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Retired, Unmarried, Male Baby Boomer Attitudes and Behaviors Toward Disease Prevention

Irene Nyawira Ruminjo
Walden University

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Walden University

College of Health Sciences

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Irene Ruminjo

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Review Committee

Dr. Bernice Kennedy, Committee Chairperson, Public Health Faculty

Dr. Kimberly Brownley, Committee Member, Public Health Faculty

Dr. Daniel Okenu, University Reviewer, Public Health Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University

2017

Abstract

Retired, Unmarried, Male Baby Boomer Attitudes and Behaviors Toward Disease

Prevention

by

Irene Nyawira Wahome Ruminjo

MPH, University of Wales, 1995

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Public Health

Walden University

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Abstract

Preventive health care is effective in reducing both infectious diseases and chronic conditions among the elderly. Despite efforts to prevent or decrease the risk of illness, unmarried men are less likely to receive selected preventive services compared to married men. The purpose of this cross-sectional survey was to describe disease prevention attitudes and behaviors of retired, unmarried, male baby boomers residing in Harlingen, Texas. Further, the study examined the effects of socioeconomic status on disease prevention attitudes and behaviors. The health belief theory framed the study. A validated questionnaire collected disease prevention attitudes, behaviors, and sociodemographic characteristics data. Data inquiry included ANOVA, multiple regression and moderation analysis. The findings did not show any differences in disease prevention attitudes and behaviors among retired, unmarried male boomers. Multiple linear regression indicated that the socioeconomic factors explained 24% of the variance in disease prevention behaviors ($p = .001$). Moderation analysis showed that 29% of the variability in the dependent variable could be explained by the independent variables and interaction terms. The only significant predictor was education, $p = .002$; none of the interaction terms were significant. Positive social change from the study is the possible increase in disease prevention behavior among the retired, unmarried male baby with a low level of education. The study results may help in developing policies that would target education barriers and raise awareness of disease prevention behavior among the retired, unmarried male baby boomers.

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Dedication

This dissertation is dedicated to the Jehovah Shammah, the Almighty Lord, who walked before me through many physical and mental adversities. Adonai kept me in peace and provided knowledge and wisdom during unbearable desolate seasons. Adonai gives power to the faint, and to him who has no might, he increases strength. Even youth shall faint and be weary, and young men shall fall exhausted, but they who wait for the Lord shall renew their strength; they shall mount up with wings as eagles; they shall run and not be weary; they shall walk and not faint.

Also, I give gratitude to my children Chuch, Nick, Nyamathai, and Chohi. Thank you for the kindness, support, encouragement and silent prayers. You are dearly loved and always in my thoughts. To my late parents, Nyawira and Wanjohi, without them, I would not be here. You are gone, not forgotten and live in my heart. Last but not least to my grandchildren Jude, Alessia, and Eliana be blessed and believe there no limits but the sky.

To the teachers who inspired me, the late Dr. Musandu and Mrs. Kagori, and to my dedicated colleagues Michael Duley and Teresa Wachiira, may God grant you eternal peace.

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Chapter 1: Introduction to the Study

Introduction

The Baby Boomer cohort comprises of men and women born from 1946 to 1964 and accounts for 26% of the U.S. population (U.S. Census Bureau, 2010). In 2011, the oldest Boomers entered retirement after reaching age 65 (Cohn & Taylor, 2010). Their departure from the workforce is at a rate of 10,000 individuals per day and is expected to continue for 18 years (Cohn & Taylor, 2010). The retirement is taking place at a time when the United States is experiencing reduced mortality and increased incidence in obesity and chronic conditions. The cohort will spend more years in retirement than the previous generation. Baby Boomers are currently responsible for the growing number of senior citizens in the United States (Butrica, Smith, & Lams, 2012; Ortman, Velkoff, & Hogan, 2014). This increase in life expectancy, older persons, and chronic conditions might lead to challenges in the health and social systems (Lin & Brown, 2012).

Among the Baby Boomer cohort is a subgroup of unmarried Baby Boomers consisting of divorced, never married, and widowed individuals. The unmarried may have fewer financial resources, a lack of social interaction, and ill health (Roth, Haley, Wadley, Clay, & Howard, 2007). The lack of social attachment and fewer resources are risk factors for diseases. Additionally, divorced men are less likely to have physical contact with adult children than divorced women (Davidson & Arber, 2004). This lack of contact with adult children reduces the potential for caregivers during elderly years, which is a period of frailty.

According to Gough (2013), a male's average life expectancy is substantially shorter than that of women. Moreover, men tend to rely on spouses for social ties. Hence, widowhood and divorce are reported to be more detrimental to men's health (Liu & Umberson, 2008). The ability to participate in disease prevention activities among aging men remains unpredictable given the range of possible life adjustments, including retirement or spousal loss (Peak & Gast, 2014). On the contrary, the change associated with older age, retirement, or widowhood may create opportunities for men to assume more efficient health-related behaviors. In the case of widowhood, if older men want to consider better health behaviors without their health promoting wives, figuring out new routes to achieve that goal is a necessity (Bennett, 2007).

Marriage is an indicator of well-being that has a connection to economic resources, social integration, health, and reduced mortality (Waite & Gallagher, 2000). Furthermore, marriage is a health determinant that provides both physical and mental health benefits for men (Guner, Kulikova, & Llull, 2014). Spouses play a role in the supervision and promotion of men's physical and mental health (Guner et al., 2013). Nevertheless, marital strain can accelerate the decline in self-rated health for both men and women (Umberson, Williams, Powers, Liu, & Needham, 2006). Consequently, participation in disease preventive activities could help both married and unmarried men maintain health and the quality of life.

Involvement in disease prevention activities differs among the married and unmarried. For example, scholars have documented higher vaccination rates among married men compared to unmarried men (Abramson & Cohen, 2000). Likewise, a lower

socioeconomic status (SES) has been correlated with lower vaccination rates (Mangtani et al., 2005). Adult men are significantly less likely than women to use disease prevention services (Cherry et al., 2007). Furthermore, negative health behaviors were reported to be consistently more likely among men after losing a spouse (Das, 2012). The lack of motivation to participate in disease prevention activities will hinder the health of the unmarried male and could negatively influence both infectious and some chronic conditions. In the United States, men suffer from more chronic diseases than women; yet, little evidence exists on male preventive health attitudes (Vlassoff & Garcia Moreno, 2002).

The purpose of this study was to review the disease prevention attitudes and behaviors of retired, unmarried, male Baby Boomers. I determined disease prevention attitudes and behaviors variances among the divorced, never married, separated, or widowed retired, male Baby Boomers. Also, I assessed the relationship between SES and attitudes and behaviors. The influence of Baby Boomer marital status on the relationships was evaluated. The study findings may assist communities, public health officials, and governments in understanding the disease prevention attitudes and practices of retired, unmarried, male Baby Boomers, particularly in Harlingen, Texas. The study results could serve as a frame of reference for future research on retired, unmarried, male Baby Boomers. The findings will provide Texas health care providers with information to better comprehend disease prevention attitudes and behaviors of the subgroup mentioned earlier. The results will also provide an opportunity for public health workers to address the attitudes and behaviors that deter access to disease prevention services among the

target population. Likewise, health educators may use the research results to design better education programs that could meet the disease prevention needs of the subgroup.

Background

The aim of this study was to define and measure disease prevention attitudes and behaviors of retired, unmarried, male Baby Boomers. The unmarried, male Baby Boomers are a subgroup that is less often the target of disease prevention initiatives. The use of preventive health care among adults has primarily focused on the treatment of acute or chronic conditions, rather than the prevention of infectious diseases (National Vaccine Advisory Committee [NVAC], 2009). In the United States, chronic diseases are common among the elderly, costly to treat, and mostly preventable (Center for Disease Control and Prevention [CDC], 2016).

A significant number of adults do not receive the recommended vaccines (NVAC, 2009). Most people in the United States are unaware of the existence of adult vaccines, and those who are aware are not sure of its benefits (Horovitz & Spicehandler, 2014). Even for the well-publicized influenza vaccine, the immunization rates fall below national targets (CDC, 2013). The NVAC (2009) recommended 14 immunizations for adults, including routine vaccines and vaccines based on other risk factors. Participation in disease prevention and health promotion activities are tools that support and maintain health and the quality of life. Given the expansion of the aging population and the rising health care costs associated with aging, any improvement in men's disease prevention attitudes and behaviors might result in cost savings (Springer & Mouzon, 2011). Moreover, participation in disease prevention initiatives will assist the unmarried, male

Baby Boomers in remaining healthy and experiencing a decent quality of life during retirement.

Infectious diseases such as influenza and pneumonia are the fifth leading cause of death in persons over the age of 65 (Johnson et al., 2014). Influenza immunizations reduce the incidence of flu amongst the elderly by 42%-50% (Nichol et al., 2007). Likewise, pneumococcal vaccination has a more than 40% mortality reduction (Jackson et al., 2003). This high death rate among ages 65 and over infers the possibility of the underuse of vaccines among the population. It is possible that participation in disease prevention activities among retired, unmarried, male Baby Boomers could reduce morbidity among the elderly.

A lack of awareness, few financial resources, and isolation are some of the factors that limit vaccinations among adults. Unmarried, male Baby Boomers tend to experience socioeconomic problems that influence chronic and infectious diseases. Even with access to health care, only a few poor men were present in the waiting rooms of prevention services clinics (Rich et al., 2002). Older men who are retired, or in ill health, are more willing to participate in preventive health services because of a loss of professional success and robust health (Calasanti & King, 2005).

A significant percent of adults contracts preventable infectious diseases due to a lack of immunization coverage. On average in a single year, influenza results in about 226,000 hospitalizations, with 75% of those cases being adults (Bridges, 2014). The overall pneumococcal bacteremia case fatality rate was 15%, and of those, 60% were adults age 65 and older (Pilishvili, 2015). There is a high morbidity and mortality caused

by preventable diseases among the elderly. Understanding the unmarried men's attitudes and behaviors could assist public health organizations in developing interventions that increase participation in disease prevention activities and eliminate or reduce vaccine-preventable diseases.

It is necessary to apply the health belief model in identifying attitudes and behaviors of retired, unmarried men, so as to determine levels of participation in disease prevention activities. Vaccines uptake was primarily driven by participants' risk perception (Wheelock et al., 2014). Unmarried, male Baby Boomers are at a danger of acquiring preventable diseases, and their disease prevention attitudes and behaviors remain unknown. Physical and social barriers to access and perceived risk of illness are important determinants of acceptance and uptake of vaccines (Kwong, Pang, Choi, & Wong, 2010); some of these barriers affect the retired, unmarried, male Baby Boomers. Furthermore, men are less likely to visit with health care providers, a problem that leads to the underuse of disease prevention services (Mansfield, Addis, & Courtenay, 2005). A decrease in visits to health care providers could reduce levels of vaccination knowledge and limit the delivery of immunizations.

Both diet and physical activity control body weight and play a role in supporting health. Moschis and Mathur (2007) found that nine out of 10 Baby Boomers are more health conscious with regards to exercise and diet than the previous generation. Sustained exercise and diet are efficient ways of pursuing healthy outcomes and maintaining body weight. Similarly, favorable attitudes towards group exercise could limit isolation, leading to a reduction in disease risk factors. Baby Boomers are less likely to smoke

compared to individuals of the same age in the previous generation (King et al., 2013). This positive behavior has the potential to reduce the incidence of heart disease and diabetes. Health promoting activities lessen the occurrence of infectious diseases when complemented by disease prevention activities.

Tobacco use can lead to smoking/nicotine dependence and serious health problems. There is a higher smoking prevalence among males who live in higher income countries (Marinho et al., 2010). Baby Boomers are reported to have low tobacco incidence (King, et al, 2013). However, the cohort is one of the largest drug using generations in the history of addiction (Han et al., 2009). The cohort has experimented with alcohol and illicit drugs during younger years. The use of illegal drugs among the leading edge Baby Boomers (born in 1946-1950) could lead to geriatric psychiatry (Offsay, 2007). Also, the incidence of moderate drinking among Baby Boomers was 67.3%, as compared to 37.2 % for the past generation (King et al., 2013). Open attitudes towards alcohol and illicit drug use often lead to misuse of prescribed medications in elderly years (Oslin, 2005). Illegal drugs and alcohol consumption might affect attitudes and behaviors towards disease prevention and could lead to addiction problems and chronic conditions.

Unmarried males are one of the fastest growing vulnerable subgroups facing both mental and physical health concerns (Brown & Lin, 2011). Despite achieving higher levels of education, the unmarried male subgroup, with fewer economic resources, is more likely to experience barriers to disease prevention services. Likewise, having fewer financial resources influences the consumption of high fats and carbohydrates diet,

resulting in obesity, a risk factor for chronic illness (Manson et al., 2004). Chronic diseases account for about 38% of all deaths in the United States (Mokdad et al., 2004). Participation in disease preventive services could improve the health of the Baby Boomer cohort (Goldman et al., 2009). Identifying disease prevention attitudes and behaviors of the subgroup may assist public health officials in designing programs that target and market disease prevention activities.

It is necessary to examine the unmarried male subgroups' attitudes and practices to gain a better understanding of the circumstances that predispose them to preventable diseases. Disease prevention includes early detection efforts and screening for appropriate management of existing diseases and related complications (CDC, AARP, American Medical Association 2009). Disease preventive activities are crucial for the health and well-being of the elderly (Altarum Institute, 2012). Disease preventive activities and health promotion interventions are the most cost-effective methods of keeping the retired, unmarried, male Baby Boomer healthy, as opposed to curative care (Coe & Beyer, 2014). Participation in disease prevention activities is one way of assisting the subgroup in experiencing healthy aging.

Filling the Gap in Knowledge

The lack of published studies on disease prevention attitudes and behaviors among the retired, unmarried, male Baby Boomer continues to widen the gap in knowledge. Available data on disease prevention attitudes and behaviors do not address the subgroup mentioned above. Furthermore, most scholars combine males and females, thereby lumping the unmarried Baby Boomers into a single category. Combining the

divorced, never married, separated, and widowed into one category could result in an underestimation of disease prevention attitudes and behaviors. The aim of this study was to describe and measure disease prevention attitudes and behaviors of each subset of the retired, unmarried, male Baby Boomers. The results of the survey may lead to the development of disease prevention interventions directed towards each subcategory of retired, unmarried, male Baby Boomers.

Baby Boomers are highly educated, high consumers of health and wellness information, and have access to life enhancing medical technologies (Benko, 2003; Chernoff, 1995). The cohort is in better physical health than the previous generation (Zapolsky, 2003) and has different quality of life expectations and worldviews (Maples & Abney, 2006). The Baby Boomer generation may be redefining aging, reinventing retirement, and becoming proactive in their health and well-being. However, these positive reports do not offer evidence of participation in disease prevention activities. A lack of disease prevention activities among the subgroup can potentially threaten their health.

Statement of the Problem

People in the United States are living longer, and the number of older adults is increasing. It is important to improve the health, function, and quality of life of older adults. Unmarried individuals report worse physical and psychological well-being, on average, compared to married people (Dupre, Beck, & Meadows, 2009; Waite, 1995).

The Boomers entered retirement 5 years ago, and despite the attention given to the elderly, limited published research exists in the area of disease prevention attitudes and

behaviors of the retired, unmarried male Boomers. The chances of the aging, retired, unmarried Baby Boomers developing chronic illnesses are higher as a result of living conditions and marital and SES.

The Purpose of the Study

The objective of this research was to describe the disease prevention attitudes and behaviors of retired, unmarried, male Baby Boomers residing in Harlingen, Texas. The unmarried marital status includes divorced, never married, separated, or widowed. This quantitative, correlational research study had three aims: (a) describe and measure the disease prevention attitudes and behaviors of each subset of the retired, unmarried, male Baby Boomers; (b) assess the relationships between SES and attitudes and behaviors; and (c) examine whether Baby Boomer's marital status is a moderator in the relationships between SES and attitudes and behaviors.

Data on demographics, SES, and attitudes and behavior were collected to describe and measure differences in attitudes and behaviors of the target population.

Socioeconomic predictive indicators included educational level, income, home ownership, and health insurance. A 21-question survey was used to collect data on sociodemographic, attitudes, and behaviors (see Appendix A). A 6-point Likert scale (*strongly disagree, disagree, slightly disagree, slightly agree, agree, strongly agree*) was used to obtain responses from the study participants.

Research Questions and Hypotheses

The following research questions and hypotheses guided the study:

1. Is there a difference in disease prevention attitudes among retired, divorced, never married, separated, and widowed, male Baby Boomers?

H_01 : There is no difference in attitudes among retired, divorced, never married, separated, and widowed male Baby Boomers toward disease prevention.

H_a1 : There is a difference in attitudes among retired, divorced, never married, separated, and widowed, male Baby Boomers toward disease prevention.

2. Is there an association between SES and attitudes toward disease prevention among retired, unmarried, male Baby Boomers?

H_02a : There is no association between SES and attitudes toward disease prevention among retired, unmarried, male Baby Boomers.

H_a2a : There is an association between SES and attitudes toward disease prevention among retired, unmarried, male Baby Boomers.

H_02b : There is no association between socioeconomic status and disease prevention attitudes among the retired unmarried male Baby Boomers moderated by the baby boomer marital status.

H_a2b : There is an association between socioeconomic status and disease prevention attitudes among the retired unmarried male Baby Boomers moderated by the Baby Boomer marital status.

3. Is there a difference in disease prevention behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers?

H_03 : There is no difference in behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers toward disease prevention behavior.

H_{a3} : There is a difference in behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers toward disease prevention behavior.

4. Is there an association between SES and behaviors toward disease prevention among retired, unmarried, male Baby Boomers?

H_{04a} : There is no association between SES and behaviors toward disease prevention among retired, unmarried, male Baby Boomers.

H_{a4a} : There is an association between SES and behaviors toward disease prevention that is moderated by Baby Boomers' marital status

H_{04b} : There is no association between socioeconomic status and disease prevention behaviors among the retired unmarried male Baby Boomers moderated by the baby boomer marital status.

H_{a4b} : There is an association between socioeconomic status and disease prevention behaviors among retired, unmarried male Baby Boomers moderated by the baby boomer marital status.

Theoretical Framework

The health belief model (HBM) was developed by social psychologists in the 1950s to explain the failure of people to participate in health promotion/prevention programs (Rosenstock, 1960). Specifically, the HBM provides a framework for linking perceived threats and perceived benefits and the value of taking action. The HBM constructs predict health-related behaviors towards the perceived costs of disease, perceived vulnerability, and beliefs in engaging in health action (Rosenstock, 1974).

The HBM theory is relevant to this study as it describes attitudes and behaviors related to disease prevention. Also, the approach guided the assessment of the association between SES and illness and attitudes and behaviors. Disease prevention attitudes and behaviors were adopted if the perceived benefit was desirable and outweighed the perceived barriers. The socioeconomic predictive indicators were comprised of participants' education level, income, health insurance, and home ownership. The effect of the predictive variables on disease prevention behaviors was examined.

The key variables of the HBM used in the study included perceived susceptibility, perceived severity, perceived benefits, and perceived barriers (Rosenstock, Strecher, & Becker, 1994). The perceived susceptibility and perceived severity constructs were used to measure disease prevention attitudes. The perceived benefit and perceived barriers construct was used to evaluate disease prevention behaviors. These four core constructs of the HBM were applied to 14 statements contained within the study questionnaire (see Appendix A) to determine the disease prevention attitudes and behaviors of retired, unmarried, male Baby Boomers. Chapter 2 provides a more detailed description of the HBM constructs as determinants of attitudes and behaviors toward disease prevention activities.

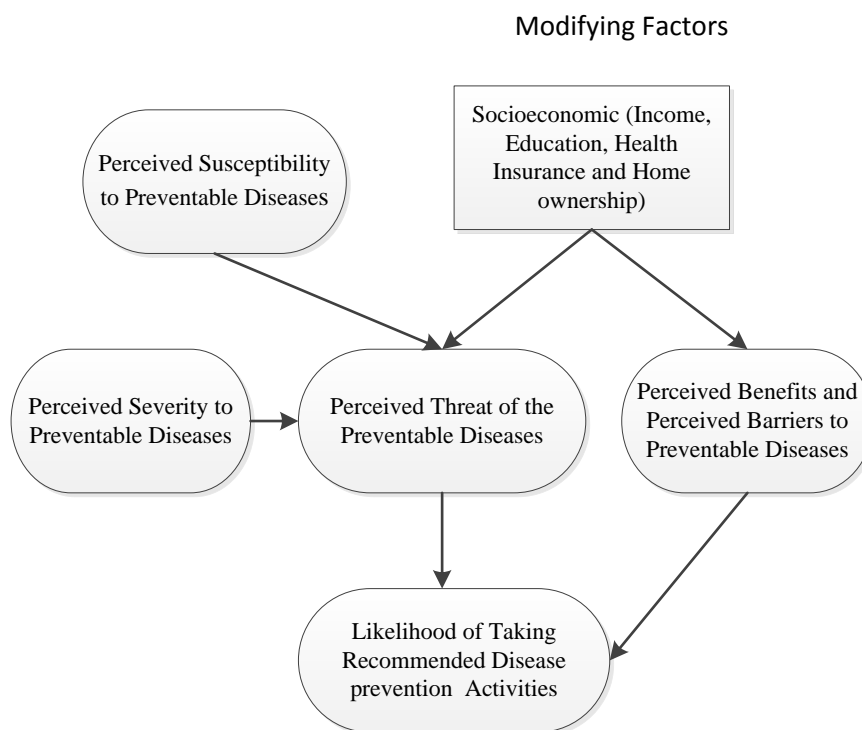


Figure 1. Diagram of the health belief model.

Source: C.P. Shah: Public Health and Preventive Medicine in Canada (2003).

The health belief model (HBM).

The HBM is the most commonly used theory in health care to predict behavior and increase colon cancer screening, and descriptive/correctional scholars have used the HBM constructs to understand HPV vaccine uptake (Glanz, Rimer, & Viswanath, 2008). The model in this study was chosen to help describe attitudes and behaviors in disease prevention among the retired, never married, divorced, widowed, or separated, male Baby Boomers.

This study was guided by the HBM; 81 retired, unmarried men completed perceived severity questions concerning regular blood pressure checks, taking time for social activities, and seeking out nonsmoking places. Perceived susceptibility to preventable diseases included regular cholesterol checks, regular exercise, maintaining a heart-healthy diet, and knowledge of family medical history. Perceived benefits and barriers to participating in disease prevention activities included knowing that cholesterol levels would help maintain overall health and that eating whatever a person wants will affect health. Perceived barriers questions are as follows: It is not important to know one's blood pressure, knowing one's family will not help maintain overall health, the need to exercise is overstated, a little smoke in the air does not affect overall health and work-life balance is not that necessary. Table 1 shows the HBM constructs and disease prevention activities that a retired, unmarried, male Boomer is likely to undertake.

Table 1

*Summary of Health Belief Model Constructs and Application of Disease Prevention**Activities*

HBM Constructs	14 Attitude and Behavioral Statements
Perceived Susceptibility	I regularly check my cholesterol level. (Behavior)
	I exercise regularly to maintain a healthy body weight (<i>Behavior</i>)
	I purposefully maintain a heart-healthy diet (<i>Behavior</i>)
	I am aware of my family medical history (<i>Behavior</i>)
Perceived Severity	I make it a point to have my blood pressure checked on a regular basis (<i>Behavior</i>)
	I make it a point to take time for social activities. (<i>Behavior</i>)
	When in public places, I purposefully seek out nonsmoking areas (<i>Behavior</i>)
Perceived Benefits	Knowing my cholesterol level will help me maintain my overall health. (attitude)
	I believe that eating what I want at times will affect my overall health. (<i>attitude</i>)
Perceived Barriers	It is not that important to always know my blood pressure level (<i>attitude</i>)
	I feel that knowing my family history will not help me maintain my overall health (<i>Attitude</i>)
	I feel that the need for exercise at my age is a bit overstated (<i>Attitude</i>)
	A little smoke in the air will not significantly affect my overall health (<i>Attitude</i>)
	Work-life balance is not that important to maintaining my overall health. (<i>Attitude</i>)

Nature of the Study

A quantitative study design was appropriate to answer the research questions, which required quantitative analysis to describe disease prevention attitudes and behaviors of retired, unmarried, male Baby Boomers. Eighty one participants provided data. The study had two dependent variables: disease prevention attitudes and disease prevention behaviors. The independent variables included SES and marital status.

Analysis of variance (ANOVA) was used to measure the mean differences in disease prevention attitudes among retired, never married, divorced, widowed, and separated, male Baby Boomers. In this analysis, the continuous dependent variable corresponded to disease prevention attitudes. The independent grouping variable corresponded to marital status. The ANOVA is an appropriate statistical analysis when the goal of the research is to determine significant differences in a continuous dependent variable between an independent grouping variable (Tabachnick & Fidell, 2012).

Multiple linear regression models were constructed to answer Questions 2 and 4 by examining the relationship between SES and disease prevention attitudes and behaviors. Question 3 dealt with the examination of the mean difference in disease prevention practices among the four groups based on marital status (never married, divorced, widowed, and separated). I examined significant differences in a continuous dependent variable and independent grouping variable. Question 4 assessed the effect of SES on disease prevention behaviors.

Definitions of Terms

The terms used in this study are defined below:

Attitude: An attitude is a belief, feeling, or behavior toward a person or event (Gerrig & Zimbardo, 2002; Harvey, 2013). For the study purpose, the disease prevention attitudes among retired, unmarried Baby Boomers were examined.

Baby Boomers: The name of the generation of people in the United States born during the Baby Boom era following World War II. The cohort was born between 1946 and 1964 (Hatfield, 2002). In this study, the target population was retired, unmarried (divorced, widowed, separated, or never married) male Baby Boomers living in Harlingen, Texas.

Baby Boomer marital status: The Baby Boomer marital status is classified into four broad categories including currently married, widowed, divorced, and separated (Kreider & Ellis, 2011). As used in this study, the term Baby Boomer marital status refers to the divorced, never married, separated, and widowed.

Behavior: Behavior is the actions by which an organism adjusts to its environment (Gerrig & Zimbardo, 2002). In this study, the retired, unmarried, male Boomer behavior towards disease prevention activities was examined.

Composite scores: The totals scores of Likert scale categories generated for both disease prevention attitudes and behaviors from an average of six survey items, each with responses ranging from 1=*strongly disagree* to 6=*strongly agree*.

Disease prevention: Disease prevention is a measure to reduce the occurrence of illness, such as through risk factor reduction, and also arrest disease progression and reduce its consequences once established (World Health Organization, 1984). The Baby

Boomers in this study provided self-perceptions of disease prevention activities and health care seeking behavior.

Divorced: Divorced refers to persons with terminated marriages through divorce by law or religious arrangement or separated from their spouse for a long duration without any possibility of reconciliation (Census Bureau, ACS Data Definitions). I considered all males who were legally separated from their wives as divorced.

Education level: The highest level of educational attained varies from some high school education to having a college degree (U.S. Department of Education: Center for Educational Statistics, 2012). For this study, all retired, unmarried, male Boomers who met the study criteria were deemed eligible, irrespective of their levels of education. Education was a predictive indicator for SES that was comprised of four levels: 0–9, 10–12, 13–16, and more than 16 years.

Health insurance coverage: Health insurance is a type of insurance policy that pays for medical and surgical expenses incurred by the insured. Health insurance can reimburse the insured for expenses incurred from illness or injury or pay the care provider directly (investopedia.com/terms). In the study, insured Boomers had Medicare, Medicaid, private insurance, or health insurance from the Department of Veteran's Affairs. Health insurance coverage was one of the socioeconomic indicators.

Home ownership: A real estate of which the legal titleholder to property or equitable owner pays tax (Kass, 2006). In this study, home ownership was a predictive indicator for SES, and any Boomer who stated that he paid taxes on his home was considered a homeowner.

Income: Income refers to the estimated gross, regular income before payments for personal income taxes, social security, union dues, and Medicare deductions (U.S. Census Bureau, 2000). Excluded were certain forms of unearned income such as capital gains, but home ownership was included (home ownership is a socioeconomic determinant of wealth). The two income brackets used to determine revenue for the study subjects included less than \$35,000 or more than \$35,000 per year.

Legal separation: This term refers to a court-sanctioned agreement for a husband and wife that detail their obligations while living apart (Dartmouth.edu, 2001). Legal separation in this study was classified as a man was separated from his wife and had not lived with his wife for the past 5 years.

Never married: The term never married applies to a person who was never legally married or to a person whose only marriage ended in an annulment (Census Bureau, 2000). In this study, never married applied to a Baby Boomer who had never legally married.

Participation: Participation is a social action of the person in a natural environment that provides evidence of how the person partakes in activities regarding disease prevention (Harvey, 2013). Participation in this study was the involvement of the Baby Boomers who agreed to respond to the survey questionnaire.

Perceived barriers: A person's estimation of the level of challenge of social, personal, environmental, and economic obstacles to a specified behavior (Glasgow, Gillette, & Toobert, 2001). Perceived barriers are disease prevention attitudes or

behaviors that might have impeded a retired, unmarried, male Baby Boomer from participating in disease prevention activities.

Perceived benefits: Perceived benefit refers to the perception of the positive consequences that are caused by a specific action. In behavioral medicine, the term perceived benefit is frequently used to explain an individual's motives of performing a behavior and adopting an intervention or treatment (Leung, 2013). In this study, the perceived benefits were disease prevention attitudes and behaviors that encouraged the subgroup to engage in disease prevention services.

Perceived severity: Perceived severity refers to any adverse outcomes or consequences that the individual experiences as a result of an event, such as a diagnosis of cancer (Miles et al., 2009). In this study, perceived severity was determined by the Baby Boomers' beliefs regarding the preventable condition, its seriousness, and its implications.

Perceived susceptibility: Perceived susceptibility, also called perceived vulnerability, refers to a person's perception of the risk or probability of contracting a disease or condition (Witte, 1992). In this study, perceived susceptibility referred to the Baby Boomer's belief that he is vulnerable to preventable diseases or conditions.

Race: The U.S. Census Bureau (2017) classified the population into five racial groups: White; Black; Native American, Eskimo or Aleut; Asian or Pacific Islander; and other. The race of an individual was self-identified in the questionnaire. In this study, all races that meet the research criteria were invited to participate.

Retired: Someone who does not work for compensation and receives income only from pensions, Social Security, and financial assets (Purcell, 2003). Recruited participants were all retired, unmarried, male Baby Boomers who are retired, semiretired, or had reinvented careers (most Baby Boomers do not completely retire).

Widowed: A widowed indicates people whose last marriage ended with the death of their spouse and they had not remarried. (Census bureau, 2000). For the purpose of this study, widowed referred to a retired Baby Boomer male whose wife had died.

Assumptions

A researcher's assumptions can affect the outcome of a study. It was assumed that I used formal logical reasoning to collect the survey data, to provide knowledge that is independent and accurate. Some assumptions in this study are as a result of the nature of the information gathered. The respondents were assumed to be a true representative sample of retired, unmarried, male Baby Boomers residing in Harlingen, Texas. The sample consisted of all eligible Boomers, and the study findings were generalizable to the target population. The sample responses were assumed to be forthcoming and honest as the sample identity was concealed, and confidentiality was preserved. The sample consisted of noncoerced volunteers who were at liberty to withdraw from the study at any given moment, without incurring penalties.

It was assumed that the responses from the all-male sample were accurate and not affected by the resentment of the survey design. Before enrollment, the participants were informed of the study objectives and the significance of a male-only sample. I assumed

that the research exclusion criteria did not ignore potential participants from the study, and all interested consenting retired, unmarried, male Boomers were recruited.

It was assumed that the information collected was impartial, regardless of the subjective decisions made throughout the various stages of the research process (Onwuegbuzie & Leech, 2005). The findings of this epistemological study were assumed to be generalizable to the target population of retired, unmarried, male Boomers in Harlingen, Texas (Gall, Gall, & Borg, 2007).

Scope and Delimitation

In this study, I described the attitudes and behaviors towards disease prevention among retired, unmarried, male Boomers in Harlingen, Texas. The convenience sampling methodology was applied, and these results are only generalizable to the retired, unmarried, male Boomers living in the city of Harlingen, Texas, maximizing external validity.

Limitations

The nature of the research design was associated with the survey limitations. Cross-sectional studies have the advantage of being less expensive and quick but have the disadvantage of not providing a difference between the cause and effect (Mann, 2003). The survey design captured one point in time or limited information that estimated the frequency of disease prevention attitudes and behaviors. The cross-sectional approach imposes a limitation, as a conclusion regarding the direction of the identified relationship between dependent and independent variable cannot be determined. Furthermore, inferences can only be made to the target population in Harlingen, Texas.

Significance of Study

The mission of public health is to improve health and promote the well-being of individuals, families, and communities through education, research, and service. It is important to understand their disease prevention attitudes and behaviors to improve the health status of the retired, unmarried, male Baby Boomer. In this study, I attempted to describe the attitudes and behaviors of the subgroup and further show the relationship between SES and illness prevention behavior. The findings have the potential to contribute to existing gaps in the literature regarding disease prevention attitudes and behaviors within the retired, unmarried, male, Boomer community.

The results of the research will deepen the understanding of disease prevention attitudes and behaviors of retired, unmarried, male Boomers in Harlingen, Texas. Further, the study results provide data to influence social change by way of development of policies and programs that could increase the subgroup's participation in disease prevention activities. Finally, the research findings have the potential to improve involvement in disease prevention activities of the retired, unmarried, male Boomer within the United States, and ultimately affect social change through enhanced disease prevention.

Summary

Men continue to lag behind women in life expectancy and health care use. Researchers showed an increase in obesity prevalence, from 1999 to 2008, among men age 60 and older (Flegal et al., 2010). Obesity among those age 60 and over is a risk factor for chronic diseases that lead to ill health during old years. Unmarried, male

Boomers are reported to be highly educated, but little evidence exists on their disease prevention attitudes and practices. Comprehending how disease prevention attitudes and practices affect the health of retired unmarried men could be a significant step in developing initiatives that will promote preventive health approaches among the subgroup. Optimistic disease prevention attitudes and behaviors are important in reducing preventable conditions during the elderly years. Preventive medicine provides significant benefits to all persons of all ages; however, these advantages are not realized among the elderly (Takahashi, Okhravi, Lim, & Kasten, 2004). Participation in disease prevention activities has the potential to improve the health of the retired, unmarried, male Boomer.

In this chapter, I introduced the study of disease prevention attitudes and behavior among retired, unmarried, male Boomers. The section included the purpose of the survey, the research questions and hypotheses, study limitations, definitions of terms, and a summary. In Chapter 2, I present disease prevention activities within the elderly population. The HBM theoretical framework is used to examine disease prevention attitudes and behaviors. In Chapter 3, I discuss the quantitative research methodology, research design, study sample, data analysis, measurement tools, and ethical considerations. In Chapter 4, I address the data analysis, data findings, and presentation of tables. Chapter 5 includes a discussion of the interpretation of results, the implications for social change, recommendations, a summary, and the conclusions.

Chapter 2: Literature Review

Introduction

The purpose of this quantitative study was to investigate disease prevention attitudes and behaviors among retired, unmarried, male Baby Boomers. Unmarried Boomers suffer from health susceptibilities as a result of few financial resources and isolation (Durkheim, 2006; Lin et al., 2012). Unmarried Boomers differ with regards to family structure and living arrangements compared to previous generations (Lin et al., 2012). These differences could have a direct effect on the health outcomes of retired, unmarried, male Baby Boomers.

Despite disease vulnerability, older people are less likely to be selected to participate in clinical trials (Herera et al., 2010). According to the European Commission (2014), senior citizens do not qualify for research because of ethical issues, difficulties of inclusion, and more requirement for follow-up monitoring. In the United States, two-thirds of cancer patients are older than 65, and only 25% participate in the cancer trials (Lewis et al., 2003). The participation of older adults in arthritis and cardiovascular disease clinical trials are low (Dhruva et al., 2008; Elley et al., 2007). The lack of elderly participation and makes it imperative to understand the disease prevention attitudes and behaviors of this subgroup of Baby Boomers.

In this literature review, theoretical foundation, demographic Implication, socioeconomic factors, the interaction of education and health, the impact of retirement on health, Baby Boomers' health trends, and disease prevention were examined.

Role of Adult Children and Spouse

Most adult children usually become the primary source of support and caregivers for their elderly parents (Atchley & Barusch, 2004; NIA, NIH, 2007). In some cases, a stronger partner may provide caregiver assistance to the elderly spouse. Both adult children and spouses take responsibility for managing mental and physical health and advocating for the elderly. This act enables the senior citizen to remain in the home and community (Byrne et al., 2009). The elderly with no family support require more health care and social services from public and nonprofit agencies, compared to those with children (Plotnick, 2006). Brown and Lin (2013) showed that adult children are more eager to care for a divorced or widowed mother than they are to care for a divorced or widowed father.

Men's Attitudes and Behaviors Towards Disease Prevention

Comprehending participation in disease prevention from a man's point of view might provide insights on why and how men use (or do not use) health services. Men ignore minor symptoms and only visit a physician once a medical condition becomes severe (Sanders-Thompson et al., 2009). Men suffer from diseases and die younger compared to women, who survive to old age even with disabling conditions (Crimmins et al., 2011). During routine physical examinations, men typically receive less advice on disease risk factors from physicians (Courtenay, 2000). The lack of integrating preventive health information into consults might result in the underuse of disease-prevention services among men.

Furthermore, only 24% of men are likely to visit a doctor within a year (AHRQ, 2011). This reduced number of visits to physicians could contribute to the absence of sufficient, preventive health participation. Comparison of Baby Boom caregivers versus noncaregivers show greater odds of the former engaging in negative health behaviors, including smoking cigarettes and consuming soda and fast food (Hoffman, Lee, & Mendez-Luck, 2012). These issues may put them at risk for disability and future chronic illnesses. Furthermore, society imposes the idea that men are strong and can handle many problems, which could influence men to keep health problems to themselves, delay in seeking medical care, and ignore minor symptoms. These traditional beliefs about masculinity could cause disconnection from the health care system, limiting the possibilities of addressing men's health needs promptly (Wade, 2009).

Literature Search Strategy

This quantitative study design was selected to describe the disease prevention attitudes and behaviors of the retired, unmarried, male Boomer. The strategy used to conduct the literature review entailed the examination of studies confined to a disease prevention attitude and behaviors among adult men. The available literature addressed disease prevention participation among the past older generation. The research lacked evidence regarding attitudes or behaviors towards disease prevention among the retired, unmarried, male Baby Boomers. The cohort started retirement in 2011, limiting the available research. I performed an extensive search of published literature related to disease prevention attitudes, behaviors, unmarried, male Boomers, Baby Boomers' marital status, retirement, and SES. The literature search included a review of published

research conducted from 2000 to 2015. I used the following keywords: *demographic implication, socioeconomic factors, interaction of education and health, implication of retirement on health, Baby Boomers' health trends, and disease prevention*. I reviewed databases and articles from the Walden University EBSCO, CINAHL, MEDLINE, and Google Scholar search engines.

Theoretical Foundation

In this research, the HBM constructs were applied to describe the disease prevention attitudes and behaviors of the retired, unmarried, male Baby Boomers. The HBM is a psychological theory developed in the early 1950s by U.S. Public Health Service social psychologists to understand the failure of people to participate in programs designed to prevent and detect tuberculosis (Hochbaum, 1958). The original aim of the theory was to encourage and screen the public to determine susceptibility to disease.

The HBM postulates that for behavior change to occur, a person must be threatened by illness and believe that engagement in healthy behavior is beneficial and results in a valued outcome at an acceptable cost (Rosenstock et al., 1988). This theory is relevant to this study because preventable diseases threaten the health of the retired, unmarried, male Boomer. A lack of participation in disease prevention activities could increase the risk for infectious and some chronic diseases among the subgroup. The subgroup may be willing to participate in preventive health, but SES may deter them.

In the study, Hypotheses 1 and 3 assume that there were no differences in attitudes and behaviors among retired, unmarried, male Boomers towards disease prevention. Therefore, to determine the mean difference in disease prevention attitudes

and behaviors, the HBM core concepts were applied to explore attitudes and behaviors in disease prevention. In assessing Hypotheses 2 and 4, the health belief concepts were used to measure the relationship between SES and illness prevention attitudes and behaviors.

The HBM has been reported to be a successful theory in determining health behavior in the promotion of disease studies. The model has been shown to be effective in preventive health service studies including the uptake of immunizations and medical treatment compliance (Janz et al., 1984; Rosenstock, 1974). The model has been applied in prevention research including condom use, seat-belt use, medical compliance, and health screening. In studies, the model proved to be a valid and reliable tool for measuring variables and exploring the relationship between the variables (Champion, 1984). Susceptibility, severity, benefits, and barriers are significant predictors of health-related behaviors (Sheeran & Abraham, 1996).

Janz and Becker (1984) reviewed 46 HBM studies conducted from 1970 to 1984. The studies consisted of 18 prospective and 28 retrospective preventive health and sick role behaviors studies. The Janz and Becker concluded that HBM concepts were valuable predictors of health behaviors. Perceived barriers were the most powerful predictors of preventive health behavior, while perceived severity was the least prevailing predictor. Perceived susceptibility and perceived benefits were crucial in predicting health protective behaviors. Nevertheless, perceived susceptibility was the strongest predictor of preventive health behavior.

The relationships of the HBM constructs facilitate the measure of health behavior outcomes after use of a valid and reliable scale (Champion, Skinner, & Menon, 2005). In

this study, I did not find any mean difference in disease prevention attitudes and behaviors among the retired, unmarried, male Boomers. Also, there was no significant relationship between SES and disease prevention perception. I did show that there was a statistically significant association between SES and disease prevention behaviors that did not infer causality. Boomers' levels of knowledge regarding disease prevention was not examined.

Demographic Implications

The U.S. Baby Boom was a period of high fertility rates that lasted from 1946 through 1964, and 76 million children were born (Population Reference Bureau, 2014). Out of these 76 million Baby Boomers, 33% are unmarried (Hunter, 2014; Lin et al., 2012). The unmarried Boomers' males consist of divorced, never married, widowed, and separated. Among the unmarried Boomers, the widowed subgroup has decreased as a result of longer life expectancies, while the divorced subgroup has increased as a result of higher divorce rates (Lin et al., 2012). Researchers show an increase in the number of males, ages 65 and older, compared to women in the same age group (U.S. Census Bureau, 2010). The increase could be as a result of greater lifespans. The average life expectancy of men, age 65, is 17.8 years, compared to 19.2 years for females (Administration Aging, 2014). The life expectancy gap between females and males might be closing.

Socioeconomic Factors

Marital Status

Baby Boomers were born during a period of improved social prosperity and higher earnings in the United States. The economic expansion influenced families to migrate to towns and cities (Jones, 1980; Kallis-Weber & Mockus, 2010; Owram, 1997). Furthermore, the dynamics altered the cohort's life course, leading to the growth of different sexualities, families, and gender viewpoints. In the 1970s, the sexual revolution increased divorce rates among the cohort (Stevenson & Wolfers, 2007). Moreover, career opportunities and a lack of pressure to marry enticed women to remain single and to pursue careers, unlike the women of the previous generation.

The deficiency in marriage came with the growth of single parent families, cohabitation, nonmarital childbearing, and a surge in divorce (Cherlin, 2010). Alongside this was the variations in age at first marriage, which resulted in increased divorce rates among Baby Boomers (Goldstein & Kenny, 2001; Meyer, Wolf, & Himes, 2005). Baby Boomers married later in life after finishing school and having cohabitated with one or more partners (Schwartz, 2013). A lack of marriage increased single household families. In 2011, there were 12 million nonfamily households maintained by individuals age 65 and older (Vespa, Lewis, & Kreider, 2013).

Wealth

Baby Boomers are retiring with reduced economic resources, fewer assets, and a high debt ratio compared to the previous generation (PEW Research Center, 2013). The Boomers prefer personal savings and housing equity as means of retirement savings,

unlike the previous generation who invested in pension funds. The previous generation retreated into retirement in the 1980s when the interest rates were 18%, compared to less than 1%, a year before the Boomers entered retirement (Whitby, 2010). Furthermore, the collapse of the housing market resulted in the stock market drop that destroyed much of the cohorts' wealth (Rosnick & Baker, 2010). Smith et al (2003) estimated that 2% of Baby Boomers will live in poverty, and 5% will live in near poverty by 2030.

Furthermore, there is a notable income difference between the unmarried and married, even without the effect of inflation. In 2009, the average annual household income for unmarried Baby Boomers was \$57,000 versus \$106,000 for the married (Lin et al., 2012). The unmarried individuals' income was 50% less than the married when the poverty rate was almost five times higher (Lin et al., 2012; Wacker & Roberto, 2013). Income gains for higher income retirees were larger than for low socioeconomic groups (Butrica et al., 2012).

Interaction Between Educational Attainment and Health

Educational attainment among Baby Boomers varies by race and ethnicity. One-tenth of the Boomers are high school dropouts, and 4% have less than a ninth grade education (Ekerdt, 2002). Caucasian Boomers are more than twice as likely as Black Boomers to have a college degree (Whitbourne & Willis, 2014). Similarly, educational attainment among unmarried Boomers differs, with the never married possessing higher education levels than the widowed (Barrett, 1999). Education provides a person with knowledge and life skills that will permit access to health information and resources. Well-educated people report lower morbidity from the most common acute and chronic

diseases (Cutler & Lleras-Muney, 2006). The relationship between education and health is complex as a disease could lead to lower levels of education or vice versa (Bloom, 2007). However, people with higher levels of education are reported to be in control of their lives, a reason that encourages healthy behavior (Pampel et al., 2010).

Although health and education are positively correlated, men holding blue collar jobs were more likely to seek preventive health care than those in higher status occupations (O'Brien, Hunt, & Hart 2005; Springer & Mouzon 2011). The rate of smoking among the highly educated was one-third that of people with less education (Mokdad et al., 2004). People with higher education tend to have healthier behaviors as a result of access to opportunities that improve health and provide access to health care. Although Boomers are reported to have high education levels, the few economic resources and social isolation could influence health outcomes of the unmarried male Boomers (Lin et al., 2012).

Health Education

According to the National Assessment of Adult Literacy, 36% of people in the United States have limited health literacy skills, functioning at a basic or below basic level (as cited in Kutner et al., 2006). People with inadequate health literacy are mostly older, non-White, with low education levels, and low annual incomes. Moreover, health literacy is low among older age groups, once mental status exam scores, visual acuity, and health status are controlled for (Baker et al., 2007).

Retired, unmarried, male Boomers with lower reading skills may lack the capacity to understand or evaluate informed health care choices. The elderly with low levels of

health education make limited use of preventive services (Baker et al., 2007). There is an association between low health literacy skills, fewer healthy choices, riskier behaviors, poorer health, and additional hospitalizations (IOM, 2004). The retired, unmarried, male Boomer, to participate in disease prevention activities, has to possess adequate health education that will enable him to accurately time preventive activities, such as immunizations, screening, and annual physical exams.

Implications of Retirement on Health

The Baby Boomer cohort is departing from the workforce, possessing nontraditional retirement values. Boomers are reluctant to retire (Harter & Agrawal, 2014), and those already in retirement might present challenges or opportunities for health care professionals. There is a possibility that the retired, unmarried, male Boomers could increase the incidence of diseases and demand for health care resources. On the contrary, these well-educated retiring Boomers might bring demands for better health attention among the elderly (LeRouge et al., 2014). There is a possibility that these well-educated Boomers might require new technologies and better health care methods that could improve the progress of patient care in the elderly (Barr, 2014).

Boomers are delaying retirement for various reasons including maintaining a consistent income, retaining a sense of identity, and lacking adequate savings (Barnes, 2010). Boomers are unlike the past generation who retired at age 65 and spent time with family and a social network. The decision of Boomers to work past the age of 65 could revolutionize retirement and offer Boomers a chance to socialize, keep active, and provide health insurance. According to Moon et al. (2012), retirement is a social factor

that contributes to an elevated risk for cardiovascular disease. Hence, remaining in the workforce might have positive health implications for Boomers. On the contrary, Boomers already in ill health might be unable to work past the traditional retirement age.

Baby Boomers Health Trends

Significant advances in medicine and technology have led to an extended life expectancy among Baby Boomers (Barasaba, 2017). Nevertheless, research findings suggest inconsistencies in the cohort's health outcomes. Some reports propose that Baby Boomers are the healthiest and most active generation while other research evidence shows that boomers are in worse overall health than their parents (King et al., 2013). The cohort-reduced health is a result of poor lifestyle choices that include inadequate nutrition, physical inactivity, and stress (Trust for America's Health, 2012).

Boomers in the United States are suffering from more chronic disease and disability than the past generation at the same age (King et al., 2013). According to Leveille et al. (2005), boomers develop obesity at earlier ages compared to their predecessors. Obesity is linked to arthritis, which causes disability and function limitations (Crowson et al., 2013; Houston et al., 2009; Leville et al., 2005). Also, obesity is associated with several chronic conditions including diabetes, hypertension, various heart diseases, and some cancers (Ahima & Lazar, 2013; Artham et al., 2009). Any increase in obesity incidence among the retired, unmarried, male boomers could surge the levels of disability and function limitations. Disability and function limitation might limit the unmarried male boomer from engaging in disease prevention activities.

Involvement in disease prevention is necessary for the reduction of infectious and some chronic illnesses, and to maintain and support the health of the unmarried male boomers. Study findings suggest that preventive disease activities should center on reducing obesity among boomers (Buckley et al., 2013). Likewise, projections show obesity rates among Baby Boomers could increase, with one-third of the cohort being obese by 2030 (American Hospital Association, 2007). These findings suggest that being overweight or obese may potentially prevent the retired, unmarried, male boomers from experiencing healthy aging. The unmarried, male, boomer already suffers from socioeconomic drawbacks that affect his health. Therefore, it is imperative to describe the boomers' disease prevention attitudes and behaviors, so as to develop approaches that can improve health during retirement years.

Disease Prevention

Disease prevention and health promotion services are effective in preventing infectious and chronic illnesses. Disease preventive services decrease health risks and deter or postpone the onset of chronic conditions (Maciosek, 2010). Similarly, disease prevention activities, complemented by health promotion could maintain and support the health of the retired, unmarried male boomer. Disease prevention services remain underutilized among the adult population.

One in five Americans, age 50 to 64, by the year 2015, was overdue for the recommended disease prevention services (Smolka et al., 2012). The aging Baby Boomer entered retirement when the country is facing an increase in chronic diseases and lack of geriatric professionals (Pacala, 2012). To maintain the health of the baby boomer the

health organization needs to boost health screenings and vaccinations for adults. The oversight might have led to the absence of disease prevention evidence among the retired, unmarried, male boomers. Many of the aging unmarried boomers are suffering from chronic conditions that could be reduced by disease prevention services (CDC, 2009a).

The purpose of this study was to describe and quantify the disease prevention attitudes and behaviors of the retired, unmarried male boomer. The findings could assist policymakers, public health officials and health educators lay the groundwork to improve disease preventive services among the retired, unmarried, male boomers.

Summary

In this literature review, existing research on retired, unmarried male boomers' attitudes and behaviors towards disease prevention was evaluated. Disease prevention and health promotion among the elderly can improve health, well-being and the quality of life. The existing evidence on disease preventive attitudes and behaviors among this subgroup is limited. Earlier studies combined unmarried male and female boomers, despite differences among and between the two groups. In describing the attitudes and behaviors of each subset of the unmarried men, the study findings will lessen the existing knowledge gap. The research results could provide healthcare providers and policymakers with the data needed to address the disease prevention challenges faced by the retired, unmarried, male Baby Boomers in Harlingen, Texas. Similarly, the findings may provide health educators with evidence with which to engage the subgroup in efforts to promote participation in preventive health. Chapter 3 of this study includes the

methodology, design and rationale, sample and sampling procedures, data collection and data analysis methods, the threats to validity, and ethical systems.

Chapter 3: Research Method

Introduction

The objective of this quantitative study was to describe the attitudes and behaviors towards disease prevention of the retired, unmarried, male Baby Boomer. I used a cross-sectional design to collect data from the target population. Another objective of the study was to examine the relationship between SES and the disease prevention attitudes and behaviors of the target population. A quantitative approach provides the best opportunity to test an existing theory by examining the relationship between variables in the context of that theory (Creswell, 2009).

Research Design and Rationale

The study was a descriptive correlational design that used a cross-sectional method via a survey instrument to describe disease prevention attitudes and behaviors among retired, unmarried, male Boomers. The methodology and design were chosen based on the research questions and hypotheses that could define the attitudes and behaviors of the target population. The independent variable was SES, and the dependent variables were attitudes and behaviors. Each dependent variable was tested versus SES to determine if a relationship existed. Moderation analysis was performed to determine if Baby Boomer marital status affected the relationship between SES and disease prevention behavior. Data collection took place at a single time-point, during the Texan Expo in Harlingen: The cross-sectional design is best suited for studies that take place at one point in time.

Moreover, cross-sectional studies are usually affordable and are suitable for studies with limited funding, such as this one. This study design provides quantitative answers to the research questions. There was not a follow-up survey. The study was conducted at one point in time, and it lasted until the required data had been collected and validated by me. The participants completed a paper questionnaire, and the survey comprised of a closed-ended questionnaire consisting of sociodemographic information and disease prevention attitudes and behaviors information.

Methodology

The study was a cross-sectional survey, and data were collected from a sample of retired, unmarried, male Baby Boomers living in Harlingen, Texas. The survey instrument was a standardized, structured questionnaire. The participants were guaranteed anonymity and privacy, and procedures were in place to stop data from getting compromised. The anonymity of participants has been shown to lead to more accurate responses (Whelan, 2007).

The occurrences of interest were attitudes and behaviors of the retired, unmarried, male Boomer towards disease prevention. The study hypotheses stated that there were no differences in disease prevention attitudes and behaviors among retired, divorced, never married, separated, and widowed male Baby Boomers. The second supposition was that there was no relationship between SES and disease prevention attitudes and behaviors. The data collected consisted of information on demographic, SES, disease prevention attitudes, and behaviors of the sample.

Population

According to the U.S. Census Bureau (2013), the total population of Harlingen was 64,849 (31,005 males and 33,844 women). The Harlingen Baby Boomer population, ages 50-69, was 5,649 (US Census Bureau, 2014). The number of males ages 15 years and over consisted of 7,530 never married, 608 separated, 728 widowed, and 1,967 divorced (U.S. Census Bureau, 2008-2012 American Community Survey, 2015). The defined study population consisted of all available retired, unmarried, male Baby Boomers residing in Harlingen, Texas. I recruited all Baby Boomers whom made contact with me and freely chose to participate in the survey.

Sampling and Sampling Procedure

A volunteer convenience sampling strategy was used to recruit 81 retired, unmarried, male Baby Boomers attending the Texas Expo in Harlingen. There was a lack of disease prevention attitudes and behaviors studies among the retired, unmarried, male Baby Boomers. This absence of evidence was the reason the retired, unmarried men were selected as the target population. The sampling process that involves volunteers does not incur the cost or time compared to a random sample (StatPac, 2007). A volunteer convenience sampling method was selected for this study because retired, unmarried men were available and willing to volunteer (Blumenthal & DiClemente, 2004).

Volunteer convenience sampling was chosen over a random sampling method because it was less expensive and less time consuming. A volunteer convenience sample enabled me to recruit a sufficient sample that provided the description of the disease

prevention attitudes and behaviors. A convenience method is a type of purposeful sampling that is valuable in providing the general idea of the phenomenon of interest.

Examples of purposeful sampling include a typical case, maximum variation, convenience, and snowball or chain sampling (Patton, 1990). Convenience sampling permits the investigator to operate within a specified period and under certain conditions that facilitate data collection. However, the method may sacrifice generalization of the study findings and might not provide a sufficient representative sample. Nevertheless, the convenience sampling method has the advantage of saving time, as participants are readily available (Merriam, 1998). Therefore, despite its deficiencies, convenience sampling was the best method of obtaining this study sample as a result of time and cost limitation.

Sampling Method

I collected data on disease prevention attitudes and behaviors. I explained the study objectives and procedures to the participants. The target population was not listed, so the convenience sampling technique was a better method of recruiting the sample. The retired, unmarried, male Baby Boomer was invited to participate, and those who responded to the research advertisements were contacted with an explanation of the study objectives and procedures.

I informed potential subjects of the survey date and venue. Informed consent that described the study design, the risks, and the benefits were provided to all eligible subjects. The participants were given the opportunity to ask questions before completing the questionnaire. The participants were informed that only fully completed surveys

would be accepted. The participants who did not want to answer all the issues were told they could choose to discontinue completing the questionnaire at any time.

The number of observations needed to make inferences to the target population was calculated using the G-power 3.1.2 linear multiple regression. A sample of 75 was needed; so all retired, unmarried, male Boomers who met the study criteria and provided verbal consent were recruited. Recruited participants included retired, unmarried, male Baby Boomers to limit the scope of the research and reduce the impact of confounding variables. The convenience sampling method could lead to underrepresentation if the number of retired, unmarried, male Boomers attending the Texan EXPO was unusual. A small sample could limit representation and, thereby undermine the ability to make a generalization to the target population.

Sampling Frame (Inclusion and Exclusion Criteria)

The sampling structure was designed to capture retired, unmarried, male Baby Boomers. The sample consisted of all available, approachable, and willing retired, unmarried, male Boomers residing in Harlingen, Texas. The following criteria were used to select the sample: retired, men, born between 1946 and 1964, and were divorced, widowed, never married, or separated and not living with a spouse. Retirement status was quantified as follows: semiretired, fully retired, reinvented second career, volunteer, or receiving a partial part time wage. Retired, unmarried, male Baby Boomers cohabiting with a significant other, unmarried men residing in assisted living or nursing homes, married males, and females were excluded. According to power analysis calculation, a sample of 100 was needed to yield a total of 74 respondents.

Power Analysis

The G-power 3.1.2 linear multiple regression, fixed model, and the single regression coefficient was used to determine the sample size (Faul, Erdfelder, Buchner, & Lang, 2009). The alpha level, the power, the number of predictors and the effect size were used to compute the required sample size. The statistical strength of the multiple linear regression analysis is a one-tailed test using a maximum of six predictor variables, with a β of .95, and α (corrected for multiple comparisons) of .03. A small effect size of .15 was added to compensate for the variation in the magnitude of effects observed and to capture any small, potentially meaningful relationships. The analysis yielded a sample size of 74 participants as the number of Baby Boomers required for the study.

Procedures for Recruitment, Participation, and Data Collection

Flyers, word of mouth, bulletin boards, and church announcements were used to inform the target population of the research study. The study fliers were posted in the following church bulletins: First Baptist Church, Saint Anthony Catholic Church, and First Methodist Church of Harlingen. The advertisements provided my name and address, the purpose of the study, the eligibility criteria, compensation, the location of the study, and contact information. The text included in the advertisement is an attachment to the IRB application.

I selected a sample population based on availability, my judgment, and the research criteria. The respondents were a representative sample of the target population. The participants acknowledged the informed consent (Appendix B), which described the reasons for and the importance of the study. Also, in the informed consent, I explained

the anticipated discomfort, which was not greater than routine physical or psychological discomfort experienced during daily activities. The informed consent included information on data collection procedures and the assurance of anonymity, privacy, and voluntary participation. The data collected included disease prevention attitudes and behaviors and sociodemographic characteristics.

Data Collection

The participants provided the primary data by completing a standardized questionnaire. The study questionnaire was an instrument that required each participant to respond to the same set of questions in a predetermined order. The structured instrument was used to collect objective and unbiased information from the sample while offering flexibility to me.

All eligible subjects gave a verbal informed consent and promised to complete all the questions. The respondents were informed of the right to terminate completion of the questionnaire at any point without being penalized. After participants had completed the survey, I thanked them for their participation. The participants did not get compensation; they could, however, view the study findings at a later date should they so desire. The study did not require a follow-up visit.

Instrumentation and Operationalization of Constructs

Instrumentation

The validity of an instrument is its ability to measure what it is supposed to measure, and its reliability is its ability to produce the same results when used more than one time (Trochim & Donnelly, 2008). The instrument used to describe disease

prevention attitudes and behaviors was a revised questionnaire (Appendix A). The original survey was from a study by McFall, Nonneman, Rogers, and Mukerji (2009). For this research, a statistician and I revised the questions. The revised instrument contained 21 questions and took approximately 10 minutes to complete. Questions 1 to 7 addressed sociodemographic information; in Section 1, attitudes towards disease prevention were measured after obtaining responses from seven attitude questions. Part 2 disease prevention behaviors were measured from responses obtained from the seven behavioral questions.

The questions and instructions were written in American English at a sixth grade level to help the respondents comprehend the content. The survey included the ordered psychometric 6-point Likert scale from which the respondents chose one option. The range consisted of an even number of positive and negative options (three positives and three negatives). The participants indicated the degree of agreement with the survey items. The ordered scale allowed the respondents to choose one option that best aligned with their disease prevention attitudes and behaviors. Numerical values anchor the options, and the degree of scaling is an interval. The psychometric properties of attitudes and behaviors toward disease prevention are valid where the internal consistency of the items generated is $\alpha = .66$.

Operationalization of Variables

The variables specified in this study were disease prevention attitudes and behaviors (dependent variables) and marital status and SES (independent variables). These nonexperimental variables regulate the statistical tests and are defined as follows:

Baby Boomer Marital Status

Baby Boomers are males born between 1946 and 1964 in the United States (Investopedia.com). Operationalization of the Baby Boomer marital status defined the four categories of unmarried male Boomers: divorced, never married, separated, or widowed. The unmarried, male Baby Boomer marital status variable is a simple measure with no natural order. The unmarried, male Baby Boomer marital status categories were meaningful, and the assigned numeric values are for coding purposes. The effect of marital status on the relationship between SES and disease prevention behavior was assessed.

Attitude

The definition of the attitude concept is the favorable or unfavorable evaluative reaction towards disease prevention (Rao, 2010). Disease prevention attitudes were calculated to provide the mean differences among the four categories of retired, unmarried, male Baby Boomers. The categories are ranked. However, the levels have no value in them.

Behavior

The definition of behavior was the reaction (participation or intent to participate) to disease prevention services. Disease prevention behaviors were calculated to provide the mean differences among the retired, unmarried, male Baby Boomers. The categories are ranked, but the levels have no value in them.

Socioeconomic Status

SES is the social standing or class of an individual or group (American Psychological Association, 2017). The measuring of a participant's SES takes into account income, education, health insurance status, and home ownership. The four predictive indicators provide a measure of unmarried, male Boomer SES. The four predictive indicators create the SES univariate measure. I examined the relationship between each predictive indicator and disease prevention attitudes and behaviors.

Socioeconomic Predictive Indicators

Income

Income was a predictive indicator of SES or the summation of all earnings provided by savings, Social Security, and other sources. Retired Boomers are eligible for Social Security income, and the amount paid varies. Income provides access to essential goods and services. Income inequalities constrain health-related choices by limiting access to activities that promote or protect physical health. I examined the extent to which variable incomes affect disease prevention attitudes and behaviors. The scaling of the variable individual income was at a nominal level, where 1=*low* (less than \$35,000) and 2=*high* (\$35,000 +).

Education

Education promotes and sustains healthy lifestyles and positive choices, supporting and nurturing human development and personal, family, and community well-being (Feinstein et al., 2006). Education is a determining factor of health and can address health behaviors, risky situations, and preventative services (Nutbeam, 2000). Education

can increase uptake of preventative care leading to long run health care savings; but, education has also been associated with alcohol and drug use (Maggs et al., 2008). In this study, the level of education variable was identified as a predictive indicator of SES. The interval-level measure for education measures the actual number of formal schooling years. The survey determined the respondent's level of education by only asking the question and recording the response (Appendix A, Question 2). I stopped reviewing here due to time constraints.

Health Insurance Status

Retired Americans, age 65 and over, are eligible for Medicare health insurance. The insurance varies with regards to cost; for example, Part B holders are required to pay a monthly premium of over one hundred dollars. Health insurance will provide data on usage of disease prevention services based on whether the respondent has health insurance. Question 4 (Appendix A) is a dichotomous level of measure that determines possession of health insurance, where 1= Yes and 2= No. Response to the health insurance question is a predictive indicator that designates possession or lack of health insurance and further explores the type of health insurance (Medicare, Medicaid or Private: the level of measure is ordinal).

Home Ownership

Home ownership is an indicator of socioeconomic status, and its level of measure is dichotomous. In question 3 (Appendix A), the participant will either respond with a yes for owning a home or no for not owning one. Home ownership is a self-sufficient material wealth that accumulates over time and is a good measure of socioeconomic

status. Retirement is a period of reduced income, and wealth-related assets can be a significant source of revenue.

Table 2.

A List of Criterion and Predictor Variables with Level of Measurements

Dependent Variable	Independent Variable (SES Predictor Variables)	Level of Measurement
Attitude: Self-reported perception of disease prevention (Ordinal)	Income	Nominal
	Education	Interval
Behavior: Self-reported perception of disease prevention (Ordinal)	Health Insurance Status	Dichotomous
	Home Ownership	Dichotomous

Table 2 shows a list of predictive indicators and the level of measurement. Education, income, possession of health insurance, and home ownership are the predictive variables used to measure the independent variable socioeconomic status. The dependent variables are attitude and behavior.

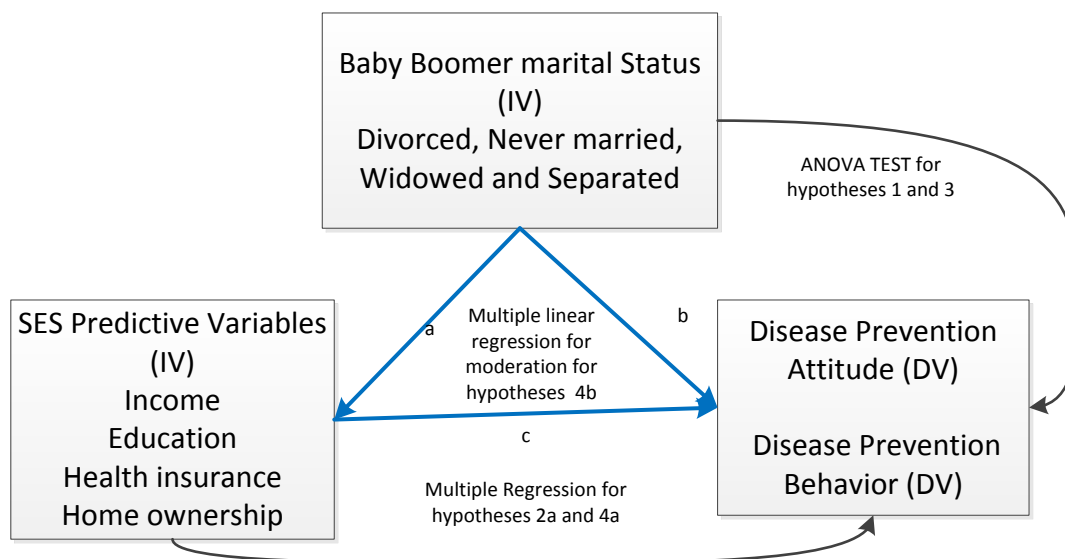


Figure 2. Operational Model.

The model parameter shows Hypotheses 1 and 3: ANOVA test that measured mean differences in disease prevention attitudes and behaviors among the four categories of retired, unmarried male Baby Boomers. Hypotheses 2a and 4a Multiple Regression tests examined the relationships between socioeconomic status, and attitudes and behaviors. Only significant relationship observed was between education and disease prevention behavior. Therefore, hypothesis 4b assessed the effect of Baby Boomer marital status on the relationship was examined.

Data Analysis Plan

The Statistical Package for the Social Sciences (SPSS) software program, Student Version 23.0 was used to analyze the data. Descriptive statistics described the frequency and percentages of demographics (education, home ownership, health insurance, marital status, income, and race). The analysis of variance (ANOVA) examined significant differences in disease prevention attitudes and behaviors between never married, divorced, separated, and widowed, male Baby Boomers. Multiple linear regression assessed the strength of the relationship between a set of predictors and a criterion variable (Tabachnick & Fidell, 2012).

Data Cleaning and Screening Procedures

Missing Data

SPSS (Statistical Package for the Social Sciences) was used to analyze participant responses and check for missing data. Depending on the nature and the cause of the missing data, the missing information was omitted from the study. Missing data may be classified as missing completely at random (MCAR), missing at random (MAR), or missing but not missing at random (NMAR). Data was screened to ensure its practicality, consistency, and validity before testing the research phenomena.

Outliers

A test for univariate outliers (extreme values on a single variable) was conducted to determine the uncertainty in the observations. The Z-score illustrated exactly where the case score was situated comparatively to the other scores in the normal distribution curve.

The Z-score assignment identified whether the evidence score was positioned above (positive), or below (negative) the mean. Case scores were converted into Z-scores and compared to the critical value of ± 3.29 ; $p < .001$ to identify outliers (Tabachnick & Fidell, 2007). Any unusual observations not contained between $Z = -2$ and $Z = +2$ (outside the observed norms) are removed from the mass of data. The dataset was checked for univariate outliers by assessing if there were standardized scores of the composite scores greater than 3.29 or less than -3.29 (Tabachnick & Fidell, 2012).

Research Questions and Hypotheses

The following research questions controlled the direction of the study:

Research Question One

Is there a difference in disease prevention attitudes among retired, divorced, never married, separated, and widowed, male Baby Boomers?

H01: There is no difference in attitude among retired, divorced, never married, separated, and widowed, male Baby Boomers toward disease prevention.

HAI: There is a difference in attitudes among retired, divorced, never married, separated, and widowed, male Baby Boomers toward disease prevention.

Research Question Two

Is there an association between socioeconomic status and attitudes toward disease prevention that is moderated by Baby Boomers' marital status?

H02a: There is no association between socioeconomic status and attitudes toward disease prevention.

HA2a: There is an association between socioeconomic status and attitudes toward disease prevention.

H02b: There is no association between socioeconomic status and disease prevention attitudes among the retired unmarried male Baby Boomers moderated by the baby boomer marital status.

HA2b: There is an association between socioeconomic status and disease prevention attitudes among the retired unmarried male Baby Boomers moderated by the baby boomer marital status.

Research Question Three

Is there a difference in disease prevention behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers?

H03: There is no difference in behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers toward disease prevention behavior.

HA3: There is a difference in behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers toward disease prevention behavior

Research Question Four

Is there an association between socioeconomic status and behaviors toward disease prevention?

H04a: There is no association between socioeconomic status and behaviors toward disease prevention.

HA4a: There is an association between socioeconomic status and behaviors toward disease prevention.

H04b: There is no association between socioeconomic status and disease prevention behaviors among the retired unmarried male Baby Boomers moderated by the baby boomer marital status.

HA4b: There is an association between socioeconomic status and disease prevention behaviors among retired, unmarried male Baby Boomers moderated by the Baby Boomer marital status.

Table 3.

Hypotheses with Related Methodological Components

Hypothesis	Dependent Variables	Independent Variables	Moderator Variables	Statistical Test	Research Questions
H ₀₁	Attitude: Self-reported perception (ordinal)	Unmarried Male Baby Boomer Marital Status (Nominal). Divorced, Never Married, Widowed, separated		ANOVA	1. Is there difference in attitudes among retired, divorced, never married, separated, and widowed male Baby Boomers towards disease preventive activities?
H _{02a} H02b	Attitude: Self-reported perception (ordinal)	Socioeconomic Status: Income (Nominal), Education (Interval), Health Insurance Status (Dichotomous), Home Ownership (Dichotomous)	Baby Boomer Marital Status	Multiple linear regression moderation regression	2. Is there an association between socioeconomic status and attitudes in relation to disease prevention moderated by Baby Boomers' marital status?

H ₀₃	Behavior: Self-reported perception (ordinal)	Unmarried Male Baby Boomer Marital Status (Nominal). Divorced, Never Married, Widowed, separated		ANOVA	3. Is there difference in behavior among retired, divorced, never married, separated, and widowed male Baby Boomers in relation to disease prevention?
H _{04a} H _{04b}	Behavior: Self-reported perception (ordinal)	Socioeconomic Status: Income (Nominal), Education (Interval), Health Insurance Status (Dichotomous), Home Ownership (Dichotomous)	Baby Boomer Marital Status	Multiple linear regression moderation Regression	4. Is there an association between socioeconomic status and behavior in relation to disease prevention moderated by Baby Boomers' marital status?

Table 4 shows hypotheses with related methodological components. Research questions two and four each contain two hypotheses. Multiple regression will test hypotheses 2a and 4a for relationships between socioeconomic status and attitudes and behaviors. Moderated multiple regression will test hypotheses 2b and 4b to assess the effect of Baby Boomer marital status (Moderator) on the both relationships.

Statistical Tests

Assumptions of ANOVA

Analysis of Variance (ANOVA), sometimes referred to as Fisher's ANOVA is a method developed by statistician and geneticist R.A. Fisher in the 1920s and 1930s (Lindman, 1974) to test the hypothesis of equality. Fisher's ANOVA uses the equation: $F = \text{Between Mean Squares} \div \text{Within Mean Squares}$. Analysis of variance (ANOVA) tested hypothesis 1 and 3 to display variances in disease prevention attitudes and behaviors. ANOVA is a robust analysis for violations of assumptions, and absence of normality or homogeneity of variance have little effect on a Type I error (Howell, 2010). Before

conducting the analysis, the assumptions of normality and homogeneity were assessed. The assumption of normality checked whether the data fitted a normal (bell-shaped) distribution and was evaluated using a Kolmogorov-Smirnov (KS) test.

Nonparametric Assumptions

Kruskal–Wallis test or one-way analysis of variance (ANOVA) that determined the statistically significant differences in disease prevention attitudes and behaviors (dependent variables) among the never married, divorced, widowed and separated male boomers (independent variable). The test also verified whether samples originated from the same distribution.

Moderated Multiple Regression

A multiple linear regression is an appropriate analysis when the goal of the research is to assess the strength of the relationship between a set of predictors and a criterion variable (Tabachnick & Fidell, 2012). Multiple linear regression analysis was used to test hypothesis two and four, to determine relationships between socioeconomic status and disease prevention attitudes and behaviors. One of the assumptions of the moderation analysis is that there exists a statistically significant relationship between the independent variables and the dependent variable, before including the moderator (Baron & Kenny, 1986). Before conducting the multiple regression tests, the normality of disease prevention attitudes and behaviors variables were assessed with a normal P-P Plot. Scatterplot was used to verify the assumption of homoscedasticity.

The socioeconomic factors for the analysis were education, home ownership, health insurance, and income level. The education variable had four possible categories

that were dummy coded before entry, with 10-12 years being treated as the reference group. If the multiple linear regression models were significant, then the moderating effect of Baby Boomers' marital status was examined further.

Variance Inflation Factors. measure how much the variance of the estimated regression coefficients is exaggerated as related to when the predictor variables are not linearly related. Any assumption of absence of multicollinearity was assessed with Variance Inflation Factors (VIFs), in which any value less than 10 indicated that there is no strong multicollinearity present in the data (Stevens, 2009). Homogeneity of variance, or the assumption of equal variances of the error terms, was assessed using a Levene's test.

Moderation analysis. One of the assumptions of the moderation analysis is that there exists a statistically significant relationship between the independent variables and the dependent variable, before including the moderator (Baron & Kenny, 1986). Before carrying out the analysis, marital status was dummy coded into a dichotomous variable with a reference being never married. The other value, previously married, contained participants who had been divorced, widowed or separated for more than five years. The interaction terms were created between each demographic factors and marital status.

Threats to Validity

Participants randomly volunteered so they met the criteria for the research study. This study consists of a single sample composed of retired, divorced, widowed, never-married, or separated boomers. Moreover, convenience sampling and data narrowness

allowed statistical inferences only to the target population. Participants provided a self-reported assessment regarding disease prevention attitudes and behaviors. The study design was appropriate for data collection, and the instrument tools were effective in measuring the data accurately.

Reliability

Cronbach's alpha tests of reliability and internal consistency were conducted on scales with one test per scale. Cronbach's alpha provides a mean correlation between each pair of items and the number of items in a scale (Brace, Kemp & Snelgar, 2012). The alpha values were interpreted using the guidelines suggested by George and Mallery (2010), where $\alpha > .9$ is excellent, $> .8$ is good, $> .7$ is acceptable, $> .6$ is questionable, $> .5$ is poor, and $< .5$ is unacceptable.

Ethical Procedures

Data from the sample was collected after research was approved by Walden University's Institutional Review Board (IRB). Respondents who accepted the survey invitation gave verbal informed consent before completing the questionnaire. The completed questionnaires were kept under lock and key. The researcher plans to store electronic and hard-copy data for a maximum of 5 years. After five years, all electronic and hard copy data will be destroyed to protect the identity of respondents and comply with Texas state laws that might be relevant to this study (privacy, protection of vulnerable populations such as the elderly).

Ethical considerations included the participants' right to anonymity, and no identifying information was collected. The participants experienced minimal risk.

Responses were coded numerically to prevent identification of respondents. The investigator honored all restrictions placed on the recruiting site (i.e., to recruit people outside the Texas Expo area, once the exhibition officials grant permission). The Texan Expo officials did not have access to the respondents' personal data.

Summary

This chapter summarized the study design, study setting, study population and sampling, data analysis and statistical procedures, and ethical considerations. Further, covers the testing of Hypothesis 1 that examines differences in attitudes toward disease prevention among the divorced, never-married, separated, or widowed, male Baby Boomers. Hypothesis 2 tested the relationship between socioeconomic status and attitudes. Hypothesis 3 examined the mean differences in disease prevention behaviors among the four Baby Boomer categories. Hypothesis 4 assessed the relationship between socioeconomic status and disease prevention behaviors, and later evaluated the effect of Baby Boomer marital status on the relationship. Chapter 4 presents the study findings and offers interpretations of statistical results.

Chapter 4: Results

Introduction

The purpose of this quantitative, correlational study was to describe the attitudes and behaviors of retired, unmarried, male Baby Boomers in relation to disease prevention. In the study findings, I did not reveal mean differences in disease prevention attitudes and behaviors among the retired, unmarried, male Boomers. Also, there was no relationship between SES and attitudes. A significant relationship was observed between SES and behaviors towards disease prevention. The positive relationship was between the level of education (SES indicator) and disease prevention behaviors. Further, I examined the moderating effect of marital status on the relationship between SES and disease prevention behaviors.

The participants completed a 21-question survey instrument that took approximately 10 minutes to complete. This survey was carried out on a single day during the Texas Expo. The study fliers were posted in the following church bulletins: First Baptist Church, Saint Anthony Catholic Church, and First Methodist Church of Harlingen. All Boomers who contacted me with questions had their questions answered. The respondents were provided with the study objectives, procedures, and the study location (Texas Expo). The participants did not experience physical or psychological issues during the interview. Two participants were distracted by their grandchildren, and they were asked if they would like to discontinue; one participant discontinued while the other continued with the process.

In this chapter, I will present the descriptive statistics of the data before conducting inferential analyses to address the research questions. After the appropriate statistical analyses, the relevant null or alternative hypothesis was accepted to answer the research questions. Statistical significance was evaluated at the conventional alpha level, $\alpha = .05$.

Preliminary Data Screening

I received 87 responses to the survey. Before conducting the analyses, the data were checked for missing cases, outliers, and unusual cases. I did not find any nonrandom missing data points. The dataset was checked for univariate outliers by assessing if there were standardized scores of the composite scores greater than 3.29 or less than -3.29 (Tabachnick & Fidell, 2012). No outliers were found in the dataset. The data were then checked for unusual cases, defined as values outside the observed norms, and identified as cases with standardized values greater than 2.00 or less than -2.00. I found two unusual cases in disease prevention attitudes and four rare cases in disease prevention behaviors. As the six unusual cases were removed, the final data set was comprised of 81 participants.

Descriptive Statistics

Of the 81 participants, 47 (58%) reported having completed 12 years of formal education. Most of the participants responded that they owned their home ($n = 46, 57\%$) and that they had health insurance ($n = 68, 84\%$). A little less than a third of the sample had never been married ($n=25, 31\%$), 43% were divorced ($n=35$), 17% were widowed ($n=14$), and 9% had been separated for more than 5 years ($n =7$). The majority of the

participants made more than \$35,000 in income ($n= 47, 58\%$). Most of the participants were White ($n=40, 49\%$). The frequencies and percentages of the demographic information are presented in Table 4.

Table 4

Frequencies and Percentages of Demographics

Demographic	<i>n</i>	%
Formal Education		
0-9 Years	4	5
10-12 Years	47	58
13-16 Years	15	19
More than 16 Years	15	19
Home Ownership		
Yes	46	57
No	35	43
Health Insurance		
Yes	68	84
No	13	16
Marital Status		
Never Married	25	31
Previously Married	56	69
Divorced	35	43
Widowed	14	17
Separated > 5 years	7	9
Income		
Less than 35,000	34	42
More than 35,000	47	58
Race		
White	40	49
African American	10	12
Hispanic/Latino	25	31
Asian	1	1
Native American	0	0
Two or more races	5	6

Note. Due to rounding error, not all percentages may sum to 100.

The responses for age ranged from 50-69 years, with a mean (M) of 60.57 years and a standard deviation (SD) of 5.56. Composite scores (Likert scale categories) were generated for both disease prevention attitudes and behaviors from an average of seven survey items, each with responses ranging from 1=*strongly disagree* to 6=*strongly agree*. Possible average scores ranged from 1.00 to 6.00. Higher mean scores indicated that the participant agreed with the survey items corresponding to each scale. The composite scores for disease prevention attitudes ranged from 1.86 to 5.00 with $M=3.32$ and $SD=0.75$. The composite scores for disease prevention behaviors ranged from 2.14 to 6.00 with $M=4.33$ and $SD=0.95$. Descriptive statistics of the continuous variables are presented in Table 5.

Table 5

Descriptive Statistics of Continuous Variables

Continuous Variables	<i>Min.</i>	<i>Max.</i>	<i>M</i>	<i>SD</i>
Age	50	69	60.57	5.56
Disease Prevention Attitudes	1.86	5.00	3.32	0.75
Disease Prevention Behaviors	2.14	6.00	4.33	0.95

Reliability

Cronbach's alpha tests of reliability and internal consistency were conducted on scales with one test per scale. Cronbach's alpha provides a mean correlation between each pair of items and the number of items in a scale (Brace, Kemp, & Snelgar, 2006). The

alpha values were interpreted using the guidelines suggested by George and Mallery (2010). The results for disease prevention attitudes ($\alpha=.57$) indicated poor reliability. As a result, further interpretations for this variable were made with caution. The results for disease prevention behaviors ($\alpha=.87$) indicated good reliability. Reliability statistics for the composite scores are presented in Table 6.

Table 6

Cronbach's Alpha Reliability Statistics for the Composite Scores

Scale	No. of Items	α
Disease Prevention Attitudes	7	.57
Disease Prevention Behaviors	7	.87

Disease Prevention Attitudes (RQ1–RQ3)**Research Question 1**

Is there a difference in disease prevention attitudes among retired, divorced, never married, separated, and widowed male Baby Boomers?

H_01 : There is no difference in attitude among retired, divorced, never married, separated, and widowed, male Baby Boomers in relation to disease prevention.

H_a1 : There is a difference in attitudes among retired, divorced, never married, separated, and widowed, male Baby Boomers towards disease prevention.

To assess Research Question 1, I used an ANOVA to analyze for significant differences in disease prevention attitudes between never married, divorced, separated,

and widowed, male Baby Boomers. An ANOVA is an appropriate statistical analysis when the goal of the research is to examine significant differences in a continuous dependent variable between an independent grouping variable (Tabachnick & Fidell, 2012). In this analysis, the continuous dependent variable corresponded to disease prevention attitudes. The independent grouping variable corresponded to marital status.

Assumptions of ANOVA. Before conducting the analysis, the assumptions of normality and homogeneity were assessed. The assumption of normality checked whether the data fitted a normal (bell-shaped) distribution and was assessed using a Kolmogorov-Smirnov (KS) test. As the data points did not deviate substantially from the regular line, the assumption was met. The results of the KS test did not indicate significance ($p=.200$); thus, the assumption of normality was met. Homogeneity of variance, or the assumption of equal variances of the error terms, was assessed using a Levene's test. The results of the Levene's test indicated significance ($p < .001$); thus, the assumption of equal variances was not met.

Results of ANOVA. The results of the ANOVA indicated that there were not significant mean differences in disease prevention attitudes scores by marital status, $F(3, 77) = 0.62, p=.607, \text{partial } \eta^2 = .023$. Therefore, the null hypothesis (H_0) cannot be rejected, and I concluded that there was not a significant difference in disease prevention attitudes among never married, divorced, separated, and widowed, male Baby Boomers. The results of the ANOVA are presented in Table 7.

Table 7

ANOVA for the Effects of Marital Status on Disease Prevention Attitudes

Variable	Never Married (<i>n</i> = 25)		Divorced (<i>n</i> = 35)		Widowed (<i>n</i> = 14)		Separated > 5 years (<i>n</i> = 7)		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Disease Prevention Attitudes	3.46	0.82	3.31	0.64	3.11	1.04	3.33	0.18	0.62	.607

Kruskal-Wallis results. As a result of the homogeneity of variance assumption not being met for the ANOVA, I conducted a nonparametric Kruskal-Wallis test due to its less restrictive assumptions. The results of the Kruskal-Wallis test did not indicate significance, $\chi^2(3) = 1.91$; $p = .591$. Thus, the findings of the ANOVA were further supported, and the null hypothesis (H_0) could not be rejected. The results of the Kruskal-Wallis test are presented in Table 8.

Table 8

Kruskal-Wallis Test for Differences in Disease Prevention Attitude by Marital Status

	Mean Ranks				$\chi^2(3)$	<i>p</i>
	Never Married	Divorced	Widowed	Separated > 5 years		
Disease Prevention Attitude	44.48	41.06	33.79	42.71	1.91	.591

Research Question Two

Is there an association between SES and attitudes toward disease prevention that is moderated by Baby Boomers' marital status?

H_02 : There is no association between SES and attitudes toward disease prevention that is moderated by Baby Boomers' marital status.

H_a2 : There is an association between SES and attitudes toward disease prevention that is moderated by Baby Boomers' marital status.

To assess Research Question 2, I proposed a linear regression with a moderation approach. A multiple linear regression was first conducted to assess the relationship between SES and attitudes toward disease progression. The socioeconomic factors for the analysis were education, home ownership, health insurance, and income level. The education variable had four possible categories and was dummy coded prior to entry, with 10-12 years being treated as the reference group. If the multiple linear regression model was significant, then the moderating effect of Baby Boomers' marital status was examined further.

Assumptions of multiple linear regression. Normality was assessed with a normal P-P plot, which indicated that the data were from the normal line (Figure 3). Thus, the assumption of normality was met. The assumption of homoscedasticity was checked via a scatterplot of the standardized residuals as a function of the normalized predicted values. As Figure 4 indicates, there were no strong deviations from a random, rectangular pattern; therefore, the assumption of homoscedasticity was met. The largest

value for a variance inflation factors (VIFs) in this model was 1.38, which is well below the limit; therefore, the assumption was met.

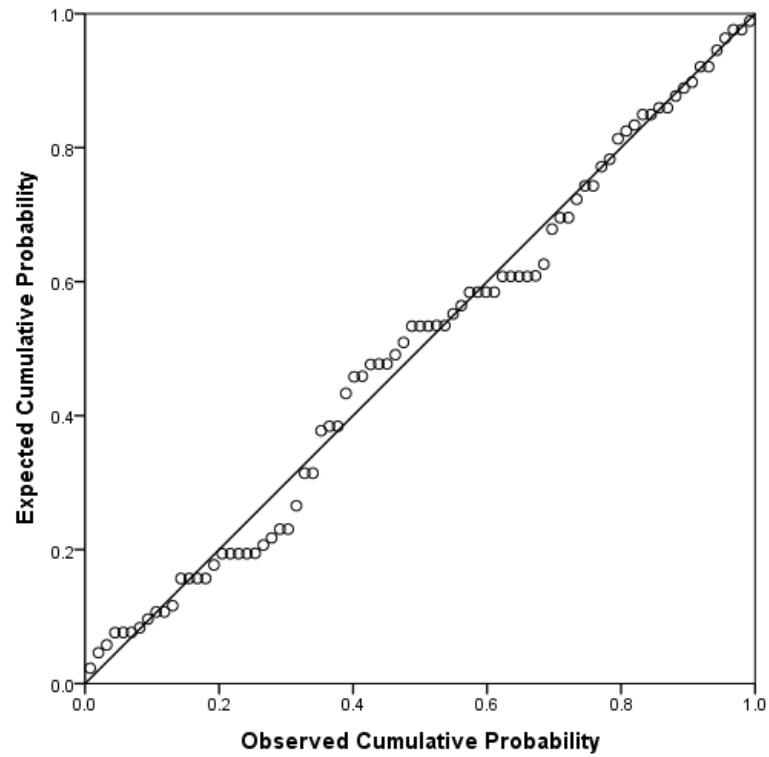


Figure 3. Normal P-P Plot for disease prevention attitudes.

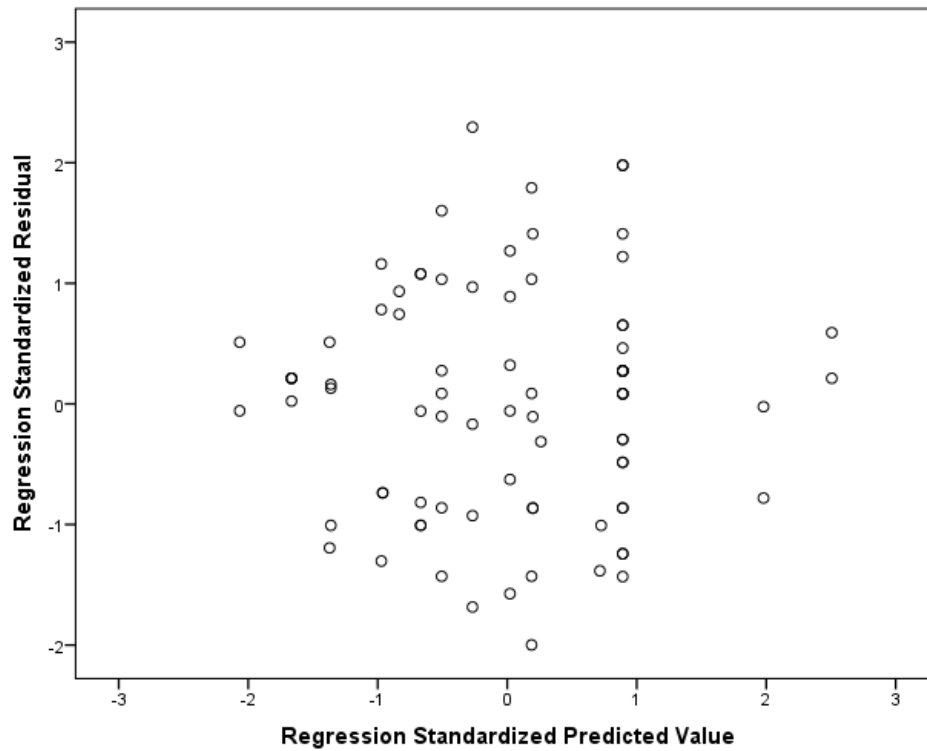


Figure 4. Scatterplot of standardized predicted values and standardized residuals for socioeconomic predictors and attitudes of disease prevention.

Results of multiple linear regression. As the assumptions were met, the multiple linear regression was conducted. I found that socioeconomic factors were not statistically significant predictors of disease prevention attitudes, $F(6, 74) = 0.99, p=.438, R^2=.07$. Due to the overall model not being significant, the individual predictors were not examined further. The results of the multiple linear regression are presented in Table 9.

Table 9

*Results for Multiple Linear Regression with Socioeconomic Predictors Predicting
Disease Prevention Attitudes*

Source	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Education (reference group: 10-12 years)					
Education (0-9 years)	0.51	0.42	.15	1.23	.222
Education (13-16 years)	-0.24	0.23	-.12	-1.06	.294
Education (more than 16 years)	-0.32	0.23	-.17	-1.41	.162
Home Ownership	-0.14	0.20	-.09	-0.72	.475
Health Insurance	0.11	0.25	.05	0.43	.666
Income	0.15	0.19	.10	0.75	.457

Note. $F(6, 74) = 0.99, p = .438, R^2 = .07$

Moderation analysis. As the results of the multiple linear regression indicated, there was not a statistically significant relationship between the socioeconomic predictors and disease prevention attitudes. Therefore, the moderation analysis could not be conducted, and the null hypothesis (H_{02}) was not rejected.

Disease Prevention Behaviors (RQ3 – RQ4)

Research Question 3

Is there a difference in disease prevention behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers?

H_{03} : There is no difference in behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers in relation to disease prevention behavior.

H_{a3} : There is a difference in behaviors among retired, divorced, never married, separated, and widowed, male Baby Boomers towards disease prevention behavior.

To assess Research Question 3, I proposed an ANOVA to examine for significant differences in disease prevention behaviors between divorced, never married, separated, and widowed, male Baby Boomers. The continuous dependent variable corresponded to disease prevention behaviors. The independent grouping variable corresponded to marital status.

Assumptions of ANOVA. Prior to conducting the analysis, the assumptions of normality and homogeneity were assessed. Results of the Kolmogorov-Smirnov (KS) test did not indicate significance ($p = .200$); thus, the assumption of normality was met. Homogeneity of variance, or the assumption of equal variances of the error terms, was assessed using Levene's test. The results of the Levene's test did not indicate significance ($p = .754$); thus, the assumption of equal variances was met.

Results of ANOVA. As the assumptions were met, the ANOVA was conducted, and the nonparametric Kruskal-Wallis test was not used for a follow-up analysis. The results of the ANOVA indicated that there were no significant mean differences in disease prevention behavior scores by marital status, $F(3, 77) = 1.21, p = .314$. Therefore, the null hypothesis (H_{03}) could not be rejected, and the researcher concluded that there were no significant differences in disease prevention behaviors between divorced, never

married, separated, and widowed, male Baby Boomers. The results of the ANOVA are presented in Table 10.

Table 10. *One-Way Analyses of Variance (ANOVA) for the Effects of Marital Status on Disease Prevention Behaviors*

Variable	Never Married (<i>n</i> = 25)		Divorced (<i>n</i> = 35)		Widowed (<i>n</i> = 14)		Separated > 5 years (<i>n</i> = 7)		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Disease Prevention Behaviors	4.46	0.88	4.40	0.94	4.28	1.06	3.71	1.05	1.21	.314

Research Question Four

Is there an association between socioeconomic status and behaviors toward disease prevention that is moderated by Baby Boomers' marital status?

H₀₄: There is no association between socioeconomic status and behaviors toward disease prevention that is moderated by Baby Boomers' marital status.

H_{A4}: There is an association between socioeconomic status and behaviors toward disease prevention that is moderated by Baby Boomers' marital status.

To assess research question four, the researcher proposed a linear regression with a moderation approach. A multiple linear regression was first conducted to assess the relationship between socioeconomic status factors and behaviors towards disease prevention. The socioeconomic factors for the analysis were education, home ownership,

health insurance, and income level. If the multiple linear regression model was significant, then the moderating effect of Baby Boomers' marital status was examined further.

Multiple linear regression. The socioeconomic factors for the analysis were education, home ownership, health insurance, and income level. Normality was checked with a normal P-P plot which indicated that there were no large deviations in the data from the normal line, so the assumption of normality was met (Figure 3). The assumption of homoscedasticity was checked via a scatterplot of the standardized residuals as a function of the standardized predicted values. As Figure 4 indicates, there were no strong deviations from a random, rectangular pattern so the assumption of homoscedasticity was met. The assumption of absence of multicollinearity was assessed with Variance Inflation Factors (VIFs), in which any value less than 10 indicates that there is not strong multicollinearity present in the data (Stevens, 2009). The largest value for a VIF in this model is 1.34, which is well below the limit, so the assumption was met.

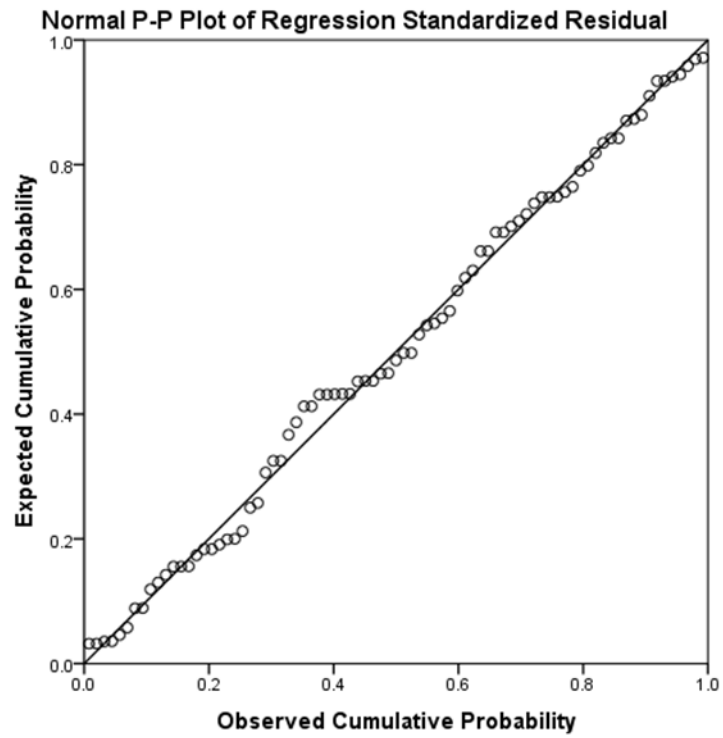


Figure 5. Normal P-P Plot between socioeconomic predictors and behaviors of disease prevention.

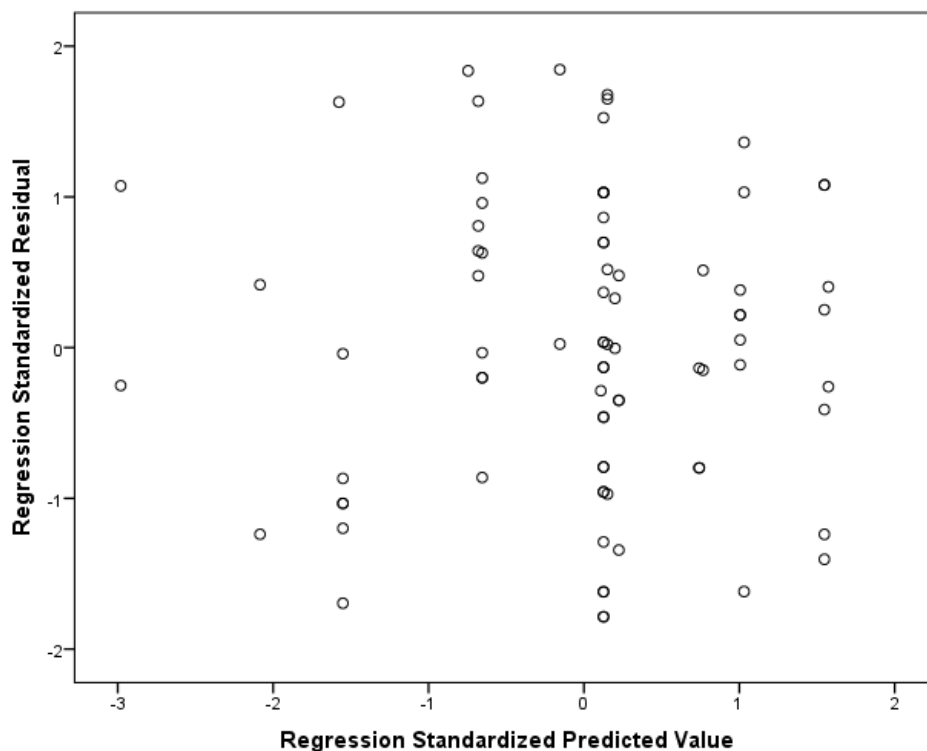


Figure 6. Scatterplot of standardized predicted values and standardized residuals for socioeconomic predictors and behaviors of disease prevention.

Results of multiple linear regression. The results of the multiple linear regression indicated that socioeconomic factors were statistically significant predictors of disease prevention behaviors, $F(4, 74) = 3.99, p = .002, R^2 = .24$. The coefficient of determination, $R^2 = .24$, indicates that approximately 24% of the variation in the dependent variable can be described by the independent variables. The only significant variable was education (16 or more years), $B = 0.67, t = 2.59, p = .002$. The regression coefficient, $B = 0.67$, suggests that participants who had more than 16 years of education experience scored on average 0.67 units greater than participants who had 10-12 years of education experience. The results of the analysis are presented in Table 11.

Table 11. Results for Multiple Linear Regression with Socioeconomic Predictors

Predicting Disease Prevention Behavior

Source	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Education (reference group: 10-12 years)					
Education (0-9 years)	-0.68	0.48	-.15	-1.42	.160
Education (13-16 years)	0.42	0.26	.17	1.61	.112
Education (more than 16 years)	0.67	0.26	.28	2.59	.012
Home Ownership	-0.38	0.23	-.20	-1.68	.098
Health Insurance	-0.42	0.29	-.16	-1.48	.144
Income	-0.01	0.22	.01	-0.05	.957

Note. $F(6, 74) = 3.99, p = .002, R^2 = .24$

Moderation analysis. There was evidence for a statistically significant association between socioeconomic predictors and disease prevention behaviors. Before carrying out the analysis, marital status was dummy coded into a dichotomous variable with a reference being never married. The other value, previously married, contained participants who had been divorced, widowed, or separated for more than five years. The interaction terms were created between each of the demographic factors and marital status.

In addition to transforming the necessary variables for the moderation analysis, the assumptions of normality, homoscedasticity, and absence of multicollinearity were re-assessed. Normality was assessed with a normal P-P plot, which indicated that there were no significant deviations in the data from the normal line, so the assumption of normality

was met (Figure 7). The assumption of homoscedasticity was checked via a scatterplot of the standardized residuals as a function of the standardized predicted values. As Figure 8 indicates, there were no strong deviations from a random, rectangular pattern, so the assumption of homoscedasticity was met (See Figure 8). The assumption of absence of multicollinearity was assessed with Variance Inflation Factors (VIFs), and largest value in this model is 4.96, which is well below the cutoff, so the assumption was met.

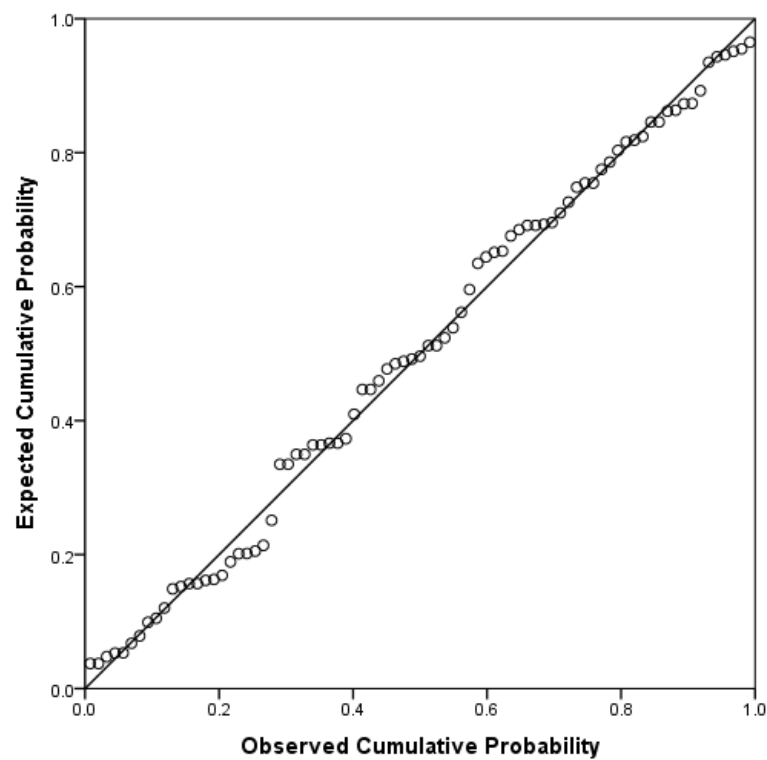


Figure 7. Normal P-P Plot between socioeconomic predictors and behaviors of disease prevention while moderating for marital status.

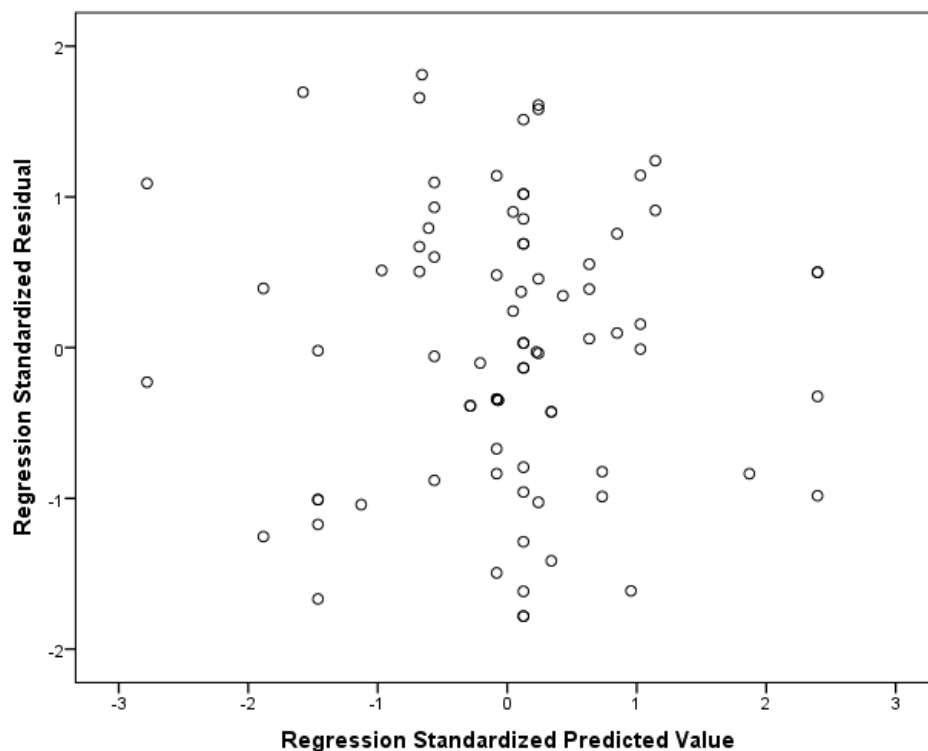


Figure 8. Scatterplot of standardized residuals and standardized predicted values for socioeconomic predictors and behaviors of disease prevention while moderating for marital status.

Due to the assumptions of multiple linear regression being met, the moderation analysis was conducted to examine the moderating effect marital status had on the relationship between socioeconomic status predictors and disease prevention behaviors. The results indicated a significant relationship between the independent, interaction variables, and disease prevention behaviors, $F(11, 69) = 2.54, p = .009, R^2 = .29$. The R^2 indicated that 29% of the variability in the dependent variable could be explained by the independent variables and interaction terms. However, the only significant predictor was education (more than 16 years) ($B = 1.27, t = 2.74, p = .008$); none of the interaction terms were significant. The interaction with education (more than 16 years) and marital status was nearly significant at the .05 level ($B = -0.96, t = -1.69, p = .097$). The interaction term,

Education (0-9 years * Marital Status), was not included in the model because it was a perfect linear combination of the Education (0-9 years). Because the interaction terms were not significant in the model, the researcher cannot conclude with confidence that marital status moderates the relationship between socioeconomic status and disease prevention behaviors. Thus, the null hypothesis (H04) could not be rejected. The results of the moderation analysis are presented in Table 12.

Table 12

Results for Multiple Linear Regression with Marital Status Moderating the Relationship between Socioeconomic Predictors and Disease Prevention Behaviors

Source	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Education (reference group: 10-12 years)					
Education (0-9 years)	-0.68	0.49	-.15	-1.38	.171
Education (13-16 years)	0.37	0.40	.15	-0.92	.363
Education (more than 16 years)	1.27	0.46	.52	2.74	.008
Home Ownership	-0.27	0.37	-.14	-0.72	.472
Health Insurance	-0.43	0.56	-.17	-0.77	.443
Income	-0.17	0.34	-.09	-0.49	.628
Interaction: Education * Marital Status					
Education (13-16 years) * Marital Status	0.01	0.52	.03	0.19	.853
Education (more than 16 years * Marital Status)	-0.96	0.67	-.32	-1.69	.096
Interaction: Home Ownership * Marital Status	-0.14	0.43	-.07	-0.33	.739
Interaction: Health Insurance * Marital Status	-0.03	0.66	-.01	-0.04	.965

Interaction: Income * Marital Status	0.11	0.34	.05	0.32	.753
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Note. $F(11,69) = 2.54, p = .009, R^2 = .288$

Summary

This chapter presented information on preliminary data screening, demographic data, and sample descriptive statistics. A detailed analysis, addressing each research question to determine whether to reject or accept the null hypotheses, followed. The results of the statistical analyses indicated that there were no significant differences in disease prevention attitudes and behaviors based on marital status. Furthermore, socioeconomic predictors, collectively, did not significantly predict disease prevention attitudes. However, education predictor was positively related to disease prevention behaviors. As a result of lack of association between socioeconomic status and attitudes no moderation, the analysis was not conducted. Marital status effect on the relation between socioeconomic status and disease prevention behaviors was examined. These results are discussed in the following chapter, in relation to the existing body of literature.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this cross-sectional, quantitative study was to describe the self-reported attitudes and behaviors towards disease prevention activities of retired, unmarried, male Baby Boomers. Social demographic factors were assessed and tabulated. Statistical analyses were performed to test the mean difference in disease prevention attitudes and behaviors. Furthermore, statistical analyses were conducted to determine the relationship between SES and disease prevention attitudes and behaviors. I found a positive association between SES and disease prevention behaviors.

Interpretation of the Findings

The health of the elderly continues to be a significant topic in the United States as more Baby Boomers join the older population. The cohort is aging at a time when scholarly attention concerning their health has been more limited (Pruchno, 2012). Unmarried boomers face greater economic, health, and social vulnerabilities than married boomers (Lin et al., 2012). Also, unmarried men tend to suffer from health susceptibility as a result of fewer economic resources (Durkheim, 2006; Lin et al., 2012). Moreover, men do not usually participate in disease prevention activities (Dhruva et al., 2008; Elley et al., 2007).

The study findings were a result of positivism approach that examined the four research questions. Positivism was used to describe if there is a difference in disease prevention attitudes and behaviors among retired, divorced, never married, separated, and

widowed, male Baby Boomers. The second and the fourth research questions examined the existence of any relationship between SES and disease prevention behaviors.

Hypothesis 1

H_01 : There is no difference in attitude among retired, divorced, never married, separated, and widowed, male Baby Boomers toward disease prevention.

H_a1 : There is a difference in attitudes among retired, divorced, never married, separated, and widowed male Baby Boomers toward disease prevention

An ANOVA was performed to test Hypothesis 1 to determine if there were significant differences in disease prevention attitudes among the four subgroups of retired, unmarried, male Boomers. I found that there were no significant mean differences in disease prevention attitudes scores by the retired, unmarried, male marital status. During routine physical examinations, men typically receive less advice on disease risk factors from physicians (Courtenay, 2000). This lack of disease prevention advice among men could contribute to the lack of difference in disease prevention attitude among the unmarried men. Additionally, men rarely visit health care providers and a situation that could contribute to the insufficient, preventive health participation (AHRQ, 2011).

Hypothesis 2

H_02 : There is no association between SES and attitudes toward disease prevention that is moderated by Baby Boomers' marital status.

H_a2 : There is an association between SES and attitudes toward disease prevention that is moderated by Baby Boomers' marital status.

A multiple linear regression was conducted to examine Hypothesis 2 and determine if a relationship existed between disease prevention attitudes and SES existed. Lower SES has been correlated with lower vaccination rates (Mangtani et al., 2005), and also adult men are significantly less likely to use disease prevention services (Cherry et al., 2007). After assessing the strength of the relationship between a set of predictors (income, education, homeownership, and possession of health insurance), a criterion (disease prevention attitudes) linear regression was performed. The unmarried Boomers are reported to suffer from disadvantages of fewer financial resources and lack of social contact (Roth et al., 2007). I found that the socioeconomic factors as a model were not a statistically significant predictor of disease prevention attitudes (p -value=.269). Therefore, the moderation analysis was not conducted, and the null hypothesis (H_02) could not be rejected. Although no significant relationship was revealed, divorced Boomers are reported to have more economic resources and better health than widowed and never married Boomers (Lin et al., 2012).

Hypothesis 3

H_03 : There is no difference in behaviors among retired, divorced, never married, separated, and widowed male Baby Boomers towards disease prevention practice.

H_a3 : There is a difference in behaviors among retired, divorced, never married, separated, and widowed male Baby Boomers towards disease prevention behavior.

The ANOVA tested Hypothesis 3 to determine differences in disease prevention practices among the divorced, never married, separated, and widowed, male Baby Boomers. I found that there were no significant mean differences in disease prevention

behavior scores by marital status (p -value=.314). Scholars have reported widowhood and divorce are more detrimental to men's health (Liu & Umberson, 2008). Baby Boomers have greater odds of engaging in negative health behaviors, including smoking cigarettes and consuming soda and fast food (Hoffman, Lee, & Mendez-Luck, 2012).

Hypothesis 4

H_04 : There is no association between SES and behaviors toward disease prevention that is moderated by Baby Boomers' marital status.

H_a4 : There is an association between SES and behaviors toward disease prevention that is moderated by Baby Boomers' marital status.

A multiple linear regression was used to examine the relationship between SES factors and disease prevention behaviors. According to the coefficient of determination, approximately 24% of the variation in the prevention behaviors could be described by the SES. The only significant variable was education (16 or more years), $p=.002$. Negative health behaviors were reported to be consistently more likely among men (Das, 2012). I did not establish the spread of the 16 years of schooling among the subgroup. Nevertheless, educational attainment among unmarried Boomers differs, with the never married possessing higher education levels than the widowed (Barrett, 1999). People with higher levels of education consume more preventive medical care (Fletcher & Frisvold, 2009). Participants with higher education influence preventive behaviors and are less likely to engage in risky behaviors, such as smoking and drinking.

The regression coefficient, $B= 0.67$, suggests that participants who had more than 16 years of education that every additional schooling one could expect disease prevention

behaviors to increase on average 0.67 units greater than participants with 10-12 years of education experience. Education provides an individual with knowledge and life skills that permit access to health information and resources (Cutler & Lleras-Muney, 2007). The low p -value suggests that the slope is not zero, which in turn suggests that changes in the education (predictor variable) are associated with changes in disease prevention behaviors. It is important to consider the relationship between education and health is complex as a disease could lead to lower levels of education, or vice versa (Bloom, 2007).

H_04b : There is no association between SES and disease prevention behaviors that is moderated by Baby Boomers' marital status.

H_a4b : There is an association between SES and disease prevention behaviors that is moderated by Baby Boomers' marital status.

Moderation analysis was used to examine the effect of marital status on the relationship between SES and disease prevention behaviors. I found a significant association between the independent, interaction variables, and disease prevention behaviors, $p=.001$. The coefficient of determination stated that 29% of the variability in the dependent variable could be explained by the independent variables and interaction terms. The Baby Boomers' marital status did not moderate the relationship. Marriage is a health determinant that provides both physical and mental health benefits for men (Guner, Kulikova, & Llull, 2014).

Men will take part in disease prevention activities if conducted in comfortable community settings, such as barbershops or bars (McVittie & Willock, 2006). For

example, public health organizations and policy makers could use the same concept to provide interventions that improve disease prevention activities. It is important to identify effective approaches and strategies that motivate change and sustain healthy behaviors.

Theoretical Framework Findings

The HBM was the conceptual framework for this study and was presented in Chapter 1. The model could help explain the failure to participate in health promotion/prevention programs (Rosenstock, 1960). The constructs for perceived threat, perceived barriers, and perceived benefits were employed to investigate the key variables and the interrelationships between the dependent and the independent variables. The independent variable, SES, had four predictive indicators: education, income, health insurance, and home ownership. These four indicators were found to be pointers of SES. The perceived barriers assisted in answering Research Questions 2 and 4. The marital status independent variable helped in answering Research Question 1 and 3.

Limitations of the Study

There were several limitations to this study. The study design was one of the major constraints: cross-sectional studies have the benefit of being quick as they are a snapshot of the investigated problem, but are unable to provide cause and effect (Ashengreau & Sage III, 2008; Mann, 2003). The participants had to travel to the Texas Expo to complete the survey questionnaire. The requirement for travel to the study site was necessary as it eliminated coercion. Furthermore, I could not have administered the survey at the household level as a result of the limitation placed by Walden's IRB

protocol. Therefore, Baby Boomers not interested in visiting the Texas Expo could have been excluded thus limiting access to that portion of the population.

Another limitation was the convenience sampling method the subjects were selected because of accessibility and proximity to me. This sampling process that involves volunteers does not incur the cost or time compared to a random sample (StatPac, 2007). Convenience sample could have led to the underrepresentation or overrepresentation of retired, unmarried, male subgroups within the sample. The power analysis calculation yielded a sample of 74 but 81 were recruited. A larger sample size would have yielded more significant results. Similarly, the study results are only generalizable to the target population of Harlingen, Texas.

The lack of mean differences in disease prevention attitudes and behaviors could be a result of the presentation or the interpretation of questions by the participants. I relied on self-reported data, and the data might have introduced some bias such as exaggerating, recall, or selective memory. A single, cross-sectional survey cannot unravel the contribution of education to disease prevention behaviors.

The study sample was adequate and did not diminish the relationship between variables. The instrument was able to provide disease prevention attitudes and behaviors of the target population. The survey did not ask for a detailed interpretation of the samples' responses. The lack of comprehensive information might have contributed to the absence of mean differences of disease prevention attitudes and behaviors.

Recommendations

Disease prevention activities are designed to promote optimal health throughout the lifespan and for maintaining the well-being and quality of life of the retired, unmarried, male Boomers. This study was conducted to describe the disease prevention attitudes and behaviors of the retired, unmarried, male Baby Boomer. The findings of the survey provided evidence of disease prevention attitudes and behaviors of retired, unmarried, male Boomers residing in Harlingen, Texas. The findings cannot be generalized and are not transferable to a different population.

Approximately 40% of the sample was White, and this calls for future studies to recruit retired, unmarried male Boomers from diverse backgrounds to participate in similar studies. Future studies could help public health researchers and Harlingen practitioners gain more insight into disease prevention behaviors of the diverse retired, unmarried male Boomers. A diversity study would ensure that all races and ethnicities are considered when gaining insight of disease prevention attitudes and behaviors. Through the inclusion of diverse populations, the differences in attitudes and behaviors can be observed. Additional recommendation is to have similar studies extended in longitudinal and comparative methods so as to assess the differences between genders living in Harlingen, Texas.

There is a need for Harlingen health department to develop disease prevention activities that will entice the disease prevention practices of the retired, unmarried, male Boomers with less than 16 years of education. The Harlingen Public health department could use the study results to develop disease interventions that address disease

prevention behaviors at the individual level. Also, health departments could provide information at the grass root level about consequences of poor disease prevention practices. The information and goals could combine immunization, tobacco cessation, and alcohol prevention.

This study could be replicated to find out if a similar relationship exists among other populations of retired, unmarried, male Boomers residing in other Texas counties. Researchers could apply the existing theory to retired, unmarried, male Boomers living in different counties to determine generalizability to different subjects, races, and to check the reliability of the current findings.

Implications

The Baby Boomers continue to join the elderly population in large numbers (Cohn & Taylor, 2010). However, research is limited in the area of disease prevention activities among the retiring, unmarried, male Boomers. The use of preventive health care among adults has its primary focus in the treatment of acute or chronic conditions, rather than the prevention of infectious diseases (NVAC, 2009). To increase awareness and make an impact, public health organizations should collaborate with Harlingen health department to implement disease prevention practice interventions.

The survey results will assist health providers in the city of Harlingen in understanding the differences in disease prevention behaviors among the target population. The findings could be used to address disease prevention practices that deter disease prevention activities among the target population. A significant number of adults do not receive the recommended vaccines (NVAC, 2009). Therefore, it is necessary to

track disease prevention behavior among the less educated, retired, unmarried, male Boomers. Monitoring disease prevention behaviors incidences among the target population would provide a baseline and that could allow the continuous observation of disease prevention trends. The study findings could be useful in securing funding for improving disease prevention practice programs for retired, unmarried Boomers with education attainment less than 12 years.

The health of the retired, unmarried, male Baby Boomers is significant at a state and national level. There is a need to maintain and support their health as this subgroup is expected to experience longevity. This study, being descriptive, raises some opportunities for public health agencies to use the study results as a frame of reference for future exploratory research. Further research will be necessary to refine these novel findings as well as to generate achievable disease prevention behavior policy.

Social Change

The social change implications from this study include the study findings may assist communities, public health officials, and governments in understanding the disease prevention attitudes and practices of retired, unmarried, male Baby Boomers, particularly in Harlingen, Texas. The survey results will be useful to health educators, public health organizations, policy makers, and researchers interested in developing disease prevention practice interventions.

The results from this quantitative approach will contribute to the gap in the literature since no previous researchers had explored disease prevention attitudes and behaviors of the retired, unmarried male Boomer. The survey findings will be

disseminated by providing an executive summary to the Harlingen health department and Baby Boomers who participated in the study. The study results will be presented at professional conferences and submitted to be published in public health and geriatrics journals.

Conclusion

In general, studies usually assist in forming the basis for literature review and laying the foundations for understanding research phenomena. In this study, there was no prior research conducted on the topic. Lack of the previous study led to the descriptive nature of the survey design that demonstrated a relationship between education and disease prevention behavior. Reduced disease prevention practices are a potential health risk that could advance illness among the aging unmarried male boomers.

The Baby Boomer cohort is entering elderly population in large numbers, and it is imperative to maintain and support their health, especially, of retired, unmarried males. Baby Boomers are currently responsible for the growing number of senior citizens in the United States (Butrica, Smith, & Lams, 2012; Ortman, Velkoff, & Hogan, 2014). Unmarried boomers are isolated and have fewer economic resources. Many of the oldest Baby Boomers, facing retirement in a time of economic uncertainty, find their life-long savings insufficient to cover their needs (Pruchno, 2012).

Moreover, it was significant to study this group of Baby Boomers as they suffer from socioeconomic disadvantages that prevent them from experiencing healthy aging (Lin et al., 2012). This quantitative population shift will increase health-care consumption and massive spending increases in programs like Social Security and Medicare. The

cohort is large, well educated, and possesses different attitudes and behaviors compared to the previous generation. To understand the real impact that this demographic change it is paramount to examine all risk factors that might influence the retired, unmarried Baby Boomers' health.

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Appendix A: Survey Instrument

Information and Instruction for Completing Questionnaire

Please complete all the questions as accurately as possible and answer questions to the best of your knowledge. Your information will be kept strictly confidential. Please let me and research assistants know if you experience any difficulties with the questionnaire. Thank you so much for participating.

1. How old are you? _____ (Year born between 1946 -1964)
2. Number of years of formal education
 - a. 0 - 9 Years
 - b. 10 -12 Years
 - c. 13 - 16 years
 - d. More than 16 years
3. Do you own a home?
 - a. Yes
 - b. No
4. Do you have health insurance?
 - a. Yes
 - I. Medicare
 - II. Medicaid
 - III. Private insurance
 - b. No

5. Are you?
 - a. Divorced
 - b. Widowed
 - c. Never Married
 - d. Separated more than five years

6. What is your yearly income?
 - a. Less than \$35,000
 - b. More than \$35,000**

7. What is your race?
 - a. White
 - b. African American
 - c. Hispanic/Latino
 - d. Asian
 - e. Native American
 - f. Two or more races

Attitudes toward Disease Prevention

1. I feel that the need for exercise at my age is a bit overstated.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

2. A little smoke in the air will not significantly affect my overall health.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

3. It is not that important to always know my blood pressure level

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

4. I believe that eating what I want at times will affect my overall health.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

5. Knowing my cholesterol level will help me maintain my overall health.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

6. Work-life balance is not that important to maintaining my overall health.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

7. I feel that knowing my family history will not help me maintain my overall health.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

Behaviors toward Disease Prevention

1. I exercise regularly to maintain a healthy body weight.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

2. When in public places, I purposefully seek out nonsmoking areas.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

3. I make it a point to have my blood pressure checked on a regular basis.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

4. I regularly check my cholesterol level.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

5. I purposefully maintain a heart-healthy diet.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

6. I make it a point to take time for social activities.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

7. I am very aware of my medical family history.

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

Appendix B: Codebook

A. Demographic

Variable Name	Question #	Possible Value
AGE	1	_____
FORMAL EDUCATION	2	0-9 Years = 0 10-12 years = 1 13-16 years = 2 More than 16 years = 3
HOME OWNERSHIP	3	Yes = 0 No = 1
HEALTH INSURENCE	4	Yes = 0 No = 1
MARITAL STATUS	5	Never Married = 0 Divorced = 1 Widowed = 2 Separated > 5 years = 3

INCOME	6	Less than 35,000 = 0
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		More than 35,000 = 1
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RACE	7	White = 0
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		African American = 1
--	--	----------------------

		Hispanic/Latino = 2
--	--	---------------------

		Asian = 3
--	--	-----------

		Native American = 4
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		Two or more races = 5
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A. Attitudes Toward Disease Prevention

<i>Variable Name</i>	<i>Question #</i>	<i>Possible Value</i>
NEED FOR EXERCISE	1	Strongly Disagree = 1
		Disagree = 2
		Slightly Disagree = 3
		Slightly Agree = 4
		Agree = 5
		Strongly Agree = 6

SMOKE/OVERALL HEALTH	2	Strongly Disagree = 1 Disagree = 2 Slightly Disagree = 3 Slightly Agree = 4 Agree = 5 Strongly Agree = 6
NEED TO KNOW B/P	3	Strongly Disagree = 1 Disagree = 2 Slightly Disagree = 3 Slightly Agree = 4 Agree = 5 Strongly Agree = 6
EATING/OVERALL HEALTH	4	Strongly Disagree = 1 Disagree = 2 Slightly Disagree = 3 Slightly Agree = 4 Agree = 5

		Strongly Agree = 6
CHOLESTEROL KNOWLEDGE	5	Strongly Disagree = 1
		Disagree = 2
		Slightly Disagree = 3
		Slightly Agree = 4
		Agree = 5
		Strongly Agree = 6
WORK-LIFE BALANCE	6	Strongly Disagree = 1
		Disagree = 2
		Slightly Disagree = 3
		Slightly Agree = 4
		Agree = 5
		Strongly Agree = 6
FAMILY HISTORY	7	Strongly Disagree = 1
		Disagree = 2
		Slightly Disagree = 3
		Slightly Agree = 4

Agree = 5

Strongly Agree = 6

B. Behaviors toward Disease Prevention

Variable Name	Question #	Possible Value
EXERCISE	1	Strongly disagree = 1
		Disagree = 2
		Slightly Disagree = 3
		Slightly Agree = 4
		Agree = 5
NONSMOKING	2	Strongly Agree 6
		Strongly Disagree = 1
		Disagree = 2
		Slightly Disagree = 3
		Slightly Agree = 4
		Agree = 5
		Strongly Agree = 6

BLOOD PRESSURE	3	Strongly Disagree = 1 Disagree = 2 Slightly Disagree = 3 Slightly Agree = 4 Agree = 5 Strongly Agree = 6
CHOLESTEROL LEVEL	4	Strongly Disagree = 1 Disagree = 2 Slightly Disagree = 3 Slightly Agree = 4 Agree = 5 Strongly Agree = 6
HEART HEALTHY DIET	5	Strongly Disagree = 1 Disagree = 2 Slightly Disagree = 3

		Slightly Agree = 4
		Agree = 5
		Strongly Agree = 6
SOCIAL ACTIVITIES	6	Strongly Disagree = 1
		Disagree = 2
		Slightly Disagree = 3
		Slightly Agree = 4
		Agree = 5
		Strongly Agree = 6
FAMILY MEDICAL HISTORY	7	Strongly Disagree = 1
		Disagree = 2
		Slightly Disagree = 3
		Slightly Agree = 4
		Agree = 5
		Strongly Agree = 6

Appendix C: Research Flier

VOLUNTEERS NEEDED FOR DISEASE PREVENTION ATTITUDE

**and BEHAVIOR SURVEY AMONG RETIRED, UNMARRIED, MALE BABY
BOOMERS**

A research study is looking for volunteers to complete a survey on attitude and behavior in relation to disease prevention. As a participant in the study, you have to be a retired, unmarried man born between 1946 and 1964. You would be asked questions about your health prevention attitudes and behaviors. The surveys will take place inside a booth at the Texas Expo in Harlingen. The study will take approximately 10 minutes to complete. In appreciation of your time, you will receive research finding through the Harlingen health department.

If you have questions concerning the survey or if you would like to participate but cannot attend the Expo, please contact the researcher at.

Tel: 956 291 9193. Email: Ngimaresearch@gmail.com

Thank you.

This study has been reviewed and approved by the Walden University
Institutional Review Board

Appendix D: Research Findings Flier

Findings from the survey on disease prevention attitudes and behaviors among retired, unmarried male Baby Boomers residing in Harlingen Texas.

2016 Research Conducted by Irene N. Ruminjo

In May 2016 demographic, socioeconomic, disease attitude and behavior data was collected from a sample of retired, unmarried male Baby Boomers. The survey took place at Texas Expo. About 81 men aged between 50 and 69 participated in the survey.

Study Finding

The study findings have provided a baseline of the retired, unmarried male Baby Boomer disease prevention attitudes and behaviors.

Evidence show relationship between level of education and disease prevention behaviors therefore, there is a need for preventive health to be actively included in primary health care.

Recommendations

There is a need for public health to develop effective prevention messages that will improve disease prevention attitudes and behaviors. Broad-based research is required to examine the disease prevention attitudes and behaviors of all subsequent subgroup of retiring unmarried men in Harlingen, Texas.

Appendix E: Permission Request to conduct Research

Walden University
100 S Washington Ave #900,
Minneapolis, MN 55401

The Texan Expo & Health Fair
700 Convention Center Blvd
McAllen, Texas 78501
Date March 7, 2016

Dear Ms. Smith

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am a PhD. student in the Department of Public Health at the Walden University. My supervisor is Dr. Bernice Kennedy

The proposed topic of my research is: Retired, Unmarried, Male Baby Boomer Attitudes and Behaviors Toward Disease Prevention. The objective of the study is:

- (a) To describe disease attitudes of the retired unmarried male Baby Boomers

I am hereby seeking your consent to recruit and collect data from retired unmarried male Baby Boomers attending the Expo. To assist you in reaching a decision, I have attached to this letter:

A copy the research instruments which I intend using in my research

Should you require any further information, please do not hesitate to contact me via phone at 919 260 0806 or by email at Irene.ruminjo@waldenu.edu or Walden University Representative Dr. Leilani Endicott phone number is 1-800-925-3368, extension 3121210 supervisor.

Upon completion of the study, I undertake to provide you with research findings.

Your permission to conduct this study will be greatly appreciated.

Yours sincerely,
Irene Ruminjo

Appendix F: Permission to Recruit and Collect Data

Texan Expo & Health Fair

700 Convention Center Blvd

McAllen, Texas 78501

March 14, 2016

Dear Irene,

The purpose of this letter is to inform you that the Texan Expo has given Irene Ruminjo permission to conduct the research titled Retired, Unmarried, Male Baby Boomer Attitudes and Behaviors Toward Disease Prevention. This also serves as assurance that the Texan Expo complies with the Texas state laws that require mandated reporting, privacy, protection of vulnerable populations such as the elderly). and will ensure that these requirements are followed in the conduct of this research.

Sincerely,



Holly smith

Chair Person of the Texan Expo

Email: southmostpromo@aol.com

Appendix G: The City of Harlingen, Texas



Appendix H: Permission to Use Questionnaire

From: Laura Q Rogers <rogersl@uab.edu>
Date: Wed, Dec 16, 2015 at 11:36 AM
Subject: RE: Permission
To: Irene Ruminjo <iruminjo@gmail.com>

Irene,

Yes, you may use the survey and can cite 2009 paper when referring to it. Unfortunately, I no longer have a copy of the survey. I can approximate the item wording from the paper text if you need me to do so. Just let me know. Thank you.

Laura Q. Rogers, MD, MPH, FACP, FACSM

Professor

University of Alabama at Birmingham

Department of Nutrition Sciences

Webb 222

1720 2nd Avenue South

Birmingham, AL 35294-3360

(For deliveries: 1675 University Blvd, Birmingham, AL 35233)

Phone: 205-975-1667