in long-term care facility	2.24	1.07	1 - 5
Long-term care insurance policies are appropriately priced	2.86	.80	1 - 5
Age	56.87	4.34	50 - 65
Gender	1.59	.49	1 - 2
Education	11.57	2.15	1 - 16
Marital status	1.85	1.33	1 - 5
Homeownership	1.29	.75	1 - 5
Household income	11.43	3.10	1 - 14

Note. Data source: RAND American Life Panel Well Being 186 – Long-term Care Insurance survey, and Well Being 193 – Long-term Care Insurance v2 survey (2012).

The empirical regression equation model describes the relationship between the dependent variable (Y) and the independent variables (X's). The empirical model for this study is as follows:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7 + B_8X_8 + B_9X_9 + B_{10}X_{10} + B_{11}X_{11} + B_{12}X_{12} + B_{13}X_{13} + B_{14}X_{14} + B_{15}X_{15} + B_{16}X_{16} + e$$

Where:

Y = long-term care insurance ownership (LTCI)

B_0 = Y intercept

B_i = coefficient of variable X_i

X_1 = Factor 1 – LTCI Concerns

X_2 = Factor 2 – Objective LTC knowledge

X_3 = subjective LTCI knowledge

X_4 = financial risk tolerance

X₅ = have thought about needing long-term care

X₆ = likelihood of remaining independent with age

X₇ = will rely on family caregivers for LTC

X₈ = private health insurance covers extended stays in LTC facilities

X₉ = LTCI policies are appropriately priced

X₁₀ = age

X₁₁ = gender

X₁₂ = education

X₁₃ = marital status

X₁₄ = net worth

X₁₅ = homeownership

X₁₆ = household income

e = error term

A binary logistic regression analysis was conducted using IBM SPSS Version 24.0 to determine the likelihood of LTCI ownership by baby boomers ($N = 1,152$). Results of the analysis are presented in Table 4.3. The model chi-square and goodness of fit test statistics showed that the model is acceptable with $\chi^2(15, N = 1,152) = 139.58, p < .001$. The model appeared to be good, with a Nagelkerke R Square of .20. The model was able to correctly classify 86.5% of participants who had LTCI, a slight improvement from 85.4% using only the intercept. Subjective financial knowledge, the thought of possibly needing LTC at some point in the future, and household income were significantly associated with LTCI ownership by baby boomers in the current study.

Financial Knowledge

Subjective LTCI knowledge was statistically significant in this model. The odds of survey participants having LTCI were 3.38 times greater for every unit increase of subjective financial knowledge.

Financial Risk Tolerance

Financial risk tolerance was not significant in this model. In other words, there was no difference in financial risk tolerance between baby boomers that had LTCI and those that did not have LTCI.

Uncertainty of Future Need for Long-Term Care

Thinking about the possibility of needing LTC at some point in the future was statistically significantly associated with LTCI ownership by survey participants. The odds of having LTCI were 1.72 times greater for every one unit increase in survey participants thoughts about possibly needing LTC in the future than those who had not thought about needing LTC at some point in the future.

Control Variables

Household income was the only control variable found to be statistically significant in the model. The odds of LTCI ownership were 1.11 times greater with each unit increase in survey participants household income. Gender, birth year, marital status, education, homeownership and the possible reliance of family members to provide LTC in needed were not significant in the model.

Table 4.3 Summary of Binary Logistic Regression for Variables Predicting Long-Term Care Insurance Ownership by Baby Boomers ($N = 1,152$)

Variables	B	$SE(B)$	e^B
Factor 1 - LTCI concerns	-.14	.09	.87
Factor 2 - Objective LTC knowledge	.18	.10	1.19
Subjective long-term care insurance knowledge	1.22 ***	.22	3.38
Financial risk tolerance	.06	.13	1.06
Have thought a lot about the possibility of needing long-term care	.55 ***	.10	1.73
Likelihood of remaining independent in the future	-.03	.11	.97
Will rely on spouse or family member for long-term care	-.16	.10	.85
Private health insurance policies cover extended stay in long-term care facility	-.15	.09	.86
Long-term care insurance policies are appropriately priced	.33	.22	1.40
Birth year	-.04	.02	.96
Gender	.03	.19	1.03
Education	.08	.05	1.08
Marital status	.17	.24	1.19
Homeownership	-.17	.28	.84
Household income	.10 *	.04	1.11
Constant	-4.99	1.50	.01

Notes: B = Beta, $SE(B)$ = Standard error, e^B = Exponentiated B (odds ratio). Note. Data source: RAND American Life Panel Well Being 186 – Long-term Care Insurance survey, and Well Being 193 – Long-term Care Insurance v2 survey (2012).

* $p < .05$. *** $p < .001$.

Summary

Using IBM SPSS Version 24, a combination of principal component analysis and binary logistic regression analysis were used to test the research hypotheses of this study (see Appendix B). Table 4.2 is a summary of the descriptive statistics of the independent variables used to

predict LTCI ownership. Results of the analysis are presented in Table 4.3. The model chi-square and goodness of fit test statistics showed that the model is acceptable with $\chi^2(15, N = 1,152) = 139.58, p < .001$. Subjective financial knowledge, the thought of possibly needing LTC at some point in the future, and household income were significantly associated with LTCI ownership by baby boomers in the current study.

Chapter 5 - Discussion

This chapter provides a discussion of the findings presented in Chapter 4, followed by the implications and limitations of the study. The chapter concludes with a discussion of potential areas for further research.

Analysis of Findings

The purpose of this study was to explore whether or not financial knowledge, financial risk tolerance, and the uncertainty regarding future need for long-term care (LTC) influenced long-term care insurance (LTCI) ownership by baby boomers. Conceptually, this study examined the relationship between baby boomers' likelihood of owning LTCI based on constructs derived using expected utility theory (EUT). Four hypotheses were proposed as part of this study which used data from the RAND American Life Panel 2012 Well Being 186–Long-term Care Insurance and Well Being 193–Long-term Care Insurance v2 surveys.

H₁: Financial knowledge regarding LTC is positively associated with LTCI ownership by baby boomers.

Based on the results of the analysis reported here, this hypothesis was not supported.

H₂: Financial knowledge regarding LTCI is positively associated with LTCI ownership by baby boomers.

Support was found for this hypothesis in that subjective financial knowledge regarding LTCI was positively associated with LTCI ownership by baby boomers. The odds of baby boomers having LTCI were 3.38 times greater for every unit increase in subjective financial knowledge regarding LTCI. One of the most common barriers to LTCI ownership is a lack of financial knowledge associated with LTC and LTCI (Binswanger & Carman, 2012; Karapiperis & Nordman, 2016; Wolff et al., 2016; Yoshimura et al., 2013).

H₃: Baby boomers with lower levels of financial risk tolerance are more likely to own LTCI.

Based on the results of the analysis reported here, this hypothesis was not supported.

H₄: Higher levels of uncertainty regarding the future need for LTC is positively associated with lower levels of LTCI ownership by baby boomers.

Based on the results of the analysis reported here, this hypothesis was not supported. Although statistically significant, study results were the opposite of what was hypothesized. In other words, higher levels of uncertainty regarding the future need for LTC were positively associated with higher levels of LTCI ownership by participants in this study. The odds of LTCI ownership were 1.72 times greater for every one unit increase in respondents' level of uncertainty regarding the future need for LTC.

In 1953, Maurice Allais introduced the Allais paradox which asserts that human behavioral patterns are often inconsistent with predictions of EUT (Allais, 2008; Lehrer, 2010; Yoshimura, Hiromu, Miller III, & Tainaka, 2013). The premise of EUT is that people generally exhibit a disproportionate preference for certain outcomes and almost always choose certainty over risk (Chavas, 2004; Lehrer, 2010). However, people do not necessarily respond to probabilities in a linear manner because all risks are not created equal: hence the Allais paradox (Lehrer, 2010). When framed in the context of gains and losses, people's dislike of losses significantly impacts their dislike for risk in general (Lehrer, 2010). Based on the results of the analysis reported here, H₄ may be an example of an Allais paradox.

Uncertainty can be unsettling. Cohen (2016) found that, among LTCI policyholders, the most frequently reported reasons for owning LTCI included the desire to maintain independence, to avoid dependence on family and others, to safeguard the affordability of services, and to maintain a standard of living equal to the level of wealth and material comfort that policyholders

currently enjoy. Long-term care insurance ownership can be a comprehensive method of mitigating the financial uncertainties associated with LTC. Although the risk of not needing LTC is known—approximately 30%—the results of this study indicate that survey participants’ preference for the financial security and stability provided by LTCI ownership mattered more than the risk associated with investing in LTCI and not needing LTC at some point in the future. These findings were statistically significant.

Household income was also significantly associated with LTCI ownership by baby boomers in this study. For every one unit increase in household income, the odds of LTCI ownership by survey participants increased 1.11 times. Similar findings have been reported in numerous empirical studies. Bergquist, Costa-Font, and Swartz (2016) found that people who were considered to be upper middle-income were more likely to purchase LTCI for two primary reasons: to protect themselves against the financial risks associated with the high cost of LTC, and to take advantage of tax incentives many plans provide. Brown and Finkelstein (2009) reported that the LTCI ownership rates of older adults increased as survey respondents’ wealth and income increased. Cramer and Jensen (2006) found that people at higher income levels were more likely to view LTCI as a good investment and were more likely to own LTCI because policy premiums were not a financial barrier to ownership.

Implications of Findings

For a growing segment of the U.S. population, insufficient resources in retirement can be directly linked to insufficient planning for LTC expenditures (Hopkins, 2014). Findings from this study support the existing empirical literature on the importance of possessing financial knowledge, especially as it relates to baby boomers and LTC. Study findings also highlight the potential influence of uncertainty on baby boomers’ likelihood of owning LTCI.

The role of subjective financial knowledge regarding LTCI was statistically significant in this study at the .001 level. Financial decisions regarding LTC and LTCI require the ability to process complex information associated with uncertainty over an extended period. General financial knowledge may be helpful in managing overall risk but is likely insufficient when it comes to making LTC and LTCI purchasing decisions. As such, financial planning professionals, the LTCI industry, and federal and state governments would do well to consider educational strategies for helping baby boomers improve financial security in retirement planning by expanding access to practical financial resources related to LTC and LTCI in places and formats where financial planning assistance is well established from trusted sources.

The majority of LTCI policies are purchased through employers (Hopkins et al., 2014). Concerted efforts to engage and incentivize employers to expand financial planning and educational programs to include LTC and LTCI could be beneficial to several stakeholders simultaneously. Employers and the LTCI industry, in partnership with Federal and State governments, could all benefit from making LTCI more accessible to employees. Employer defined contribution plans are a prime example of cooperation amongst various stakeholders working together to improve the financial security of employees. A company 401(k) retirement plan, for instance, provides long-term investment opportunities for employees through an investment company, typically a mutual fund. The Federal government incentivizes participation in employer-sponsored plans by allowing employee investments to grow tax-deferred. This cooperation amongst employers, employees, investment companies, and the government has led to increased savings for retirement and has made 401(k) plans the primary method of saving for retirement (Binswanger & Carman, 2012).

Financial advisors can play a more significant role in LTC and LTCI education by challenging the prevailing perception that many clients have regarding their ability to self-insure for LTC if needed (Hopkins et al., 2014). Clients often base this perception on unrealistic assumptions regarding the resources they will likely have in retirement and the length of time those resources are likely to last (Reinhard et al., 2015). The fact that these unanticipated financial shortfalls typically do not take into consideration the cost of LTC should create a sense of urgency for financial planning professionals as they work at assisting clients in preparing for uncertainty over the long term.

One notable implication of not adequately planning for LTC that is seldom discussed in the literature is the potential financial burden that families of LTC recipients may face in the future. For example, The Deficit Reduction Act of 2005 provides for the enforcement of federal and state laws that allow LTC providers to collect unpaid debts for LTC from the immediate families of LTC recipients (Hopkins et al., 2014). The enforcement of these laws could become more widespread as the demand for paid LTC grows.

The central issues associated with financing LTC are not new. In their study on how to balance public and private financing of LTC, Rosenthal, Makofsky, and Morith (1993) examined the impacts of shifting demographics and the aging U.S. population on projected future LTC need, how those LTC services will be paid for, and by whom. The authors concluded back then that planning for the likelihood of needing LTC was no longer optional. More current studies have reported similar findings, concluding that retirement plans that do not include LTC are incomplete (Batsell, 2013; Doherty & Dzielak, 2006; Frank 2012; Gelvin, 2005).

Limitations

There are a few limitations to this study. First, the generalizability of results is limited to baby boomers. Also, the surveyed population may not be representative of the general baby boomer population though ALP is probability based. Participants in this study had higher education levels, higher incomes, greater net worth, and LTCI ownerships rates that were substantially higher than the general baby boomer population. Larger national representative samples are needed to help validate these research findings. Second, the subjective LTCI knowledge variable was broadly categorized and open to varied interpretation. Third, financial risk tolerance is difficult to measure. Although EUT is one of the primary normative models used to describe how risk tolerance and risk-taking behaviors are conceptually linked, there is no standardized measure of financial risk tolerance (Grable, 2008; 2016). While it is true that financial risk tolerance was not positively associated with LTCI ownership in this study, it should be noted that the measure of financial risk tolerance was quite broad and open to varied interpretations. Finally, results reported here are based on relatively simple statistical techniques. Additional research, using more sophisticated methodologies, is needed to evaluate and verify study findings.

Recommendations for Future Research

Over the past four decades, researchers have made considerable contributions to the personal financial planning field related to baby boomers and the costs associated with aging and longevity. Even so, public education and participation in LTC planning continues to present numerous challenges for stakeholders (Karapiperis & Nordman, 2016). Additional theoretical and empirical studies are needed to elevate the field as it relates to the role of risk management

and LTCI ownership, especially now as approximately 11,000 baby boomers turn 65 years old every day (U.S. Census Bureau, 2010).

The looming crisis of insufficient resources devoted to covering the costs of LTC is not a future problem. It is a current problem. Stakeholders will have to find ways to educate an aging population on the importance of risk management in retirement planning and the value of preparing financially for the likelihood of needing LTC at some point in the future.

Research and educational efforts focused on informing baby boomer women regarding matters of LTC could positively impact their decisions to prepare financially for the likelihood of needing LTC at some point in the future. At ages 85 and older, there are 41 men for every 100 women in the U.S, which suggests that many women will likely grow older alone (Ortman, Velkoff, & Hogan, 2014). African American women generally face greater systemic adverse financial conditions and experience higher rates of chronic conditions like diabetes and heart disease than any other segment of the U.S. population (Siegel & Rimskey, 2015). For baby boomer women, planning for the potential need for LTC is no longer optional and retirement plans that do not include LTC will likely be insufficient to meet their needs in retirement.

Research focused on workplace financial education, specific to LTC and LTCI, could uniquely position employers to positively impact the risk management decisions of their employees (Joo & Grable, 2005). Consistent with the national average, 70% of the baby boomers in this study purchased LTCI through a current or former employer. Grable and Joo (2005) examined whether or not employer education contributed to employees having a retirement savings program. The authors' overall findings showed that employees who had access to employer-sponsored financial education, and a workplace savings program for retirement, were more likely to have a retirement plan and were more confident in their overall retirement plan.

An examination of whether or not similar outcomes could be achieved through employers in partnership with the federal and state governments and the LTCI industry would be a worthwhile investigation. Workplace financial education has been shown to positively influence employee financial decision making (Batsell, 2013). Employers may be uniquely positioned to capture the attention of target markets earlier in the financial planning process, in environments where financial literacy is often attained and financial decision making occurs. Another potential benefit of employer sponsored education could be that it leads to earlier insurance applications by younger employees when insurance approval rates are higher and premium costs are typically lower.

Reverse mortgages are growing in popularity as retirees find themselves facing financial shortfalls in retirement. When the need for LTC arises, retirement savings are often exposed to premature, and often devastating, erosion as a result of LTC expenses. As the primary asset in retirement, more retirees are finding it necessary to access the equity in their homes to cover LTC costs. There is an estimated \$6.1 trillion in home equity owned by households aged 62 and older in the U.S. Reverse mortgages can be viewed as a viable funding source if accessed properly and should be included in long-term care financing discussions (Pepe, 2017). As baby boomers navigate how best to manage LTC costs, continued studies on the role of reverse mortgages in risk management would be relevant and timely.

Family caregivers will continue to be the primary providers of LTC for the foreseeable future (Kane, 2016). Increased LTCI ownership is one way to reduce the growing physical and mental toll commonly experienced by family caregivers (Cohen, 2016). Paid LTC services enable family caregivers to shift their focus from providing care to providing companionship and social interaction for care recipients. This shift in care giver and care recipient dynamic has been

shown to restore traditional family dynamics and contribute to a greater sense of normalcy in family relations (Kane, 2016). Studies that focus on family education regarding issues of LTC and LTCI would be relevant and timely.

Empirical studies supported by government agencies could have positive implications for public policy in the area of LTC. To date, programs designed to incentivize the purchase of LTCI and decrease dependence on government programs have had limited success (Hopkins et al., 2014). As the largest financial provider of LTC services, federal and state governments have a vested interest in shifting the responsibility for LTC costs back to the care recipients. Supporting empirical research that leads to better access of comprehensive, publicly accessible information on the benefits of preparing for the potential need of LTC and the value of LTCI will be necessary if a tangible shift is to occur.

Finally, further investigation of government regulated State Long-Term Care Partnership Programs could be an important resource for advancing the discussion on financing LTC through LTCI going forward. While only a few states have made concerted efforts to implement and grow their State Long-Term Care Partnership Programs, the results from those efforts have been promising (Hopkins et al., 2014). Expanding these programs offers the potential benefit of addressing the LTC concerns of numerous stakeholders.

Summary

The need for further studies on risk management issues facing baby boomers is ongoing. This is evidenced by the fact that, in 40 years of availability, LTCI has yet to experience measurable adoption rates, even though there is considerable consensus that it is one of the most comprehensive methods available for managing financial risks associated with LTC costs.

Without effective educational programs that focus specifically on issues of funding LTC care, quantifiable increases in LTCI ownership are unlikely in the immediate or foreseeable future.

References

- Allais, M. (2008). Allais paradox. In S. N. Durlauf, & L.E. Blume (Eds.) *The New Palgrave Dictionary of Economics* (pp. 119-122). Palgrave Macmillan, London: Springer.
- American Association for Long-Term Care Insurance. *Consumer's Information Center*. Retrieved from <http://www.aaltci.org/long-term-care-insurance>
- America's Health Insurance Plans. (n.d.). *Long-term care insurance*. Retrieved from <https://www.ahip.org/institute>
- Batsell, M. (2013). The role of long-term care in planning for retirement. *Journal of Financial Service Professionals*, 67(5), 39-47.
- Bergquist, S., Costa-Font, J., & Swartz, K. (2016). Partnership program for long-term care insurance: The right model for addressing uncertainties with the future? *Aging and Society*, 36(9), 1779-1793.
- Binswanger, J., & Carman, K. G. (2012). How real people make long-term decisions: The case of retirement preparation. *Journal of Economic Behavior & Organization*, 81(1), 39-60.
- Bodnar, V. (2016, May). *The long-term care insurance puzzle: The lack of private insurance penetration*. National Association of Insurance Commissioners and the Center for Insurance Policy and Research, 49-55.
- Bojazi, G., & Tacchino, K. (2016). Strategies for overcoming the risks associated with aging. *Journal of Financial Service Professionals*, 70(4), 7-12.
- Brown, J. R., & Finkelstein, A. (2009). The private market for long-term care insurance in the United States: A review of the evidence. *Journal of Risk and Insurance*, 76, 5-29.
- Brown, J. R., Goda, G. S., & McGarry, K. (2016). Heterogeneity in state-dependent utility: Evidence from strategic surveys, *Economic Inquiry*, 54(2), 847-861.

- Brown, J. R., Goda, G. S., & McGarry, K. (2012). Long-term care insurance demand limited by beliefs about needs, concerns about insurers, and care available from family. *Health Affairs, 31*(6), 1294-1302.
- Broyles, I. H., Sperber, N. R., Voils, C. I., Konetzka, T. R., Coe, N. B., & Harold Van Houtven, C. H. (2016). Understanding the context for long-term care planning. *Medical Care Research and Review, 73*(3), 349-368.
- Brucker, E., & Leppel, K. (2013). Retirement plans: Planners and nonplanners. *Educational Gerontology, 9*, 1-11.
- Center for Insurance Policy and Research. (2016, May). *The state of long-term care insurance: The market, challenges, and future innovations*. National Association of Insurance Commissioners and The Center for Insurance Policy and Research.
- Chavas, J. (2004). *Risk analysis in theory and practice*. Amsterdam: Elsevier Inc.
- Chiappelli, T., Koepke, C., & Cherry, K. (2005). Money—The great divide in planning for long-term care. *Journal of Financial Service Professionals, 59*(4), 76-92.
- Coe, N. B., Goda, G. S., & Van Houtven, C. H. (2015). *Family spillovers of long-term care insurance*. (NBER Working Paper 21483). Cambridge, MA: National Bureau of Economics Research.
- Cohen, M. A. (2016, May). The state of the long-term care insurance market. *National Association of Insurance Commissioners and the Center for Insurance Policy and Research, 31*-47.
- Colby, S. L., & Ortman, J. M. (2014). The baby boom cohort in the United States: 2012 to 2060. *U.S. Department of Commerce: Economics and Statistics Administration. U.S. Census Bureau, 1*-16.

- Congressional Budget Office. (2017, October 20). *Measuring the adequacy of retirement income: A primer*. Congress of the United States Congressional Budget office. (CBO Publication No. 53191). Retrieved from <https://www.cbo.gov/system/files?file=115th-congress-2017-2018/reports/53191-retirementadequacy.pdf>
- Cramer, A. T., & Jensen, G. A. (2006). Why don't people buy long-term-care insurance? *Journals of Gerontology: Series B*, 61(4), S185–S193.
- Cutler, J. (2016, May). *The long-term care insurance puzzle: Long-term care reform proposals*. National Association of Insurance Commissioners and the Center for Insurance Policy and Research, 95-113.
- DeVaney, S. A. (2008). Financial issues of older adults. In J. J. Xiao (Ed.), *Handbook of consumer finance research* (pp. 209-221). NY: Springer.
- Doherty, M., & Dzielak, H. (2006). Protecting the hidden risk to boomers' retirement income. *National Underwriter Life and Health*, 110(19), 18-37.
- Fisher, G. G., Chaffee, D. S., & Sonnega, A. (2016). Retirement timing: A review and recommendations for future research. *Work, Aging, and Retirement*, 2(2), 230-261.
- Frank, R. G. (2012). Long-term care financing in the United States: Sources and institutions. *Applied Economic Perspectives and Policy*, 34(2), 333–345.
- Gelvin, K. (2005). As workers delay retirement, advisors respond. *Financial Planning*, 22-31.
- Genworth Financial, Inc. (2017). *Cost of long-term care: 2017 cost of care report*. Retrieved from <https://www.genworth.com/about-us/industry-expertise/cost-of-care.html>
- Genworth Financial Inc. (2015). *Genworth 2015 Cost of Care Survey: Home care providers, adult day health care facilities, assisted living facilities and nursing homes*. Retrieved from

https://www.genworth.com/dam/Americas/US/PDFs/Consumer/corporate/130568_040115_gnw.pdf

- Gilliam, J., Chatterjee, S., & Grable, J. (2010). Measuring the perception of financial risk tolerance: A tale of two measures. *Journal of Financial Counseling and Planning*, 21(2), 30-43.
- Gilliam, J. E., Chatterjee, S., & Zhu, D. (2010). Determinants of risk tolerance in the baby boomer cohort. *Journal of Business and Economic Research*, 8(5), 79-88.
- Grable, J. E. (2016). Financial risk tolerance. In J. J. Xiao (Ed.), *Handbook of Consumer Finance Research* (pp. 19-31). New York, NY: Springer.
- Grable, J. E. (2008). Risk tolerance. In J. J. Xiao (Ed.), *Handbook of Consumer Finance Research* (pp. 3-19). New York, NY: Springer.
- Grable, J. E. (2000). Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of Business and Psychology*, 14(4), 625-630.
- Grable, J. E., & Joo, S. (2004). Environmental and biopsychosocial factors associated with financial risk tolerance. *Financial Counseling and Planning*, 15(1), 73-82.
- Grable, J. E., & Joo, S. (2005). Employee education and the likelihood of having a retirement savings program. *Financial Counseling and Planning*, 16(1), 37-49.
- Grable, J. E., & Rabbani, A. (2014). Risk tolerance across life domains: Evidence from a sample of older adults. *Journal of Financial Counseling and Planning*, 25(2), 174-183.
- Greenwald, L., Copeland, C., Van Derhei, J., & Employee Benefit Research Institute. (2017, March 21). *Employee Benefit Research Institute*.
- Guina, R. (2010, July 27). *5 essential components of a retirement plan: Retirement planning calls for more than just a well-funded investment account*. Retrieved from

<http://money.usnews.com/money/blogs/on-retirement/2010/07/27/5-essential-components-of-a-retirement-plan>

Harvard Health Letter. (2016, March). Retrieved from

https://www.health.harvard.edu/newsletters/harvard_health_letter/2016/march

Hershey, D. A., & Jacobs-Lawson, J. (2012). Bridging the gap: Anticipated shortfalls in future retirement income. *Journal of Family and Economic Issues*, 33(3), 306-314.

Hopkins, J. P. (2014). Long-term care financing reform: Leveraging existing tax incentives for employer-sponsored plans. *Journal of Financial Service Professionals*, 68(2), 59-71.

Hopkins, J. P., Kurlowicz, T., & Woehrl, C. P. (2014). Leveraging filial support laws under the state partnership programs to encourage long-term care insurance. *Widener Law Review*, 20(165), 165-198.

Institute of Risk Management. (n.d.). *What is risk management?* Retrieved from

www.theirm.org/the-risk-profession/risk-management.aspx

Jacobs-Lawson, J. M., & Hershey, D. A. (2005). Influence of future time perspective, financial knowledge, and financial risk tolerance on retirement saving behaviors. *Financial Services Review*, 14(4), 331-344.

Joo, S., & Grable, J. E. (2005). Employee education and the likelihood of having a retirement savings program. *Journal of Financial Counseling and Planning*, 16(1), 37-49.

Kane, R. L. (2016, May), Financing options for long-term care. *National Association of Insurance Commissioners and the Center for Insurance Policy and Research*, 82-93.

Karapiperis, D., & Nordman, E. C. (2016, May). *Long-term care (Forward)*. National Association of Insurance Commissioners and the Center for Insurance Policy and Research, 1-5.

- Kelly, A. S., McGarry, K., Fahle, W., Marshall, S. M., Du, Q., & Skinner, J. S. (2012). Out-of-pocket-spending in the last five years of life. *Journal of General Internal Medicine*, 28(2), 304-309.
- Kemper, P., Komisar, H. L., & Alecxih, L. (2005). Long-term care over an uncertain future: What can current retirees expect? *Inquiry*, 42, 335-350.
- Kim, H., & DeVaney, S. A. (2005). The selection of partial or full retirement by older workers. *Journal of Family and Economic Issues*, 26(3), 371-394.
- Lehrer, J. (2010). The Allais paradox. *Science*. Retrieved from <https://www.wired.com/2010/10/the-allais-paradox/>
- LifePlans. (2017). *Who buys long-term care insurance? Twenty-five years of study of buyers and non-buyers in 2015-2016*. Retrieved from https://www.ahip.org/wp-content/uploads/2017/01/LifePlans_LTC_2016_1.5.17.pdf
- Longtermcare.gov. (n.d.). Retrieved from <https://longtermcare.acl.gov/the-basics/index.html>
- Lown, J. M., & Palmer, L. (2004). Long-term care insurance purchase: An alternative approach. *Journal of Financial Counseling and Planning*, 15(2), 1-11.
- Mather, M. Jacobsen, L. A., & Pollard, K. M. (2015). Population bulletin. *Population Reference Bureau*, (70)2, 1-21.
- McGarry, B. E., Temkin-Greener, H., Chapman, B. P., Grabowski, D. C., & Li, Y. (2016). The impact of consumer numeracy on the purchase of long-term care insurance. *HRS: Health Services Research*, 51(4), 1612-1631.
- Medicaid.gov. (2016). Financial management: 2015 national health expenditure accounts. Retrieved from <https://www.medicaid.gov/medicaid/finance>

- Okasha, S. (2011). Optimal choice in the face of risk: Decision theory meets evolution. *Philosophy of Science*, 78(1), 83-104.
- Ortman, J. M., Velkoff, V. A., & Hogan, H. (2014). *An aging nation: The older population in the United States*. Retrieved from the U.S. Department of Commerce Economics and Statistics Administration., U.S. Census Bureau:
<https://www.census.gov/prod/2014pubs/p25-1140.pdf>
- Pepe, S. R. (2017). The home equity conversion mortgage as a long-term care insurance alternative for financing in-home care. *Journal of Financial Service Professionals*, 71(4), 53-64.
- Pew Research Center. (2006). *Social & demographic trends*. Retrieved from
<http://www.pewsocialtrends.org>
- Pollard, K. M., & Scommegna, P. (2014). *Just how many baby boomers are there?* Population Reference Bureau. Retrieved from
<https://www.prb.org/justhowmanybabyboomersarethere/>
- RAND Corporation. (2012). *RAND HRS data, version N. Produced by RAND Center for the Study of Aging, with funding from the National Institute on Aging and the Social Security Administration*. Retrieved from <https://alpdata.rand.org/index.php?page=data>
- Reinhard, S. C., Feinberg, L. F., Choula, R., & Houser, A. (2015). *Valuing the invaluable: 2015 update undeniable progress, but big gaps remain*. AARP Public Policy Institute. Retrieved from <https://www.aarp.org/content/dam/aarp/ppi/2015/valuing-the-invaluable-2015-update-new.pdf>

- Rosenthal, M., Makofsky, E. G., & Morith, N. P. (1993). Balancing the use of public and private financing for long-term care. *Journal of the American Society of CLU & ChFC*, 47(5), 50-58.
- Resnik, D. B. (2004). The precautionary principle and medical decision making. *Journal of Medicine and Philosophy* 29(3): 281-299.
- Siegel, S., & Rimsky, N. T. (2015). Where do we go from here? Long-term care in the age of baby boomers. *National Academy of Elder Law Attorneys*, 11(1), 49-60.
- The SCAN Foundation. (2013). *Who pays for long-term care in the U.S.?* Retrieved from http://www.thescanfoundation.org/sites/default/files/who_pays_for_ltc_us_jan_2013_fs.pdf
- Timmermann, S. (2000). Planning for the future: A focus on mature women. *Journal of Financial Service Professionals*, 54(1), 22-24.
- United States Census Bureau. (n.d.). *2010 Population Finder*. Retrieved from <http://www.census.gov/popfinder>
- United States Census Bureau. (2012, April). *Households and families: 2010*. 2010 Census Briefs. Retrieved from <http://www.census.gov/popfinder>
- Von Neumann, J., & Morgenstern, O. (1944). *Theory of games and economic behavior*. Princeton, NJ, US: Princeton University Press.
- Wettstein, G., & Zulkarnain, A. (2017). How much long-term care do adult children provide? *Center for Retirement Research at Boston College*. 17(11), 1-5.
- Wolff, J. C., Spillman, B. C., Freedman, V. A., & Kasper, J. D. (2016). A national profile of family and unpaid caregivers who assist older adults with health care activities. *JAMA Internal Medicine*, 176(3), 372-379.

Yoshimura, J., Hiromu, I, Miller III, D. G., & Tainaka, K. (2013). Dynamic decision-making in uncertain environments II. Allais paradox in human behavior. *Journal of Ethology*, 31(2), 107-113.

Appendix A – Survey Instrument

Part 1 – Demographics

Household information

Consent1 consent form 1

By clicking NEXT below, I certify that I am [name on button] and as of today, am 18 years or older. *Choose one of the following options:*

1. I understand my participation in the RAND American Life Panel is voluntary and that I can stop participating at any time
2. That is not my name, but I still wish to participate
3. I am not 18 years or older

INTRODUCTIONS

Our goal is to improve policymaking by informing decision makers about how the public is responding to policy changes and life changes. You are part of a randomly selected sample, especially chosen to represent the U.S. both geographically and demographically. To make sure that this selection process is working properly, we would like you to complete this short questionnaire about your household, your background, and your work. By keeping this information current, we will be able to compare our panel to U.S. Census data. This will ensure that our results accurately reflect what is happening across the nation. We will also be able to assess how different types of households are affected by policy changes and life changes. In the future when you login, we will ask you to update us about any important changes to your household or your work as described in this questionnaire.

What is your gender?

- 1 Male
- 2 Female

What is your birth date?

BIRTH MONTH

- 1 January
- 2 February
- 3 March
- 4 April
- 5 May
- 6 June
- 7 July
- 8 August
- 9 September
- 10 October
- 11 November
- 12 December

BIRTH DAY

- 1 01
- 2 02
- 3 03
- 4 04
- 5 05
- 6 06
- 7 07
- 8 08
- 9 09
- 10 10
- 11 11
- 12 12
- 13 13
- 14 14
- 15 15
- 16 16
- 17 17
- 18 18
- 19 19
- 20 20
- 21 21
- 22 22
- 23 23
- 24 24
- 25 25
- 26 26
- 27 27
- 28 28
- 29 29
- 30 30

31 31

BIRTH YEAR

11 1911
12 1912
13 1913
14 1914
15 1915
16 1916
17 1917
18 1918
19 1919
20 1920
21 1921
22 1922
23 1923
24 1924
25 1925
26 1926
27 1927
28 1928
29 1929
30 1930
31 1931
32 1932
33 1933
34 1934
35 1935
36 1936
37 1937
38 1938
39 1939
40 1940
41 1941
42 1942
43 1943
44 1944
45 1945
46 1946
47 1947
48 1948
49 1949
50 1950
51 1951
52 1952
53 1953

54 1954
55 1955
56 1956
57 1957
58 1958
59 1959
60 1960
61 1961
62 1962
63 1963
64 1964
65 1965
66 1966
67 1967
68 1968
69 1969
70 1970
71 1971
72 1972
73 1973
74 1974
75 1975
76 1976
77 1977
78 1978
79 1979
80 1980
81 1981
82 1982
83 1983
84 1984
85 1985
86 1986
87 1987
88 1988
89 1989
90 1990
91 1991
92 1992
93 1993
94 1994
95 1995
96 1996
97 1997
98 1998
99 1999

Now we would like to know about where you live. In which state do you reside?

- 1 (AK) ALASKA (AK)
- 2 (AL) ALABAMA (AL)
- 3 (AZ) ARIZONA (AZ)
- 4 (AR) ARKANSAS (AR)
- 5 (CA) CALIFORNIA (CA)
- 6 (CO) COLORADO (CO)
- 7 (CT) CONNECTICUT (CT)
- 8 (DE) DELAWARE (DE)
- 9 (FL) FLORIDA (FL)
- 10 (GA) GEORGIA (GA)
- 11 (HI) HAWAII (HI)
- 12 (ID) IDAHO (ID)
- 13 (IL) ILLINOIS (IL)
- 14 (IN) INDIANA (IN)
- 15 (IA) IOWA (IA)
- 16 (KS) KANSAS (KS)
- 17 (KY) KENTUCKY (KY)
- 18 (LA) LOUISIANA (LA)
- 19 (ME) MAINE (ME)
- 20 (MD) MARYLAND (MD)
- 21 (MA) MASSACHUSETTS (MA)
- 22 (MI) MICHIGAN (MI)
- 23 (MN) MINNESOTA (MN)
- 24 (MS) MISSISSIPPI (MS)
- 25 (MO) MISSOURI (MO)
- 26 (MT) MONTANA (MT)
- 27 (NE) NEBRASKA (NE)
- 28 (NV) NEVADA (NV)
- 29 (NH) NEW HAMPSHIRE
- 30 (NJ) NEW JERSEY
- 31 (NM) NEW MEXICO
- 32 (NY) NEW YORK
- 33 (NC) NORTH CAROLINA
- 34 (ND) NORTH DAKOTA
- 35 (OH) OHIO (OH)
- 36 (OK) OKLAHOMA (OK)
- 37 (OR) OREGON (OR)
- 38 (PA) PENNSYLVANIA (PA)
- 39 (RI) RHODE ISLAND
- 40 (SC) SOUTH CAROLINA
- 41 (SD) SOUTH DAKOTA
- 42 (TN) TENNESSEE (TN)
- 43 (TX) TEXAS (TX)
- 44 (UT) UTAH (UT)

- 45 (VT) VERMONT (VT)
- 46 (VA) VIRGINIA (VA)
- 47 (WA) WASHINGTON (WA)
- 48 (WV) WEST VIRGINIA
- 49 (WI) WISCONSIN (WI)
- 50 (WY) WYOMING (WY)
- 51 (DC) WASHINGTON D.C. (DC)
- 52 (PR) PUERTO RICO (PR)

Were you born in the United States?

1 Yes

2 No

In what state were you born?

- 1 ALASKA (AK)
- 2 ALABAMA (AL)
- 3 ARIZONA (AZ)
- 4 ARKANSAS (AR)
- 5 CALIFORNIA (CA)
- 6 COLORADO (CO)
- 7 CONNECTICUT (CT)
- 8 DELAWARE (DE)
- 9 FLORIDA (FL)
- 10 GEORGIA (GA)
- 11 HAWAII (HI)
- 12 IDAHO (ID)
- 13 ILLINOIS (IL)
- 14 INDIANA (IN)
- 15 IOWA (IA)
- 16 KANSAS (KS)
- 17 KENTUCKY (KY)
- 18 LOUISIANA (LA)
- 19 MAINE (ME)
- 20 MARYLAND (MD)
- 21 MASSACHUSETTS (MA)
- 22 MICHIGAN (MI)
- 23 MINNESOTA (MN)
- 24 MISSISSIPPI (MS)
- 25 MISSOURI (MO)
- 26 MONTANA (MT)
- 27 NEBRASKA (NE)
- 28 NEVADA (NV)
- 29 NEW HAMPSHIRE (NH)
- 30 NEW JERSEY (NJ)
- 31 NEW MEXICO (NM)
- 32 NEW YORK (NY)

- 33 NORTH CAROLINA (NC)
- 34 NORTH DAKOTA (ND)
- 35 OHIO (OH)
- 36 OKLAHOMA (OK)
- 37 OREGON (OR)
- 38 PENNSYLVANIA (PA)
- 39 RHODE ISLAND (RI)
- 40 SOUTH CAROLINA (SC)
- 41 SOUTH DAKOTA (SD)
- 42 TENNESSEE (TN)
- 43 TEXAS (TX)
- 44 UTAH (UT)
- 45 VERMONT (VT)
- 46 VIRGINIA (VA)
- 47 WASHINGTON (WA)
- 48 WEST VIRGINIA (WV)
- 49 WISCONSIN (WI)
- 50 WYOMING (WY)
- 51 WASHINGTON D.C.
- 52 PUERTO RICO

Are you a citizen of the United States?

- 1 Yes
- 2 No

Could you tell us what your current living situation is?

- 1 Married or living with a partner
- 2 Separated
- 3 Divorced
- 4 Widowed
- 5 Never married

What is the highest level of school you have completed or the highest degree you have received?

- 1 Less than 1st grade
- 2 1st,2nd,3rd,or 4th grade
- 3 5th or 6th grade
- 4 7th or 8th grade
- 5 9th grade
- 6 10th grade
- 7 11th grade
- 8 12th grade NO DIPLOMA
- 9 HIGH SCHOOL GRADUATE high school DIPLOMA or the equivalent (For example: GED)
- 10 Some college but no degree
- 11 Associate degree in college Occupational/vocational program
- 12 Associate degree in college Academic program
- 13 Bachelor's degree (For example: BA,AB,BS)

- 14 Master's degree (For example: MA,MS,MEng,MEd,MSW,MBA)
- 15 Professional School Degree (For example: MD,DDS,DVM,LLB,JD)
- 16 Doctorate degree (For example: PhD,EdD)

Do you consider yourself Hispanic or Latino?

- 1 Yes
- 2 No

IF HISPANIC LATINO = Yes THEN

Would you say that you are primarily Mexican American, Puerto Rican, Cuban, or something else?

- 1 Mexican American
- 2 Puerto Rican
- 3 Cuban
- 4 Something else

Do you consider yourself primarily white or Caucasian, Black or African American, American Indian, or Asian?

- 1 White/Caucasian
- 2 Black/African American
- 3 American Indian or Alaskan Native
- 4 Asian or Pacific Islander
- 5 Other

IF WHITE = Asian or Pacific Islander THEN

Are you Asian or Pacific Islander?

- 1 Asian
- 2 Pacific Islander

IF WHITE = Other THEN

Please specify.

String

What is your current employment situation?

- 1 Working Now
- 2 Unemployed and looking for work
- 3 Temporarily laid off, on sick or other leave
- 4 Disabled
- 5 Retired
- 6 Homemaker
- 7 Other

IF Other IN CURRENT JOB STATUS THEN

Please specify.
String

IF Working Now IN CURRENT JOB STATUS THEN

Next are some questions about your current, main job. Do you work for someone else, are you self-employed, or what?

- 1 Work for someone else
- 2 Self-employed
- 3 Other

Which of the following categories best describes the type of work you [DO/DID]?

- 1 Management Occupations
- 2 Business and Financial Operations Occupations
- 3 Computer and Mathematical Occupations
- 4 Architecture and Engineering Occupations
- 5 Life, Physical, and Social Science Occupations
- 6 Community and Social Services Occupations
- 7 Legal Occupations
- 8 Education, Training, and Library Occupations
- 9 Arts, Design, Entertainment, Sports, and Media Occupations
- 10 Healthcare Practitioner and Technical Occupations
- 11 Healthcare Support Occupations
- 12 Protective Service Occupations
- 13 Food Preparation and Serving Related Occupations
- 14 Building and Grounds Cleaning and Maintenance Occupations
- 15 Personal Care and Service Occupations
- 16 Sales and Related Occupations
- 17 Office and Administrative Support Occupations
- 18 Farming, Fishing, and Forestry Occupations
- 19 Construction and Extraction Occupations
- 20 Installation, Maintenance, and Repair Occupations
- 21 Production Occupations
- 22 Transportation and Material Moving Occupations

IF Unemployed and looking for work IN CURRENT JOB STATUS OR Temporarily laid off, on sick or other leave IN CURRENT JOB STATUS OR Disabled IN CURRENT JOB STATUS OR Retired IN CURRENT JOB STATUS THEN

Which of the following categories best describes the type of work you [DO/DID]?

- 1 Management Occupations
- 2 Business and Financial Operations Occupations
- 3 Computer and Mathematical Occupations
- 4 Architecture and Engineering Occupations
- 5 Life, Physical, and Social Science Occupations
- 6 Community and Social Services Occupations

- 7 Legal Occupations
- 8 Education, Training, and Library Occupations
- 9 Arts, Design, Entertainment, Sports, and Media Occupations
- 10 Healthcare Practitioner and Technical Occupations
- 11 Healthcare Support Occupations
- 12 Protective Service Occupations
- 13 Food Preparation and Serving Related Occupations
- 14 Building and Grounds Cleaning and Maintenance Occupations
- 15 Personal Care and Service Occupations
- 16 Sales and Related Occupations
- 17 Office and Administrative Support Occupations
- 18 Farming, Fishing, and Forestry Occupations
- 19 Construction and Extraction Occupations
- 20 Installation, Maintenance, and Repair Occupations
- 21 Production Occupations
- 22 Transportation and Material Moving Occupations

Now we would like to know about other members of your household if there are any.
 [/PREVIOUSLY YOU INDICATED THAT YOU LIVE WITH YOUR] How many other people live with you [/OTHER THAN YOUR SPOUSE OR PARTNER]? (enter 0 for no one else).
 Range: 0..10

IF HOUSEHOLD MEMBERS > 0 or (HOUSEHOLD MEMBERS = 0 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

Now, please tell us how each person is related to you, as well as indicating the age and gender.
 [/PLEASE USE THE FIRST LINE FOR YOUR SPOUSE OR PART]

Relation

- 1 Spouse/Registered partner (e.g. husband, wife, registered partner)
- 2 Significant other (e.g. fiancée, boyfriend, girlfriend)
- 3 Parent (e.g. father, mother, stepfather, stepmother)
- 4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)
- 5 Sibling (e.g. brother, sister, stepbrother, stepsister)
- 6 Grandparent (e.g. grandfather, grandmother)
- 7 Grandchild (e.g. grandson, granddaughter)
- 8 Aunt/uncle
- 9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)
- 10 Family-in-law (e.g. father-in-law, sister-in-law)
- 11 Roommate/housemate (e.g. friend)
- 12 Financial (e.g. tenant, renter, landlord, employer, nanny)
- 14 Not related
- 15 Other

Age

Range: 0..120

Gender

1 Male

2 Female

IF HOUSEHOLD MEMBERS > Married or living with a partner or (HOUSEHOLD MEMBERS = Married or living with a partner and CURRENT LIVING SITUATION = Married or living with a partner) THEN

Relation

1 Spouse/Registered partner (e.g. husband, wife, registered partner)

2 Significant other (e.g. fiancée, boyfriend, girlfriend)

3 Parent (e.g. father, mother, stepfather, stepmother)

4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)

5 Sibling (e.g. brother, sister, stepbrother, stepsister)

6 Grandparent (e.g. grandfather, grandmother)

7 Grandchild (e.g. grandson, granddaughter)

8 Aunt/uncle

9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)

10 Family-in-law (e.g. father-in-law, sister-in-law)

11 Roommate/housemate (e.g., friend)

12 Financial (e.g., tenant, renter, landlord, employer, nanny)

14 Not related

15 Other

Age

Range: 0..120

Gender

1 Male

2 Female

IF HOUSEHOLD MEMBERS > 5 or (HOUSEHOLD MEMBERS = 5 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

Relation

1 Spouse/Registered partner (e.g. husband, wife, registered partner)

2 Significant other (e.g. fiancée, boyfriend, girlfriend)

3 Parent (e.g. father, mother, stepfather, stepmother)

4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)

5 Sibling (e.g. brother, sister, stepbrother, stepsister)

6 Grandparent (e.g. grandfather, grandmother)

7 Grandchild (e.g. grandson, granddaughter)

8 Aunt/uncle

9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)

10 Family-in-law (e.g. father-in-law, sister-in-law)

- 11 Roommate/housemate (e.g. friend)
- 12 Financial (e.g. tenant, renter, landlord, employer, nanny)
- 14 Not related
- 15 Other

Age
Range: 0..120

- Gender
- 1 Male
 - 2 Female

IF HOUSEHOLD MEMBERS > 5 or (HOUSEHOLD MEMBERS = 5 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

- Relation
- 1 Spouse/Registered partner (e.g. husband, wife, registered partner)
 - 2 Significant other (e.g. fiancée, boyfriend, girlfriend)
 - 3 Parent (e.g. father, mother, stepfather, stepmother)
 - 4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)
 - 5 Sibling (e.g. brother, sister, stepbrother, stepsister)
 - 6 Grandparent (e.g. grandfather, grandmother)
 - 7 Grandchild (e.g. grandson, granddaughter)
 - 8 Aunt/uncle
 - 9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)
 - 10 Family-in-law (e.g. father-in-law, sister-in-law)
 - 11 Roommate/housemate (e.g. friend)
 - 12 Financial (e.g. tenant, renter, landlord, employer, nanny)
 - 14 Not related
 - 15 Other

Age
Range: 0..120

- Gender
- 1 Male
 - 2 Female

IF HOUSEHOLD MEMBERS > 5 or (HOUSEHOLD MEMBERS = 5 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

- Relation
- 1 Spouse/Registered partner (e.g. husband, wife, registered partner)
 - 2 Significant other (e.g. fiancée, boyfriend, girlfriend)
 - 3 Parent (e.g. father, mother, stepfather, stepmother)

- 4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)
- 5 Sibling (e.g. brother, sister, stepbrother, stepsister)
- 6 Grandparent (e.g. grandfather, grandmother)
- 7 Grandchild (e.g. grandson, granddaughter)
- 8 Aunt/uncle
- 9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)
- 10 Family-in-law (e.g. father-in-law, sister-in-law)
- 11 Roommate/housemate (e.g., friend)
- 12 Financial (e.g., tenant, renter, landlord, employer, nanny)
- 14 Not related
- 15 Other

Age

Range: 0..120

Gender

1 Male

2 Female

IF HOUSEHOLD MEMBERS > 5 or (HOUSEHOLD MEMBERS = 5 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

Relation

- 1 Spouse/Registered partner (e.g. husband, wife, registered partner)
- 2 Significant other (e.g. fiancée, boyfriend, girlfriend)
- 3 Parent (e.g. father, mother, stepfather, stepmother)
- 4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)
- 5 Sibling (e.g. brother, sister, stepbrother, stepsister)
- 6 Grandparent (e.g. grandfather, grandmother)
- 7 Grandchild (e.g. grandson, granddaughter)
- 8 Aunt/uncle
- 9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)
- 10 Family-in-law (e.g. father-in-law, sister-in-law)
- 11 Roommate/housemate (e.g. friend)
- 12 Financial (e.g. tenant, renter, landlord, employer, nanny)
- 14 Not related
- 15 Other

Age

Range: 0..120

Gender

1 Male

2 Female

IF HOUSEHOLD MEMBERS > 6 or (HOUSEHOLD MEMBERS = 6 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

Relation

- 1 Spouse/Registered partner (e.g. husband, wife, registered partner)
- 2 Significant other (e.g. fiancée, boyfriend, girlfriend)
- 3 Parent (e.g. father, mother, stepfather, stepmother)
- 4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)
- 5 Sibling (e.g. brother, sister, stepbrother, stepsister)
- 6 Grandparent (e.g. grandfather, grandmother)
- 7 Grandchild (e.g. grandson, granddaughter)
- 8 Aunt/uncle
- 9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)
- 10 Family-in-law (e.g. father-in-law, sister-in-law)
- 11 Roommate/housemate (e.g., friend)
- 12 Financial (e.g., tenant, renter, landlord, employer, nanny)
- 14 Not related
- 15 Other

Age

Range: 0..120

Gender

- 1 Male
- 2 Female

IF HOUSEHOLD MEMBERS > 7 or (HOUSEHOLD MEMBERS = 7 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

Relation

- 1 Spouse/Registered partner (e.g. husband, wife, registered partner)
- 2 Significant other (e.g. fiancée, boyfriend, girlfriend)
- 3 Parent (e.g. father, mother, stepfather, stepmother)
- 4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)
- 5 Sibling (e.g. brother, sister, stepbrother, stepsister)
- 6 Grandparent (e.g. grandfather, grandmother)
- 7 Grandchild (e.g. grandson, granddaughter)
- 8 Aunt/uncle
- 9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)
- 10 Family-in-law (e.g. father-in-law, sister-in-law)
- 11 Roommate/housemate (e.g. friend)
- 12 Financial (e.g. tenant, renter, landlord, employer, nanny)
- 14 Not related
- 15 Other

Age

Range: 0..120

Gender

1 Male

2 Female

IF HOUSEHOLD MEMBERS > 8 or (HOUSEHOLD MEMBERS = 8 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

Relation

1 Spouse/Registered partner (e.g. husband, wife, registered partner)

2 Significant other (e.g. fiancée, boyfriend, girlfriend)

3 Parent (e.g. father, mother, stepfather, stepmother)

4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)

5 Sibling (e.g. brother, sister, stepbrother, stepsister)

6 Grandparent (e.g. grandfather, grandmother)

7 Grandchild (e.g. grandson, granddaughter)

8 Aunt/uncle

9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)

10 Family-in-law (e.g. father-in-law, sister-in-law)

11 Roommate/housemate (e.g., friend)

12 Financial (e.g., tenant, renter, landlord, employer, nanny)

14 Not related

15 Other

Age

Range: 0..120

Gender

1 Male

2 Female

IF HOUSEHOLD MEMBERS > 9 or (HOUSEHOLD MEMBERS = 9 and CURRENT LIVING SITUATION = Married or living with a partner) THEN

Relation

1 Spouse/Registered partner (e.g. husband, wife, registered partner)

2 Significant other (e.g. fiancée, boyfriend, girlfriend)

3 Parent (e.g. father, mother, stepfather, stepmother)

4 Child (e.g. son, daughter, stepson, stepdaughter, adopted child)

5 Sibling (e.g. brother, sister, stepbrother, stepsister)

6 Grandparent (e.g. grandfather, grandmother)

7 Grandchild (e.g. grandson, granddaughter)

8 Aunt/uncle

9 Cousin (e.g., nephew, niece, 2d cousin, great nephew)

10 Family-in-law (e.g. father-in-law, sister-in-law)

- 11 Roommate/housemate (e.g. friend)
- 12 Financial (e.g. tenant, renter, landlord, employer, nanny)
- 14 Not related
- 15 Other

Age
Range: 0..120

- Gender
- 1 Male
 - 2 Female

Which category represents the total combined income of all members of your family (living here) during the past 12 months? This includes money from jobs, net income from business, farm or rent, pensions, dividends, interest, social security payments and any other money income received by members of your family who are 15 years of age or older.

- 1 Less than \$5,000
- 2 \$5,000 to \$7,499
- 3 \$7,500 to \$9,999
- 4 \$10,000 to \$12,499
- 5 \$12,500 to \$14,999
- 6 \$15,000 to \$19,999
- 7 \$20,000 to \$24,999
- 8 \$25,000 to \$29,999
- 9 \$30,000 to \$34,999
- 10 \$35,000 to \$39,999
- 11 \$40,000 to \$49,999
- 12 \$50,000 to \$59,999
- 13 \$60,000 to \$74,999
- 14 \$75,000 or more

IF FAMILY INCOME = \$75,000 or more THEN

familyincome_part2 FAMILY INCOME PART 2

You told us that the total combined income of all members of your family (living here) during the preceding 12 months was more than \$75,000. Thinking about the total combined income of your family from all sources, approximately how much did members of your family receive during the previous 12 months?

- 1 \$75,000-\$99,999
- 2 \$100,000-\$124,999
- 3 \$125,000-\$199,999
- 4 \$200,000 or more

Finally, we would like to know how you are communicating with us. From what location are you currently connected to the Internet?

- 1 Home

- 2 Work
- 3 Internet cafe, library, etc.
- 4 Elsewhere

Part 2 – Survey Questions

Well Being ms186 – Long-term care insurance and ms193 – Long-term care insurance v2

For purposes of this survey, when we use the term ‘long-term care,’ we are referring to assistance with personal care needs such as dressing, bathing, getting in and out of bed, using the bathroom or eating. Please indicate whether you agree or disagree with the following statements on a five-point scale.

Q1 This survey is going to ask you questions about long-term care insurance. Which of the following describes your current knowledge about this type of insurance?

- 1 A lot
- 2 A little
- 3 None at all

Q2 For purposes of this survey, we define long-term care insurance as a type of insurance that helps to pay for extended stays in a nursing home or assisted living facility, or for personal or medical care in your home. It is typically separate from your regular health insurance and requires paying separate premiums. Do you have a long-term care insurance policy?

- 1 Yes
- 2 No
- 3 I don't know

Q3 We realize that you may be uncertain about whether or not you own a long-term care insurance policy, but this information is important to our study. Do you think it is more likely that you do have a long-term care insurance policy, or that you do not?

- 1 It is more likely that I **do** own a long-term care insurance policy
- 2 It is more likely that I **do not** own a long-term care insurance policy

Q4 Did you purchase your long-term care insurance policy through a current or past employer?

- 1 Yes
- 2 No
- 3 I don't know

Q5 What is the most important reason for why you purchased a long-term care insurance policy?
Open|

Q6 What is the most important reason for why you did not purchase a long-term care insurance policy?
Open

Q7 Have you ever had an application for long-term care insurance denied?

- 1 Yes
- 2 No
- 3 I don't know

Q7 Which of the following reasons best explains why your application was denied?

- 1 Health-related reasons
- 2 Financial reasons
- 3 Other, please specify:

Q7_why_other other reason denied insurance

Other reason your application was denied:

String

Please indicate whether you agree or disagree with the following statements on a five-point scale. Remember that when we use the term 'long-term care,' we are referring to assistance with personal care needs such as assistance with dressing, using the bathroom, bathing, eating or getting in and out of bed.

Q8 I have thought a lot about the possibility of needing long-term care

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q9 At some point in the future, it is likely that I will no longer be able to live independently because of my health

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Please indicate whether you agree or disagree with the following statements on a five-point scale. Remember that when we use the term 'long-term care,' we are referring to assistance with personal care needs such as assistance with dressing, using the bathroom, bathing, eating or getting in and out of bed.

Q10 It is important to me to leave an inheritance to my loved ones

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q11 A person who buys long-term care insurance would be more likely to be able to leave an inheritance to their loved ones than a person who does not buy a long-term care insurance policy

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree

- 4 Agree
- 5 Strongly Agree

Q12 Even without long-term care insurance, I would have the means to pay for long-term care if I were to need it

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q13 When considering whether to purchase long-term care insurance, a tax deduction or tax credit for doing so would be an important consideration for me

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q14 I am concerned about my ability to afford the premiums for a long-term care insurance policy

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q15 It is important to me that I not create a financial burden for my family if I need long-term care

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q16 My spouse or another family member will be able to take care of me if I need long-term care

- Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q17 I would prefer receiving care from a professional health aide or nurse rather than my spouse or another family member

- 1 Strongly Disagree

- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q18 If a family member (other than a spouse) cares for me, I would feel obligated to compensate that person in some way

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q19 It is a child's obligation to help a parent with long-term care needs

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q20 Medicare covers the extended use of long-term care for those over age 65

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q21 Medicaid covers the extended use of long-term care for those who qualify

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q22 Most ordinary private health insurance policies cover extended stays in long-term care facilities

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q23 Long-term care insurance policies are appropriately priced given the cost of the care they cover

- 1 Strongly Disagree
- 2 Disagree

- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q24 I am concerned that an insurance company might deny reasonable claims for long-term care

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q25 I am concerned that once I own a long-term care insurance policy, an insurance company might raise my premiums

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q26 I am concerned that an insurance company may not remain in business long enough to pay for my care

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q27 Long-term care insurance contracts are complicated and difficult to understand

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q28 A financial adviser has suggested that I buy long-term care insurance

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q29 We now want to ask you a series of questions about other types of insurance you own, expectations about your own health, your familiarity with financial concepts, and how you would trade off wealth in different situations. First, we would like to ask you questions about the other types of insurance you own. Do you have a life insurance policy that provides benefits should you die? Include individual and group policies.

- 1 Yes
- 2 No
- 3 I don't know

Q30 Which of the following types of health insurance, if any, do you have? Please check all that apply. Do not include long-term care insurance.

- 1 Health insurance through your or your spouse's current or former employer
- 2 Health insurance bought on your own directly from an insurance company
- 3 Medicare, a public health insurance program for people 65 or older or those people receiving Social Security Disability benefits
- 4 Medicaid, a public health insurance program for people with low incomes
- 5 A military health care plan such as TRI-CARE, CHAMPUS, CHAMP-VA, or any other
- 6 Insurance through your union, a group such as AARP, a church, or other organization
- 7 I do not have health insurance
- 8 I don't know

IF I do not have health insurance in which health insurance to you have AND CARDINAL (which health insurance to you have) > Health insurance through your or your spouse's current or former employer THEN

Q30 You said that you don't have health insurance, but also checked an answer. Please go back and check your answer.

Q31 Some people who enter a nursing home pay for it with their own resources or with private long-term care insurance. Others have the cost paid for by Medicaid. How do you think the quality of care compares between a nursing home paid by private resources and one paid by Medicaid?

- 1 Medicaid-paid care is much better
- 2 Medicaid-paid care is slightly better
- 3 Medicaid-paid and private-paid care are the same
- 4 Private-paid care is slightly better
- 5 Private-paid care is much better

Q32 To your knowledge, does your state currently offer a tax credit or deduction for any type of long-term care insurance?

- 1 Yes
- 2 No
- 3 I don't know

Q33 We would now like to ask you some questions about your expectations about your own health, both now and in the future. Would you say your health is excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very Good
- 3 Good
- 4 Fair

5 Poor

Q34 On a scale of 0 to 100 where 0 is absolutely no chance and 100 is absolutely certain, what is the percent chance that you will live to age 85 or more?

String

Q35 Assuming that you live to age 85, on a scale of 0 to 100, what is the chance that your health will allow you to be living independently at that time, that is, to live at home without help and to manage your own affairs?

String

Q36 Assuming that you are still living at 85, what are the chances that you will not have any serious problems in thinking, reasoning or remembering things that would interfere with your ability to manage your own affairs?

String

Q37 Of course nobody wants to go to a nursing home, but sometimes it becomes necessary. Assuming you live to age 85, what is the percent chance that you will have moved into a nursing home or other assisted living facility?

String

Q38 Suppose there is a 50/50 chance that one year from now you will either be: Healthy and living at home, or In poor health and living in a nursing home Also suppose that you do not have any insurance that will cover long-term care expenses. Now suppose that someone offers you an insurance policy that will pay you \$10,000 if you are healthy at home, OR \$10,000 if you are in poor health and living in a nursing home, OR you can divide the \$10,000 across these two possibilities (such as \$5,000 either way). Which of the following outcomes would you prefer?

1 I would like to receive \$10,000 if I were healthy and living at home, and \$0 if I were in a nursing home

2 I would like to receive \$7,500 if I were healthy and living at home, and \$2,500 if I were in a nursing home

3 I would like to receive \$5,000 if I were healthy and living at home, and \$5,000 if I were in a nursing home

4 I would like to receive \$2,500 if I were healthy and living at home, and \$7,500 if I were in a nursing home

5 I would like to receive \$0 if I were healthy and living at home, and \$10,000 if I were in a nursing home

Q39 When thinking about long-term care, are financial resources more valuable to you: When you are in poor health, so that you can use the resources to provide for your care? OR When you are in good health, so that you can use the resources to pay for other goods and services that you enjoy? Please use a 7-point scale where 1 means "Financial resources are most valuable to me when I am in poor health" and 7 means "Financial resources are most valuable to me when I am in good health."

1 1

2 2

3 3
4 4
5 5
6 6
7 7

Q40 Now we would like to ask you a few questions about your family and household. Has a close relative (a parent, sibling, or parent in-law) ever lived in a nursing home or assisted living facility for an extended period of time?

- 1 Yes
- 2 No
- 3 I don't know

Q41 How many sons and daughters do you have? Include only biological, step- and adopted children.

Sons:

Range: 0..25

Daughters:

Range: 0..25

Q42 Do any of your children live with you?

- 1 Yes
- 2 No

Q43 How many of your children live within an hour's travel time?

Range: 0..50

Q44 Excluding the value of your primary residence (if any), what is your best guess as to your total household financial wealth? By total household financial wealth we mean the value of all bank accounts, IRAs/401(k)s, stocks, bonds, investment property, etc. less any credit card balances, medical debts, loans, etc.

- 1 Less than \$1,000
- 2 At least \$1,000 but less than \$10,000
- 3 At least \$10,000 but less than \$50,000
- 4 At least \$50,000 but less than \$100,000
- 5 At least \$100,000 but less than \$250,000
- 6 \$250,000 or more

Q45 Which of the following describes your current living situation?

- 1 Live in a place that I own
- 2 Live in a place that I rent
- 3 Live in an assisted living community
- 4 Live with a friend or relative
- 5 Other

Q46 If you sold your home and then paid off any mortgages or home equity loans on it, about how much would you have leftover?

- 1 \$0 or less
- 2 At least \$0 but less than \$1,000
- 3 At least \$1,000 but less than \$10,000
- 4 At least \$10,000 but less than \$50,000
- 5 At least \$50,000 but less than \$100,000
- 6 At least \$100,000 but less than \$250,000
- 7 At least \$250,000 but less than \$500,000
- 8 At least \$500,000 but less than \$1,000,000
- 9 \$1,000,000 or more

Q47 Now we would like to ask some questions about your familiarity and comfort with financial concepts. Please answer these questions the best you can. Suppose you have \$100 in a savings account, the interest rate is 2% per year and you never withdraw money or interest payments.

After 5 years, how much will you have in this account in total?

- 1 More than \$110.00
- 2 Exactly \$110.00
- 3 Less than \$110.00

Q52 Which of the following statements comes closest to describing the amount of financial risk that you are willing to take when you save or make investments?

- 1 I am willing to take substantial financial risks expecting to earn substantial returns
- 2 I am willing to take above average financial risks expecting to earn above average returns
- 3 I am willing to take average financial risks expecting to earn average returns
- 4 I am not willing to take any financial risks

CS_001 Could you tell us how interesting or uninteresting you found the questions in this interview?

- 1 Very interesting
- 2 Interesting
- 3 Neither interesting nor uninteresting
- 4 Uninteresting
- 5 Very uninteresting

Part 3 – Survey Questions

Well Being ms186 – Long-term care insurance

Note: These questions were administered as a part of ms186 and not ms193. The response to several of these questions was less than 50%. None of these questions are used in this dissertation.

Q48 True or false? Buying company stock usually provides a safer return than buying a stock mutual fund.

1 0

2 1

3 2

4 3

5 4

6 5

7 6

8 7

9 8

10 9

11 10

12 11

Q49 True or false? A young person with \$100,000 to invest should hold riskier financial investments than an older person with \$100,000 to invest.

1 0

2 1

3 2

4 3

5 4

6 5

7 6

8 7

9 8

10 9

11 10

12 11

Q50 True or false? It is best to avoid owning stocks of foreign companies.

1 0

2 1

3 2

4 3

5 4

6 5

7 6
8 7
9 8
10 9
11 10
12 11

Q51 True or false? You should invest most of your money in a few good stocks that you select rather than in lots of stocks or in mutual funds.

1 0
2 1
3 2
4 3
5 4
6 5
7 6
8 7
9 8
10 9
11 10
12 11

Q53 Now here is another kind of question. Suppose that you unexpectedly inherited one million dollars from a distant relative. You are immediately faced with the opportunity to take a one-time risky, but possibly rewarding investment option that has a 50-50 chance of doubling the money to two million dollars within a month and a 50-50 chance of reducing the money by one-third, to 667 thousand dollars, within a month. Would you take the risky investment option or not?

1 Yes
2 No

Q54 Suppose that the chances were 50-50 that the risky investment option would double the money to two million dollars and 50-50 that it would cut it in half, to 500 thousand dollars. Would you take the risky investment option or not?

1 Yes
2 No

Q55 Suppose that the chances were 50-50 that the risky investment option would double the money to two million dollars and 50-50 that it would reduce it by seventy-five percent, to 250 thousand dollars.

Would you take the risky investment option or not?

1 Yes
2 No

Q56 Suppose that the chances were 50-50 that the risky investment option would double the money to two million dollars and 50-50 that it would reduce it by twenty percent, to 800 thousand dollars. Would you take the risky investment option or not?

- 1 Yes
- 2 No

Q57 Suppose that the chances were 50-50 that the risky investment option would double the money to two million dollars and 50-50 that it would reduce it by ten percent, to 900 thousand dollars. Would you take the risky investment option or not?

- 1 Yes
- 2 No

Variable Key

Dependent Variable

Q2 Do you have a long-term care insurance policy?

- 1 Yes
- 0 No
- 0 I don't know

Independent Variables

Financial Knowledge (LTC / LTCL)

Q1 This survey is going to ask you questions about long-term care insurance. Which of the following describes your current knowledge about this type of insurance?

- 3 A lot
- 2 A little
- 1 None at all

Q20 Medicare covers the extended use of long-term care for those over age 65

- 5 Strongly Disagree
- 4 Disagree
- 3 Neither Agree nor Disagree
- 2 Agree
- 1 Strongly Agree

Q21 Medicaid covers the extended use of long-term care for those who qualify

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q22 Most ordinary private health insurance policies cover extended stays in long-term care facilities

- 5 Strongly Disagree
- 4 Disagree
- 3 Neither Agree nor Disagree
- 2 Agree
- 1 Strongly Agree

Q23 Long-term care insurance policies are appropriately priced given the cost of the care they cover

- 0 Strongly Disagree
- 0 Disagree
- 1 Neither Agree nor Disagree
- 1 Agree
- 1 Strongly Agree

Q24 I am concerned that an insurance company might deny reasonable claims for long-term care

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q25 I am concerned that once I own a long-term care insurance policy, an insurance company might raise my premiums

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q26 I am concerned that an insurance company may not remain in business long enough to pay for my care

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q27 Long-term care insurance contracts are complicated and difficult to understand

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Financial Risk Tolerance

Q52 Which of the following statements comes closest to describing the amount of financial risk that you are willing to take when you save or make investments?

- 4 I am willing to take substantial financial risks expecting to earn substantial returns
- 3 I am willing to take above average financial risks expecting to earn above average returns
- 2 I am willing to take average financial risks expecting to earn average returns
- 1 I am not willing to take any financial risks

Uncertainty Regarding Future LTC Need

Q8 I have thought a lot about the possibility of needing long-term care

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Q9 At some point in the future, it is likely that I will no longer be able to live independently because of my health

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Control Variables

Q16 My spouse or another family member will be able to take care of me if I need long-term care

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

Gender

- 1 Male
- 0 Female

Birth year

- 1946
- 1947
- 1948
- 1949
- 1950
- 1951
- 1952
- 1953
- 1954
- 1955
- 1956
- 1957
- 1958
- 1959
- 1960
- 1961
- 1962
- 1963
- 1964

Marital Status

Could you tell us what your current living situation is?

- 1 Married or living with a partner
- 1 Separated
- 0 Divorced
- 0 Widowed
- 0 Never married

Household Income (annual)

- 1 Less than \$5,000
- 2 \$5,000 to \$7,499
- 3 \$7,500 to \$9,999
- 4 \$10,000 to \$12,499
- 5 \$12,500 to \$14,999
- 6 \$15,000 to \$19,999
- 7 \$20,000 to \$24,999
- 8 \$25,000 to \$29,999
- 9 \$30,000 to \$34,999
- 10 \$35,000 to \$39,999
- 11 \$40,000 to \$49,999
- 12 \$50,000 to \$59,999
- 13 \$60,000 to \$74,999
- 14 \$75,000 or more

Education

- 1 Less than 1st grade
- 2 1st,2nd,3rd, or 4th grade
- 3 5th or 6th grade
- 4 7th or 8th grade
- 5 9th grade
- 6 10th grade
- 7 11th grade
- 8 12th grade NO DIPLOMA
- 9 HIGH SCHOOL GRADUATE high school DIPLOMA or the equivalent (For example: GED)
- 10 Some college but no degree
- 11 Associate degree in college Occupational/vocational program
- 12 Associate degree in college Academic program
- 13 Bachelor's degree (For example: BA,AB,BS)
- 14 Master's degree (For example: MA,MS,MEng,MEd,MSW,MBA)
- 15 Professional School Degree (For example: MD,DDS,DVM,LLB,JD)
- 16 Doctorate degree (For example: PhD,EdD)

Q45. Homeownership

- 1 Live in a place that I own
- 0 Live in a place that I rent
- 0 Live in an assisted living community
- 0 Live with a friend or relative
- 0 Other

Appendix B – Statistical Output (IBM SPSS Version 24.0)

Factor Analysis

```

FACTOR
/VARIABLES q20LTC q21LTCI q24LTCI q25LTCI q26LTCI q27LTCI
/MISSING LISTWISE
/ANALYSIS q20LTC q21LTCI q24LTCI q25LTCI q26LTCI q27LTCI
/PRINT UNIVARIATE INITIAL CORRELATION KMO EXTRACTION ROTATION
/PLOT EIGEN
/CRITERIA MINEIGEN(1) ITERATE(25)
/EXTRACTION PC
/CRITERIA ITERATE(25)
/ROTATION VARIMAX
/SAVE REG(ALL)
/METHOD=CORRELATION.
    
```

- - - - - F A C T O R A N A L Y S I S - - - - -

Notes

Output Created		02-OCT-2018 11:49:56
Comments		
Input	Data	C:\Users\nanderson2\Desktop\Dissertation Stats 10.2.18.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1152
Missing Value Handling	Definition of Missing	MISSING=EXCLUDE: User-defined missing values are treated as missing.

Cases Used		LISTWISE: Statistics are based on cases with no missing values for any variable used.
Syntax		<p>FACTOR</p> <p>/VARIABLES q20LTC q21LTCI q24LTCI q25LTCI q26LTCI q27LTCI</p> <p>/MISSING LISTWISE</p> <p>/ANALYSIS q20LTC q21LTCI q24LTCI q25LTCI q26LTCI q27LTCI</p> <p>/PRINT UNIVARIATE INITIAL CORRELATION KMO EXTRACTION ROTATION</p> <p>/PLOT EIGEN</p> <p>/CRITERIA MINEIGEN(1)</p> <p>ITERATE(25)</p> <p>/EXTRACTION PC</p> <p>/CRITERIA ITERATE(25)</p> <p>/ROTATION VARIMAX</p> <p>/SAVE REG(ALL)</p> <p>/METHOD=CORRELATION.</p>
Resources	Processor Time	00:00:03.05
	Elapsed Time	00:00:01.61
	Maximum Memory Required	6120 (5.977K) bytes
Variables Created	FAC1_1	Component score 1
	FAC2_1	Component score 2

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
20. Medicare covers the extended use of LTC for those over age 65	3.28	1.202	1152
21. Medicaid covers the extended use of LTC for those who qualify	3.25	1.150	1152
24. I am concerned that LTCI company might deny reasonable claims for LTC	3.35	.949	1152

25. I am concerned that LTCI company might raise my premiums	3.59	.926	1152
26. I am concerned that LTCI may not remain in business	3.40	.963	1152
27. LTCI contracts are complicated and difficult to understand	3.46	.880	1152

Correlation Matrix

		20. Medicare covers the extended use of LTC for those over age 65	21. Medicaid covers the extended use of LTC for those who qualify	24. I am concerned that LTCI company might deny reasonable claims for LTC
Correlation	20. Medicare covers the extended use of LTC for those over age 65	1.000	-.404	-.036
	21. Medicaid covers the extended use of LTC for those who qualify	-.404	1.000	.068
	24. I am concerned that LTCI company might deny reasonable claims for LTC	-.036	.068	1.000
	25. I am concerned that LTCI company might raise my premiums	-.056	.095	.503
	26. I am concerned that LTCI may not remain in business	.010	.012	.415
	27. LTCI contracts are complicated and difficult to understand	-.065	.084	.363

Correlation Matrix

		25. I am concerned that LTCI company might raise my premiums	26. I am concerned that LTCI may not remain in business	27. LTCI contracts are complicatd and difficult to understand
Correlation	20. Medicare covers the extended use of LTC for those over age 65	-.056	.010	-.065
	21. Medicaid covers the extended use of LTC for those who qualify	.095	.012	.084
	24. I am concerned that LTCI company might deny reasonable claims for LTC	.503	.415	.363
	25. I am concerned that LTCI company might raise my premiums	1.000	.500	.420
	26. I am concerned that LTCI may not remain in business	.500	1.000	.450
	27. LTCI contracts are complicatd and difficult to understand	.420	.450	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.722
Bartlett's Test of Sphericity	Approx. Chi-Square	1304.192
	df	15
	Sig.	.000

Communalities

	Initial	Extraction
20. Medicare covers the extended use of LTC for those over age 65	1.000	.702
21. Medicaid covers the extended use of LTC for those who qualify	1.000	.698
24. I am concerned that LTCI company might deny reasonable claims for LTC	1.000	.554

25. I am concerned that LTCI company might raise my premiums	1.000	.646
26. I am concerned that LTCI may not remain in business	1.000	.620
27. LTCI contracts are complicated and difficult to understand	1.000	.522

Extraction Method: Principal Component Analysis.

Total Variance Explained

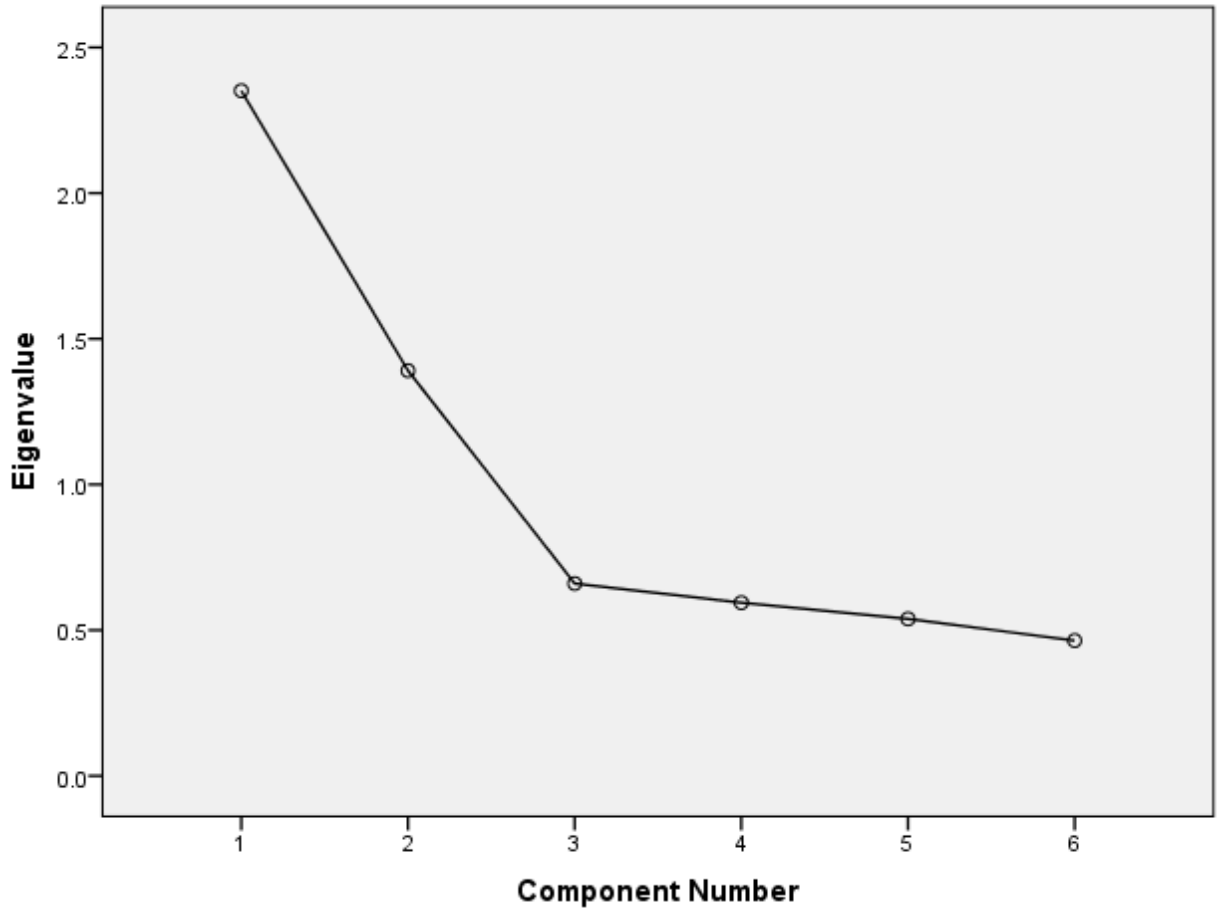
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.351	39.190	39.190	2.351	39.190	39.190
2	1.391	23.178	62.368	1.391	23.178	62.368
3	.660	11.005	73.373			
4	.595	9.909	83.282			
5	.539	8.980	92.262			
6	.464	7.738	100.000			

Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2.329	38.812	38.812
2	1.413	23.556	62.368
3			
4			
5			
6			

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix^a

	Component	
	1	2
20. Medicare covers the extended use of LTC for those over age 65	-.137	.826
21. Medicaid covers the extended use of LTC for those who qualify	.187	-.814
24. I am concerned that LTCI company might deny reasonable claims for LTC	.740	.077
25. I am concerned that LTCI company might raise my premiums	.802	.055

26. I am concerned that LTCI may not remain in business	.765	.185
27. LTCI contracts are complicated and difficult to understand	.721	.031

Extraction Method: Principal Component Analysis.^a

a. 2 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
20. Medicare covers the extended use of LTC for those over age 65	-.009	-.838
21. Medicaid covers the extended use of LTC for those who qualify	.059	.834
24. I am concerned that LTCI company might deny reasonable claims for LTC	.743	.037
25. I am concerned that LTCI company might raise my premiums	.801	.069
26. I am concerned that LTCI may not remain in business	.785	-.065
27. LTCI contracts are complicated and difficult to understand	.718	.080

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.988	.154
2	.154	-.988

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

Logistic Regression

```
LOGISTIC REGRESSION VARIABLES q2LTICI
  /METHOD=ENTER q1LTICI FAC1_1 FAC2_1 q22LTICI q23LTICI q52 q8LTICI q9LTICI
q16LTICI gender birthyear ms
  HHincome educ q45
  /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
```

Notes

Output Created		02-OCT-2018 11:59:14
Comments		
Input	Data	C:\Users\nanderson2\Desktop\Dissertation Stats 10.2.18.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1152
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
Syntax		LOGISTIC REGRESSION VARIABLES q2LTICI /METHOD=ENTER q1LTICI FAC1_1 FAC2_1 q22LTICI q23LTICI q52 q8LTICI q9LTICI q16LTICI gender birthyear ms HHincome educ q45 /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Case Processing Summary

Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	1152	100.0
	Missing Cases	0	.0
	Total	1152	100.0
Unselected Cases		0	.0
Total		1152	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
1	1

Block 0: Beginning Block

Classification Table^{a,b}

	Observed		Predicted		Percentage Correct
			2. LTCI Ownership 0	1	
Step 0	2. LTCI Ownership	0	984	0	100.0
		1	168	0	.0
Overall Percentage					85.4

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	
Step 0	Constant	-1.768	.083	448.384	1	.000	.171

Variables not in the Equation

		Score	df	Sig.	
Step 0	Variables	1. Subjective LTCI knowlege	65.081	1	.000
		LTCI Concerns	4.349	1	.037
		LTC Knowledge	.273	1	.601
		22. Most ordinary private health insurance cover extended stays in LTC facilities	.791	1	.374
		23. LTCI policies are appropriately priced given the cost of care they cover	4.240	1	.039
		Financial risk tolerance	2.739	1	.098
		8. Have thought a lot about the possibility of needing LTC in the future	57.120	1	.000
		9. At some point in the future, it is likely that I will no longer be able to live independently because of health	7.791	1	.005
		16. My spouse/family will take care of me if I need LTCI	4.473	1	.034
		Gender	.154	1	.695
		Birth Year	8.781	1	.003
		Marital Status	2.421	1	.120
		HH income	12.966	1	.000
		Education	15.002	1	.000
		45. Homeownership	2.442	1	.118
Overall Statistics		128.990	15	.000	

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	139.582	15	.000
	Block	139.582	15	.000
	Model	139.582	15	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	817.529 ^a	.114	.202

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Classification Table^a

	Observed	Predicted		Percentage Correct
		0	1	
Step 1	2. LTCI Ownership	0	1	
		975	9	99.1
		1	22	13.1
	Overall Percentage			86.5

a. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a						
1. Subjective LTCI knowlege	1.218	.216	31.895	1	.000	3.382
LTCI Concerns	-.139	.091	2.338	1	.126	.870
LTC Knowledge	.175	.098	3.191	1	.074	1.192
22. Most ordinary private health insurance cover extended stays in LTC facilities	-.153	.094	2.610	1	.106	.858
23. LTCI policies are appropriately priced given the cost of care they cover	.333	.224	2.214	1	.137	1.395
Financial risk tolerance	.056	.129	.191	1	.662	1.058
8. Have thought a lot about the possibility of needing LTC in the future	.546	.102	28.781	1	.000	1.727

9. At some point in the future, it is likely that I will no longer be able to live independently because of health	-0.032	.108	.088	1	.767	.968
16. My spouse/family will take care of me if I need LTCI	-.160	.097	2.732	1	.098	.852
Gender	.030	.190	.025	1	.874	1.031
Birth Year	-.042	.022	3.668	1	.055	.959
Marital Status	.172	.238	.519	1	.471	1.187
HH income	.101	.043	5.435	1	.020	1.106
Education	.075	.050	2.247	1	.134	1.078
45. Homeownership	-.173	.282	.377	1	.539	.841
Constant	-4.988	1.498	11.096	1	.001	.007

a. Variable(s) entered on step 1: 1. Subjective LTCI knowlege, LTCI Concerns, LTC Knowledge, 22. Most ordinary private health insurance cover extended stays in LTC facilities , 23. LTCI policies are appropriately priced given the cost of care they cover, Financial risk tolerance, 8. Have thought a lot about the possibility of needing LTC in the future, 9. At some point in the future, it is likely that I will no longer be able to live independently because of health, 16. My spouse/family will take care of me if I need LTCI, Gender, Birth Year, Marital Status, HH income, Education, 45. Homeownership .

Appendix C – Statistical Output (IBM SPSS Version 24.0)

Factor Analysis

FACTOR

```

/VARIABLES q20LTC q21LTCTI q24LTCTI q25LTCTI q26LTCTI q27LTCTI
/MISSING LISTWISE
/ANALYSIS q20LTC q21LTCTI q24LTCTI q25LTCTI q26LTCTI q27LTCTI
/PRINT UNIVARIATE INITIAL SIG KMO EXTRACTION ROTATION
/PLOT EIGEN
/CRITERIA MINEIGEN(1) ITERATE(25)
/EXTRACTION PC
/CRITERIA ITERATE(25) DELTA(0)
/ROTATION OBLIMIN
/SAVE REG(ALL)
/METHOD=CORRELATION.
    
```

- - - - - F A C T O R A N A L Y S I S - - - - -

Notes

Output Created		24-NOV-2018 16:50:42
Comments		
Input	Data	C:\Users\nanderson2\Downloads\Dissertation Stats 10.2.18 (1).sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1152
Missing Value Handling	Definition of Missing	MISSING=EXCLUDE: User-defined missing values are treated as missing.

Cases Used		LISTWISE: Statistics are based on cases with no missing values for any variable used.
Syntax		<p>FACTOR</p> <p>/VARIABLES q20LTC q21LTCI q24LTCI q25LTCI q26LTCI q27LTCI</p> <p>/MISSING LISTWISE</p> <p>/ANALYSIS q20LTC q21LTCI q24LTCI q25LTCI q26LTCI q27LTCI</p> <p>/PRINT UNIVARIATE INITIAL SIG</p> <p>KMO EXTRACTION ROTATION</p> <p>/PLOT EIGEN</p> <p>/CRITERIA MINEIGEN(1)</p> <p>ITERATE(25)</p> <p>/EXTRACTION PC</p> <p>/CRITERIA ITERATE(25) DELTA(0)</p> <p>/ROTATION OBLIMIN</p> <p>/SAVE REG(ALL)</p> <p>/METHOD=CORRELATION.</p>
Resources	Processor Time	00:00:02.83
	Elapsed Time	00:00:00.97
	Maximum Memory Required	6120 (5.977K) bytes
Variables Created	FAC1_2	Component score 1
	FAC2_2	Component score 2

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
20. Medicare covers the extended use of LTC for those over age 65	3.28	1.202	1152
21. Medicaid covers the extended use of LTC for those who qualify	3.25	1.150	1152

24. I am concerned that LTCI company might deny reasonable claims for LTC	3.35	.949	1152
25. I am concerned that LTCI company might raise my premiums	3.59	.926	1152
26. I am concerned that LTCI may not remain in business	3.40	.963	1152
27. LTCI contracts are complicated and difficult to understand	3.46	.880	1152

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.722
Bartlett's Test of Sphericity	Approx. Chi-Square	1304.192
	df	15
	Sig.	.000

Correlation Matrix

		20. Medicare covers the extended use of LTC for those over age 65	21. Medicaid covers the extended use of LTC for those who qualify	24. I am concerned that LTCI company might deny reasonable claims for LTC
Sig. (1-tailed)	20. Medicare covers the extended use of LTC for those over age 65		.000	.110
	21. Medicaid covers the extended use of LTC for those who qualify	.000		.010
	24. I am concerned that LTCI company might deny reasonable claims for LTC	.110	.010	
	25. I am concerned that LTCI company might raise my premiums	.029	.001	.000

26. I am concerned that LTCI may not remain in business	.361	.337	.000
27. LTCI contracts are complicated and difficult to understand	.014	.002	.000

Correlation Matrix

		25. I am concerned that LTCI company might raise my premiums	26. I am concerned that LTCI may not remain in business	27. LTCI contracts are complicated and difficult to understand
Sig. (1-tailed)	20. Medicare covers the extended use of LTC for those over age 65	.029	.361	.014
	21. Medicaid covers the extended use of LTC for those who qualify	.001	.337	.002
	24. I am concerned that LTCI company might deny reasonable claims for LTC	.000	.000	.000
	25. I am concerned that LTCI company might raise my premiums		.000	.000
	26. I am concerned that LTCI may not remain in business	.000		.000
	27. LTCI contracts are complicated and difficult to understand	.000	.000	

Communalities

	Initial	Extraction
20. Medicare covers the extended use of LTC for those over age 65	1.000	.702
21. Medicaid covers the extended use of LTC for those who qualify	1.000	.698

24. I am concerned that LTCI company might deny reasonable claims for LTC	1.000	.554
25. I am concerned that LTCI company might raise my premiums	1.000	.646
26. I am concerned that LTCI may not remain in business	1.000	.620
27. LTCI contracts are complicated and difficult to understand	1.000	.522

Extraction Method: Principal Component Analysis.

Total Variance Explained

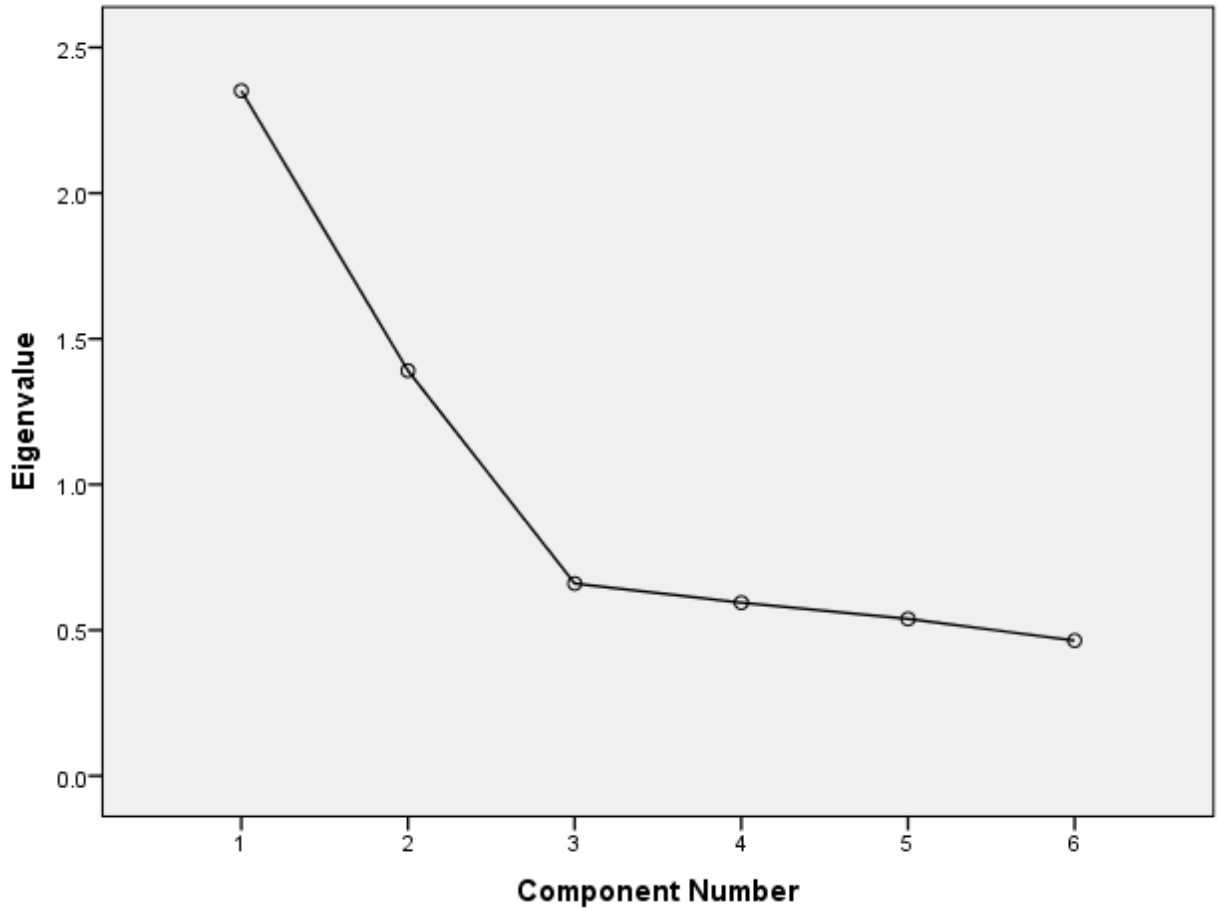
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.351	39.190	39.190	2.351	39.190	39.190
2	1.391	23.178	62.368	1.391	23.178	62.368
3	.660	11.005	73.373			
4	.595	9.909	83.282			
5	.539	8.980	92.262			
6	.464	7.738	100.000			

Total Variance Explained

Component	Rotation Sums of Squared Loadings ^a
	Total
1	2.339
2	1.426
3	
4	
5	
6	

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix^a

	Component	
	1	2
20. Medicare covers the extended use of LTC for those over age 65	-.137	.826
21. Medicaid covers the extended use of LTC for those who qualify	.187	-.814
24. I am concerned that LTCI company might deny reasonable claims for LTC	.740	.077
25. I am concerned that LTCI company might raise my premiums	.802	.055
26. I am concerned that LTCI may not remain in business	.765	.185

27. LTCI contracts are complicated and difficult to understand	.721	.031
--	------	------

Extraction Method: Principal Component Analysis.^a

a. 2 components extracted.

Pattern Matrix^a

	Component	
	1	2
20. Medicare covers the extended use of LTC for those over age 65	.024	.839
21. Medicaid covers the extended use of LTC for those who qualify	.027	-.833
24. I am concerned that LTCI company might deny reasonable claims for LTC	.744	-.008
25. I am concerned that LTCI company might raise my premiums	.800	-.037
26. I am concerned that LTCI may not remain in business	.789	.097
27. LTCI contracts are complicated and difficult to understand	.716	-.052

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

Appendix D – VITA

NaRita G. Anderson

College of Business
University of Central Oklahoma
100 N. University Drive, Edmond, OK 73034
nanderson2@uco.edu / 405-822-7325

Education

Kansas State University

Ph.D. Candidate – Anticipated graduation (2018)

Personal Financial Planning

Dissertation: Do financial knowledge, financial risk tolerance, and uncertainty regarding future long-term care need influence long-term care insurance ownership by baby boomers?

Oklahoma City University

Master of Business Administration: Healthcare Administration (1996)

University of Central Oklahoma

Bachelor of Business Administration: Marketing (1986)

Certification

Student Transformative Learning Record (STLR) Certification (2017)

Academic Experience

University of Central Oklahoma

- Instructor, College of Business (2006 – present)
- Sam Walton Fellow, Students in Free Enterprise (2009 – 2013)

Park University

- Senior Adjunct Instructor (1998 – 2007)

Professional Experience

OU Physicians

- Business Development Analyst, Financial Services Department (2001 – 2005)

The Schuster Group

- Executive Director, Independent Medical Providers Action Coalition (1996 – 1998)
- Project Manager (1995 – 1998)

Oklahoma County Assessor

- Administrator, Maps Department (1993 – 1994)

Pitney Bowes, Inc.

- Sales Representative (1992 – 1993)

Teaching Experience

University of Central Oklahoma

- Personal Finance – 24 Sections
- Project Persist – 4 Sections
- Introduction to Business – 53 Sections
- Students in Free Enterprise – 4 Courses
- Financial Literacy – Upward Bound Summer Enrichment Program (2015, 2017)

Park University

- Senior Seminar in Marketing
- Organizational Behavior
- Principles of Marketing
- Introduction to Business

Peer Reviewed Publications

Garrett, J. L., Rodermund, R., **Anderson, N.**, Berkowitz, S., & Robb, C. A., (2014). Adoption of mobile payment technology by consumers. *Family and Consumer Sciences Research Journal*, 42(4), 358-368.

Henegar, J. M., Archuleta, K., Grable, J., Britt, S., **Anderson, N.**, & Dale, A. (2013). Credit card behavior as a function of impulsivity and mother's socialization factors. *Journal of Financial Counseling and Planning*, 24(2), 37-49.

Anderson, N., Fernatt, F., Rodermund, R., Sages, R., & Grable, J. (2012). Mama's boys and Nature's girls: Explaining differences in risk attitudes between women and men. *Global Journal of Human Social Science*, 12(15), 10-21.

Grable, J. E., Cupples, S., Frenatt, F., & **Anderson, N.** (2012). Evaluating the link between perceived income adequacy and financial satisfaction: A resource deficit hypothesis approach. *Social Indicators Research*, 114(3), 1109-1124.

Conference Presentations

Credit Card behavior as a function of risk attitude, impulsivity, and a mother's socialization factors (Fall 2011)

- Presented research paper at the Association for Financial Counseling and Planning Education annual conference held in Jacksonville, FL.

- **Anderson, N.** (Presenter & Author), Grable, J. E. (Presenter & Author), Britt, S. (Author Only), Dale, A. (Author Only).

Mama's boys and Nature's girls: explaining differences in risk attitudes between women and men (Fall 2011)

- Presented research paper at the Academy of Financial Services 25th Annual Meeting held in Las Vegas, NV.
- **Anderson, N.** (Author Only), Grable, J. E. (Author Only), Fernatt, F. (Presenter & Author), Rodermund, R. (Presenter & Author), Sages, R. (Author Only).

Business communication across the curriculum: What can we learn from other disciplines? (Fall 2008)

- Presented research paper at the Association for Business Communication-Southwest United States annual meeting held in Houston, TX.
- Wardrope, W. (Presenter & Author), **Anderson, N.** (Author Only).

An analysis of the business communication course as a component of core business curriculum (Fall 2007)

- Presented research paper at the Association for Business Communication annual conference held in Washington, DC.
- Wardrope, W. (Presenter & Author), **Anderson, N.** (Author Only).

Invited Presentations

How do you use new financial technologies? (Spring 2014)

- Invited presentation at American Council on Consumer Interests in Milwaukee, WI.
- Garrett, J. L., **Anderson, N.**, Rodermund, R., Berkowitz, S., & Robb, C. A.

Are baby boomer women likely to continue working during retirement? (Summer 2013)

- Invited presentation at KSU/Ewha University Colloquium, Ewha University, Seoul, South Korea.
- **Anderson, N. G.**

Evaluating the link between perceived income adequacy and financial satisfaction: A resource deficit hypothesis approach (Summer 2012)

- Presented at KSU/Ewha University Colloquium, Ewha University, Seoul, South Korea.
- Cupples, S. (Presenter & Author), Grable, J. (Author Only), Fernatt, F. (Author Only), **Anderson, N.** (Author Only)

University Service

Departmental:

- Coordinator, Introduction to Business courses (2007 – 2014)
- Committee Member, Core Curriculum Committee (2011 – 2013)
- Committee Member, Scholarship Awards Committee (2011 – 2013)

College of Business:

- Sam Walton Fellow and Faculty Advisor, Students in Free Enterprise (2009 – 2015)
- Committee Member, CBA Standard 13 Team (2013)
- Officer, Faculty Senate (2009 – 2011)
- Faculty Advisor, UCO Mortar Board. (2008 – 2009)
- Usher, Delta Mu Delta (2010 – 2013)
- Conference Moderator, Twenty-Seventh Annual Southwest Business Symposium held in Edmond, OK (Spring 2010)

University:

- Committee Member, Student Support Services Traditional Steering Committee (2011 – present)
- Faculty Advisor, Student Support Services (2007 – present)
- Usher, UCO Graduation (2006 – present)
- Faculty Advisor, UCO Mortar Board (2008 – 2009)
- Volunteer, UCO Career & Internship Fair (2006 – 2012)
- Volunteer, UCO Business Exposition (Fall 2008)
- Guest Speaker, Delta Sigma Theta Sorority, Inc. (Fall 2008)
- Volunteer, National Campus Security Summit: Practical Measures for Campus Security (Fall 2008)
- Guest Speaker, Sigma Gamma Rho Sorority, Inc. (Spring 2008)
- Judge, Miss Black and Gold Scholarship Pageant (Spring 2008)

Professional Development:

- 2017 Personal Finance Seminar for Professional, held in Annapolis, MD (Summer 2017)
- UT Summer Statistics Institute, held at The University of Texas at Austin (Summer 2017)
- American Council on Consumer Interests annual conference, held in Washington, DC (Spring 2011)
- The Courage to Teach with Parker Palmer – UCO Educators' Leadership Academy, held in Oklahoma City, OK (Spring 2010)
- Generation NeXt with Mark Taylor, held in Edmond, OK (2007)
- The McDonaldization of America, held in Oklahoma in Edmond, OK (2007)
- Disney Keys to Excellence, held in Oklahoma in Edmond, OK (2006)

Public and Community Service

- Make A Will & Financial Management Board and Financial Planning Team (2015 – present)
- St. James Baptist Church Financial Education Program Advisor (2013 – present)
- Medical Center Neighborhood Association of Oklahoma City (2000 – present)
- Harding Fine Arts Academy Parent-Teacher Organization (2015 – present)
- Ambassador Concert Choir Member (2006 – 2010)
- MLK Elementary School Parent-Teacher Association President (2005 – 2007)

Professional Organizations and Memberships

- Association for Financial Counseling, Planning, and Education (2011– present)
- The American Council on Consumer Interests (2011 – present)
- Kappa Omicron Nu National Honor Society (2011 – present)
- Empowerment for Excellence, University of Central Oklahoma (2013 – present)
- OCU Meinder's School of Business Alumni Association Founding Member (1998)
- Oklahoma City University Alumni Association Board of Directors (1996 – 2013)

Awards and Honors

- Outstanding Journal Article Award (2014). Credit card behavior as a function of impulsivity and mother's socialization factors. *Association for Financial Counseling, Planning and Education*.
- Outstanding Faculty/Staff Award, Women of Many Ethnic Nationalities (2012). University of Central Oklahoma.
- Faculty Service Award, Department of Economics and International Business (2012).
- Students in Free Enterprise Regional Rookie Team of the Year (2010).