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What Impacts Life Satisfaction Of Aging Adults Following Stressful Life Events?: An Examination Of The Buffering Effect Of Personal Resources

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WHAT IMPACTS LIFE SATISFACTION OF AGING ADULTS FOLLOWING STRESSFUL LIFE EVENTS?: AN EXAMINATION OF THE BUFFERING EFFECT OF PERSONAL RESOURCES

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DEDICATION

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CHAPTER 1: Introduction to the problem

Aging adults are more likely to experience events, sometimes concurrently, that create permanent stressful changes (Hutchison, 2008) with long-term effects on well-being (Pearlin & Skaff, 1996, Pearlin & Bierman, 2013). When considering what matters in the lives of elders, one must step away from a medical model wherein the elderly are perceived as needy and vulnerable and view them instead as adults in a new life stage with new challenges. However, as with every other stage we face as human beings – we adapt (Pearlin, 2010). How well we adapt is reflected in the perception of our lives and our overall life satisfaction (Giele & Elder, 1998; Hutchison, 2008; Moll & Cott, 2012; Pearlin, 2010). Adaptation can also be influenced by daily life experiences (Dannefer, 2013), attitudes, and personal resources. The strength of some personal resources, such as support systems (Pearlin & Bierman, 2013), our perceived ability to financially support ourselves, and the ability to make our own decisions (Ensel & Lin, 2000; Song, 2011) are all factors proven to predict life satisfaction in elders.

An area of research that is under-represented in the literature is the examination of the role these personal resources: social support, autonomy, and perception of financial security, have on elders following stressful life events and how this buffering effect is reflected in their overall life satisfaction (Marshall, 2009; Wahl & Oswald, 2010; Wahl, Iwarsson, & Oswald, 2012). For example, minority elders, in particular, are more susceptible to increased stress and lower life satisfaction related to systemic barriers but have resilience to long-term adjustment difficulties based on their strong family and social networks (Taylor, Chatters, Woodward, & Brown, 2013). Furthermore, social support and perception of financial security (Broman, 1997) are both areas that minority elders report as being significantly positive influences in their lives. These findings suggest a need to further examine contributing factors to overall life satisfaction in elders.

Few events can shake the foundation of a person's life like the death of a spouse. In fact, the loss of your wife or husband is considered the most stressful event any adult, regardless of gender or ethnicity, can endure (Holmes & Rahe, 1967; Lee, 2013). While not all stressful life events (SLEs) are as devastating as losing your life partner, each event changes the life course and creates a new reality requiring an individual to cope and adjust (Dunkle, Roberts, & Haug, 2001; Pearlin, 2010). For over 15 years, I was privileged to work in over 140 long term facilities across the Midwest, including many in the Metro Detroit area. During this time, I witnessed the struggles of families as they experienced the stress of losing their health, physical abilities, financial stability, social support, and autonomy.

A single event can create a "domino effect" in multiple aspects of life. In my experience, after a rehabilitation stay, elders often find themselves grappling with their new reality. Once they return home, they are surrounded with health related support services. Home-based services and transportation are provided to ensure medical needs are met, but other needs, such as those provided by family, friends, and a sense of security, are not addressed. Personal resources can be the difference between successfully or unsuccessfully adjusting to changes over time. For example, if a health crisis has led to a decline in physical condition – a supportive spouse or family could mean the difference between being able to stay independent and safe. With support, non-medical needs such as transportation to activities and the ability to socialize can remain intact. Having support at home can influence the ability to return to the community and gives elders a choice in their future housing options. Additionally, with financial security there is less stress for the elder to make choices regarding their return home. However, returning home without these resources can negatively impact life satisfaction and adjustment (Wahl, Iwarsson, & Oswald, 2012) as challenges and changes may lead to loneliness, isolation, and depression. Elders who experience

SLEs are at a higher risk to experience a decline in life satisfaction if positive personal resources are not present (Alley et al., 2009). Often times, those who returned home without personal resources returned to the facility following a fall or other secondary health crisis. Strong personal resources have the potential to buffer the negative impact that SLEs have on life satisfaction (Fry, 2001; Maschi, Viola, & Morgen, 2013). Weak personal resources on the other hand, can exacerbate less-stressful events during times of strain and transition (Pearlin & Schooler, 1978; Lawton, Moss, Kleban, Glicksman, & Rovine, 1991; Thoits, 2010). This example magnifies what challenges elders in the community face and how long-term adjustments to the changes created by the SLE occur. The role personal resources play can make a significant difference for elders in their ability to make these necessary adjustments to changes in their daily lives.

For elders who are very ill, social relationships play a larger role in the personal perception of life satisfaction over their health status (Davison, McCabe, Knight, & Mellor, 2012; Dürner, Reinecker, & Csef, 2013). Support networks of family and friends play an even more important role in coping with daily stressors (Benin & Keith, 1995; Thoits, 2010; Utsey, Payne, Jackson, & Jones, 2002). In fact, social relationships have a positive buffering effect on mental health outcomes whether during stressful times or times of relatively low stress (Song, 2011; Turner, 1999). African American elderly in particular, experience better mental health outcomes than their non-minority counterparts creating a race paradox considering their disproportionate experience of psychosocial stressors (Mouzon, 2013), demonstrating the weight elders place on their social relationships.

The explicitly stated purpose of community based elder policy is to keep elders in the home and avoid relocation, which is based on the belief that leaving home would be tremendously harmful to the quality of life of elders. However, remaining in the home may not be an elder's

obvious or first choice when factors other than location, such as personal resources, are considered (Golant, 2009). The stress model suggests elders have a higher life satisfaction (Perry, Anderson, & Kaplan, 2013) and have fewer instances of institutionalization (Lees, 2013) when given time to adjust to changes and choices when faced with relocation (Ryff, 2014). Additionally, when given choice about relocation, having a say in the process (a sense of autonomy) is ultimately the most important factor in making a successful transition to another home (Perry, Anderson, & Kaplan, 2013). Thus, avoiding relocation to maintain life satisfaction as a basis for community based services policy is not founded on current research, but rather a dated perception that the aging population would prefer to remain in their home.

Relocation is no doubt a stressful event, but does not have as devastating an impact that is generally thought. The seminal work of Holmes and Rahe (1967) clearly demonstrates that in spite of the assumption that QOL of elders is based on remaining in the home (Golant, 2008), relocation is not a long-lasting SLE. In fact, change in living situation is one of the less stressful events because of the length of time it takes to adjust to the move and the overall long-term disruption it causes (Holmes & Rahe, 1967). The focus on preventing relocation as a preservation tool to maintain QOL may be misinformed by pervasive beliefs of what old age is "supposed to be" (Settersten & Trauten, 2010). Elder programs and policy may better preserve life satisfaction by attending to elders following non-health related SLEs known to have negative long-term influence on daily life.

An elder who has sufficient retirement income every month to pay their bills may experience a sense of financial security. Another elder with substantially higher income may experience stress about paying their bills and maintaining a home, even though their income would suggest a higher life satisfaction. This seemingly contradictory reality demonstrates how higher

socioeconomic status (SES) does not necessarily equate a sense of financial security or higher life satisfaction. Since resource allocation for the elderly is based on a perception of need and dependency (Oldman, 2002; Wilmoth, 2010). Environmental resources and support may be present in the community; however, strict requirements to qualify for their use may prevent access, thus ignoring non-medical related needs. Therefore, the sense of financial security is potentially more relevant and important over time as the actual amount of income or SES.

Background to the Problem

Physical health status (Halvorsrud, Kirkevold, Diseth, & Kalfoss, 2010) and SES (Hsu, 2011) are well proven as indicators of life satisfaction and are well supported in seminal works (Cohen & Wills, 1985; Ensel & Lin, 2000) as well as modern literature. The elderly are at higher risk to have both a lower SES due to retirement (Choi, 2013) and the inability to improve on their income (Settersten & Trauten, 2010). However, little is known about what influences life satisfaction following a SLE when health status and SES are not considered as dependent variables. This research will specifically address the long term buffering effect of personal resources on life satisfaction in elders of all incomes and health diagnoses to address this gap in the literature.

Having social supports (Dour et al., 2013), a sense of autonomy (Balkir, Arens, & Barnow, 2012), and a perception of financial security (Howell, Kurai, & Tam, 2013) are important across age, income, race, culture and gender (Bond, 2013). Some differences do exist however. For example, minority elderly, specifically African American elders are at significantly higher risk of lower levels of life satisfaction related to poor health status (Broman, 1997; Tran, Wright & Chatters, 1991) but with higher incomes, elderly African Americans are found to have higher levels of life satisfaction (Broman, 1997) suggesting financial status in some form can play a role in the buffer effect on life satisfaction. What is not examined among the elderly and specifically among

minority elderly, is the influence of the perception of financial security, which is not the same as SES.

This chapter will support each proposed hypothesis by first, giving relevant policy background that informed the formulation of these hypotheses. I will then outline the relationships between current policy and the present research and clearly discuss how social support, autonomy, and a sense of financial security impact an elder's life satisfaction following SLEs. I conclude with a description of how my research will contribute to current SLE knowledge, the power of these personal resources on life satisfaction in the elderly, and what these findings mean for aging policy.

Elder Policy in the United States. As elders age, they often become less physically functional, which creates an increase in the use of medical care and dependence on environmental resources (Marek & Rantz, 2000; Settersten & Trauten, 2010). In response to this change in physical functioning, elders struggle to remain independent. Changes in independence leads to the current dilemma of elder policy being based on a reactive system that provides support based on dependency and need (Oldman, 2002) with the premise of maintaining quality of life (Golant 2008). Community based agencies provide health related services with the focus to preserve quality of life and life satisfaction of elders following a health related SLE. These community based policies assume the support offered by health related services in the home as the key to maintaining life satisfaction. This is a false logic because elders who decline in health or relocate do not always experience a decline in their life satisfaction (Browne, O'Boyle, McGee, Joyce, McDonald, and Hiltbrunner, 1994; Dürner, Reinecker, & Csef, 2013) due to many factors, including strong personal resources.

Our current political environment finds legislators at federal and state levels grappling with rising healthcare costs and how to rein them in (Special Committee on Aging, 2011). It is

imperative that lawmakers begin to focus on sustaining and promoting successful aging versus reacting to and managing illness and frailty. SLEs are often unplanned, unexpected and unable to be reversed. Support for personal resources however, can be manipulated through the provision of elder policy (Lin, Ensel, Simeone, & Kuo, 1979) and thus have an effect on life satisfaction. Considerations of subjective concerns elders find important such as attending church versus what is medically needed or objective, such as a wheelchair ramp (Fernández-Ballesteros, 2011) are key in maintaining social support and personal relationships. In order to impact the perspective of policy makers, one must first acknowledge successful aging is a process influenced by stressors and resources (Pearlin & Skaff, 1996; Wilmoth, 2010). Connections between resources, life satisfaction and positive outcomes must be clear and easily understood. Therefore, the exploration of the role of personal resources on life satisfaction following SLEs has a clear and relevant connection to elder policy that could be used to support or provide for personal resources.

Elder policy is often developed with the premise to improve or maintain life satisfaction (Golant, 2008) while little attention is given to what exactly contributes to improving or maintaining life satisfaction. Age stratification (Riley, Johnson, & Foner, 1972), the perception of dependence of the elderly (Wilmoth, 2010), establishes a policy paradox wherein services are almost exclusively designed for and used by those elders with physical disabilities or limitations. Poor life satisfaction based on age or disability is often the perception of the public, not the aging individual (Estes 1983; Albrecht & Devlinger, 1999; Wilmoth, 2010). The role of personal resources in the perception of life satisfaction is minimized as we get older, specifically because of the stereotype of the dependency of elders (Estes, 2001; Gilleard & Higgs, 2013). This perception of the elderly has led to structural lag wherein policies are not keeping pace with the changing dynamics of the aging; rather they are based on antiquated and inaccurate perceptions of

a dependent aging population (Estes, 2001; Wilmoth, 2010). Policy goals represent an ideal, but realities of elders living in the community are often vastly different than how others perceive their situations (Hudson, 2010a). The foundation concepts of age stratification and structural lag offer some theoretical insight in to policy formulation in the United States.

Older American's Act (OAA). Historically, government policy has been enacted as a response to needs in the population or by the current political climate (Estes, 2001; Golant, 2008) regardless of the target demographic or issue. The OAA (1965) created a structured system in response to a lack of community resources for elders in which coordination of community based elder services is managed at the local level. The OAA (1965) facilitates the implementation of programs that are integral to keeping elders in the community when faced with medical emergencies that would otherwise move them to a nursing home indefinitely.

Home based services are important to elders who can and want to remain in their homes. Remaining in the home is not a realistic situation, however for many elders because of physical, financial, and environmental limitations. There is a gap in services for those who have sufficient financial means or who are not "sick enough" to access services. Because services are limited based on income or disability (OAA, 1965), the non-medical needs of older Americans are for the most part, ignored. The OAA (1965) specifically states that in-home services (homemaker, home health aides, visiting and telephone reassurance, in-home respite, chore services, home modifications) are to be delivered to facilitate older adults remaining in the home – which addresses primarily a perceived need versus actual need.

The Olmstead Decision. Olmstead versus L.C. (1999) determined that the unnecessary institutionalization of disabled individuals violates the American's with Disabilities Act (ADA PL 101-336, 104 Stat. 327, 1990) (Oldman, 2002). The Supreme Court decision (Olmstead v. L. C.,

527 U.S 581, 1999) mandated that states provide home and community-based services (HCBS) to disabled individuals so they could remain independent in the community. The policy goal is to avoid the decline in life satisfaction associated with institutionalization. The Olmstead Decision (1999) enabled elders to access services previously unavailable to them. Following this decision, Federal initiatives began heavily supporting and funding nursing-home diversion programs to support elders remaining in the community as long as possible. This combination of elder and disability services has been extremely beneficial to the elderly who need health related services. This does not, however, address how life satisfaction is enhanced or maintained through the provision of community-based services.

Administration on Intellectual and Developmental Disabilities. More recently, the perception of elder dependence is perpetuated by the design of programs at a federal level. The Agency on Aging (AoA) was restructured in 2012 to work in conjunction with the Administration on Intellectual and Developmental Disabilities (AIDD) and founded in the belief that "all Americans—including people with disabilities and older adults—should be able to live at home with the supports they need, participating in communities that value their contributions" (Administration for Community Living, 2013). Combining aging and disability services could potentially have a positive impact on elders by providing a wider array of services previously not available. The restructuring is done, however with the assumption that living at home is the wish of all elders (Golant, 2008). The AIDD does address the importance of contributing to the community, but again – no provisions for enabling this are outlined in the policy.

National Council on Aging. The National Council on Aging (NCOA) is a non-profit agency founded in 1950 with the purpose to improve the lives of older Americans as rising health care costs and compulsory retirement was impacting elders, especially those with limited resources

and income (National Council on Aging, 2007). In 2012 the NCOA developed the Economic Security Initiative (ESI) to expand on their already successful Benefits Check-Up program, a screening process to put elders in touch with programs they were eligible for, but not accessing. The ESI was a pilot program designed to specifically address the ways 25 communities in the United States could creatively address the financial security of elders through accessing untapped financial and community resources. This innovative approach to the financial state of elders led to participating seniors to save an average $250 in their monthly budgets – which could contribute significantly to the sense of being able to pay their bills (National Council on Aging, 2012). While not specific policy, the NCOA has been conducive in addressing those needs that are often overlooked by wider spectrum policy through their innovative programs. The NCOA advocates for elder public policy that improves the lives of elders (National Council on Aging, 2013), and thus are instrumental in contributing to elder policy by ensuring non-medical needs are heard by law makers. These aforementioned polices have significant implications in the perception of what contributes to life satisfaction for older adults.

Policy Implications and Significance

The restructuring of the AoA with the AIDD essentially strengthened the community based services available to elders by tying them to federally mandated disability service provision (ADA PL § 101-336, 104 Stat. 327, 1990). Prevention of institutionalization as a cost saving measure and maintenance of life satisfaction are the focus of nursing home diversion programs supported under the Olmstead Act. Included in these diversion programs are case management services, enhanced nursing support, caregiver education, assistive technology, home modifications, and coordination of services with housing options (Reinhard, 2010). What are missing in these initiatives are systems to support an elder's lifestyle and mechanisms to support non-tangible resources, such as

social support and autonomy. Proactive versus reactive programs designed to specifically reach elders who are at risk of a decline in their life satisfaction due to SLEs other than those that are health or income related would be a great step in truly maintaining or improving the life satisfaction of elders.

There is currently a political debate regarding the sustainability of entitlement systems, such as Medicare and Medicaid, programs that are heavily utilized by elders (Estes, 2001; Rogne, Estes, Grossman, Hollister, & Solway, 2009). Current discussion centers around the role of entitlement programs, combined with the anticipated growth in the elder population as the baby boomers retire. One outcome could lead to policy changes that will have negative impacts on older adults (Rogne, et al, 2009). For example, although cost savings is substantial for elders in nursing home diversion programs after one year (Golden, Roos, Silverman, and Beers, 2010),there is a lack of allowance for support services, such as transportation to social events once participation in the program ends. This lack of support could eventually lead to unsuccessful outcomes and illustrates how current policy neglects to account for actual life satisfaction.

Significance of the Problem for Social Work Research, Practice, and Policy

Social workers believe in the importance of human relationships (National Association of Social Workers, 2008) and as a profession, are interested in researching quality of life and well-being in elders (Gobbens, van Assen, Luijkx, & Schols, 2012; McMillen & Fisher, 1998). The social work profession advocates for elder autonomy and self-determination by pursuing research that works to give elders a voice. Promoting the dignity and worth of elders through responsible research can inspire practice, as seen with the NCOA initiatives. Social workers are frequently focused on short-term; task centered work with the aging by way of case management roles at the micro level. The social work profession must also be mindful at the macro level of by identifying

systemic barriers and environmental concerns (McCallion & Ferretti, 2010) that if addressed might enhance life satisfaction. A key element to progressive social work practice with elders is a commitment to promote their well-being and to promote change on a much larger scale (NASW, 2008).

Social workers who work with aging populations are also concerned about the gap between eligibility for services and need for support that is not health related. Current policies addressing just health related demands fall short in addressing the human needs of elders and what actually constitutes their life satisfaction and overall well-being (Alley et al., 2009). Based on changes in the aging population in recent generations (Gilleard & Higgs, 2013), the assumption that elders only benefit from health or disability related resources aimed at keeping them at home might be a shortsighted perspective and a disservice to the elderly in general. Because the receipt of services is based on physical ability or financial need, there is an enormous gap in the provision of non-health related needs even though they have been found to have positive influences on life satisfaction. The misinformation that elders only need physical or financial based assistance comes from a narrow focus based on dependency in old age (Gilleard & Higgs, 2013; Wilmoth, 2010). A way to correct this misinformation is by learning what resources matter the most to maintain independence and enhance life satisfaction (Alley et al., 2009). This dissertation will have broad implications for elder services by providing support to amend eligibility to expand beyond physical ability or medical need and have a significant and real impact on life satisfaction by increasing access to and support of resources not medically related.

Proposed Study Aim

The overarching aim of this research is to extend the current body of literature to include examination of the buffering effect of personal resources on life satisfaction as well addressing

less concrete buffers related to race or culture for the elderly population. Considering the current focus on spending in governmental programs, understanding the effect of personal resources is imperative. In light of non-race related stressful life events (such as discrimination) , the buffering effect of personal resources is potentially drastically different for Black and White elders.. Understanding these relationships will lead to the implementation of more appropriate programs to augment already heavily supported health status related services. An examination of social support, autonomy, and the perception of financial security as potential buffers of the relationship between SLE's and life satisfaction (Thoits, 2010) will help to inform policy makers about the actual experiences of elders and the factors that have the biggest long-term impact.

Purpose of Study and Research Questions

This dissertation differs from current elder life satisfaction-related research as it will not be using primary data to develop or test an instrument to measure or define life satisfaction. This research will use secondary data analysis to examine the buffering effect between the personal resources of social support, autonomy, and sense of financial security and their impact on life satisfaction as measured by the Diener Life Satisfaction Scale (Diener, Emmons, Larsen & Griffin, 1985), a validated instrument embedded in the Health and Retirement Study (HRS) following a SLE as defined by Holmes & Rahe (1967). This research will expand on traditional life satisfaction research by incorporating the stress model through a life-course cohort approach (Pearlin, 2010). According to the stress model, the way individuals react to a stressful event can be swayed by buffers, which can perhaps soften the long-term disruption on life satisfaction.

The purpose of this research is to explore the long term buffering effect of personal resources on life satisfaction of elders following a SLE. Because health and well-being are inextricably connected with physical, psychological, and social factors of elders (Black, 2009),

gathering a full picture of successful aging is complex. To accomplish this task, this dissertation will deconstruct the concept of life satisfaction by examining what older adults perceive as important in their lives (Bowling & Gabriel, 2003). There are known predictive relationships between SLEs and life satisfaction (Hendricks & Hatch, 2009) and between personal resources and life satisfaction (Kostka & Jachimowicz, 2010), but the effects of their combined relationships are not fully explored in the current body of research (Marshall, 2009; Wahl & Oswald, 2010). In order to fully examine these predictive relationships and the role they play in predicting changes in life satisfaction among elders the following research questions will be answered:

- Do significant life events predict changes in life satisfaction?
- Do changes in social support buffer the relationship between SLEs and changes in life satisfaction?
- Do changes in autonomy buffer the relationship between SLEs and changes in life satisfaction?
- Do changes in financial security buffer the relationship between SLEs and changes in life satisfaction?
- Do changes in social support impact changes in life satisfaction after an SLE differently for Black and White elders?
- Do changes in financial security impact changes in life satisfaction after an SLE differently for Black and White elders?

CHAPTER 2: Review of the Relevant Research

The life-course perspective views the aging process as a complex set of interactions between systems and is more complicated with older populations (Cutchin, 2001; Marshall, 2009). Factors throughout the life course can have an influence on well-being and alter the underlying processes of aging (Kuh, Cooper, Richards, Gale, vonZglinicki, & Guralnik, 2012). Cohen & Hoberman's (1983) seminal work on the buffering effect of emotional reactions to SLEs found that SLEs lead to changes in behavior, attitude, and health across all populations and ages. This buffering effect can impact elders significantly as they adjust to the changes stemming from a SLE (Lubben & Gironda, 2003; Murrell, Himmelfarb & Phifer, 1988).

Because the life course considers events that happen to us throughout our lives, it is essential to examine the effect stressful events have on life satisfaction. Elders especially are subject to experiencing more stressful events as they age. For example, an elder is far more likely to lose their spouse, friends, and family than younger adults. Perception of life satisfaction is dependent on current life situations over factors usually correlated with higher life satisfaction, such as higher SES and better health (Marshall, 2009). Factors that vary from person to person, such as feeling in control of their lives, the ability to financially support themselves and the presence of supportive friends and family, influence how one perceives their current situation and thus, satisfaction with their lives. The buffering effect these perceptions have on life satisfaction, even when "traditional" factors would predict either a higher or lower life satisfaction, such as a low SES predicts low life satisfaction and vice versa, is the area that will be examined in this research. This dissertation will fill a gap in the current literature and answer the question: Do stronger social supports, higher levels of autonomy, and the perception of financial security, buffer the stressful effects of life events on the perception of life satisfaction?

Life satisfaction

Since Jung (1933) first theorized individuation as the path to self-actualization, researchers have worked to define and measure the abstract constructs of life satisfaction, quality of life, and well-being. Ryff (2014) describes the core dimensions of psychological well-being as: purpose in life, environmental mastery, positive relationships, personal growth, autonomy, and self-acceptance and bases this on seminal theories in the social sciences. Quality of life is defined by Katschnig (1997, p.6) as:

> "a loosely related body of work on psychological well-being, social and emotional functioning, health status, functional performance, life satisfaction, social support, and standard of living, whereby normative, objective, and subjective indicators of physical, social and emotional functioning are all used."

Katschnig's definition (1997) incorporates many of the same concepts as Ryff's (2014) well-being definition. Similarly, life satisfaction specifically represents the cognitive component, or perception, of subjective well-being and has been defined as engagement, satisfaction with emotional life, and meaning in life (Seligman, Parks, & Steen, 2005), again mirroring components of quality of life and well-being.

Studies that examine healthy aging, well-being, quality of life and life satisfaction often use the same or similar indicators. For example, physical and cognitive capability, social and psychological well-being, and underlying biology have all been used to measure the concept of healthy aging (Kuh et al., 2012). The World Health Organization Quality of Life Inventory (World Health Organization, 1998) incorporates physical health, psychological domain, social relationships, and environment to measure quality of life via a 5 point Likert type rating scale to produce one score. Coping resources (sense of coherence and perceived social support) have been examined as a moderator between stress and psychological well-being, with psychosocial well-being measured by positive functioning and negative health outcomes (Jibeen, 2011).

Diener's Satisfaction with Life scale is the "gold standard" for measuring life satisfaction and includes globally accepted positive perception measures (Diener et al., 1985; Seligman, Parks, & Steen, 2005). Diener's Satisfaction with Life Scale has even been used as a measure for quality of life (Cardona, 2010) further blurring the lines between quality of life and life satisfaction. Diener (2000) proposed a national index to measure happiness while utilizing the terms "subjective well-being", "life satisfaction" and "quality of life" interchangeably in his argument. Therefore, because there are no distinct and clear empirical parameters between life satisfaction, well-being, and quality of life nor are there standard variables that are mutually exclusive to any of these concepts, it is expected and acceptable for life satisfaction to be defined by the researcher. Measurement of these concepts is not standardized. The term "life satisfaction" is used in this research to encompass all these concepts unless explicitly stated otherwise.

Stressful Life Events

The impact of SLEs was first examined in the seminal work of Holmes and Rahe (1967), which resulted in the development of the Social Readjustment Rating Scale (SRRS). Social readjustment is essentially the length of time it takes for someone to adjust to the changes in the normal patterns of life resulting from various life events (Holmes & Rahe, 1967). The SRRS remains a salient tool and it continues to be used in modern research (Blasco-Fontecilla, Delgado-Gomez, Ruiz-Hernandez, Aguado, Baca-Garcia, & Lopez-Castroman, 2012) including that of older adults (Holt, Munter, Morisky, Webber, & Krousel-Wood, 2012).

Not all SLEs represented in the SRRS are widely applicable to elders, such as the birth of a child or graduating from college. Because the HRS is an attitude survey of the aging population, those SLEs that are included in the HRS are considered relevant to this research. The SLEs used in this research and found in the HRS are (a) the death of a spouse, (b) divorce, (c) marital

separation, (d) the death of a close family member, (e) personal injury or illness, (f) marriage, (g) retirement, (h) change in living conditions, (i) change in income, and (j) change in residence.

SLEs as Predictors of Life Satisfaction

The first research question will examine the predictive relationship between SLEs and life satisfaction. The aging process is not just a series of events and physical changes, but adaptations and adjustments in routine, behavior, and attitudes, continuing into old age. SLEs are stressful events along the life course (Holmes & Rahe, 1967) and have both positive and negative effects on quality of life (Halvorsrud, Kirkevold, Diseth, & Kalfoss, 2010; Zautra & Reich, 1983). Changes in attitude can be detected through changes in perception of life satisfaction. The predictive relationship between SLEs and life satisfaction is well established in the literature, but not longitudinally and not been examined extensively in elderly populations.

The most stressful life event, the loss of a husband or wife has been proven to have a significant bearing on the surviving spouse. This event is also a predictor of life satisfaction (Wiggins, Higgs, Hyde, & Blane, 2004) with little research available on this event. The bulk of recent life satisfaction research on elders focuses on health related SLEs. Most notably, there are many studies on patients with cancer (Min et al., 2012; Golden et al,, 2005; Parker, Baile, de Moor, & Cohen, 2002; Andrykowski, Brady, & Hunt, 1993) while others focus on other health diagnoses as a primary characteristic of their sample population (Min et al., 2012; Wiggins et al., 2004). Not only do specific diagnoses and health conditions act as predictors to life satisfaction, the changes *due to* health status impacts life satisfaction (Halvorsrud, Kirkevold, Diseth, & Kalfoss, 2010). This health related diagnoses research further reinforces the elderly as sick and weak, which is not an accurate representation of today's aging population.

Identifying the distinct differences between minorities and non-minorities can be difficult as research is often complicated by being almost exclusively examined by SES, health status and other disparities in aging populations (Morgan & Kunkel, 2011). Minority elders experience an additional stressor due to experiences of racism and this stress alone is an indicator for lower life satisfaction (Ayalon & Gum, 2011; Utsey, Payne, Jackson, & Jones, 2002). The literature is lacking in direct comparisons between groups based on same circumstances, such as SLEs that are not necessarily predicated by race or SES. Examination of the within-group differences will yield more information regarding complex relationships contributing to life satisfaction over traditional comparative nature of research based on between group differences (Taylor, Chatters, Woodward, & Brown, 2013). This research will specifically examine all groups and this heterogeneity will allow for a perspective that will impact the way diverse populations are generally examined. Extracting the effect of resources by race can be challenging – but this research will make this possible by using the HRS and will thus, fill a significant gap in the literature.

Personal Resources as Buffers

SLEs may initially result in a decline in our life satisfaction but personal resources can stabilize life satisfaction over time as we adjust perceptions and adapt to the new situation created by the life event (Parker, Baile de Moor, & Cohen, 2002).Personal resources are sources of support and strength that are present in the daily lives of elders during times of stress (Pearlin & Schooler, 1978; Lawton et al., 1991). The role and influence of these resources on the trajectory of the life course were first examined by Riley & Riley (1994) and continues to be an area of interest in more recent studies (Nilsson, Rana, & Kabir, 2006). SLEs are usually one-time events resulting in abrupt changes having serious and long-lasting effects on life satisfaction (Hutchison, 2008). The

measures used to examine personal resources in this research are (a) autonomy, (b) perception of financial security, and (c) social support.

Social support. The second research question focuses on the role of social support as a buffer on the relationship between SLE's and life satisfaction. There is an extensive body of research extending back for several decades documenting the importance of social support for older populations (Nilsson, Rana, & Kabir, 2006; Rioux, 2005). Positive social support has been found to be a reliable predictor of positive life satisfaction (Aneshensel, 1992; Cohen & Wills, 1985; House, Kahn, McLeod, Williams, & Cohen, 1985; Lin & Ensel, 1989; Thoits, 1995; Turner, Wheaton, & Lloyd, 1995, Farquhar, 1995; Gabriel & Bowling, 2004; Rioux, 2005) while poor social support has also been found to be a significant predictor of poor life satisfaction (Nilsson, Rana, & Kabir, 2006; Gabriel & Bowling, 2004). Social support also acts as a buffer between stress and well-being (Chronister, Chou, & Liao, 2013) following important SLEs (Hsu, 2011; Hsu, 2007; Lin, Woelfel, & Light, 1985; Newsom & Schulz, 1996). Stice, Ragan, and Randall (2004) found that changes in social support over time mitigates the long term impact of SLEs on depressive symptoms. While not a direct relation to life satisfaction, mood and depression are predictors of life satisfaction and one can reasonably conclude that if mood and depression are alleviated by increases in social support over time (Stice, Ragan, & Randall, 2004), then a buffering effect would potentially extend to life satisfaction as well.

Changes in interpersonal relationships such as any increase or decrease in the level of social support could have an impact on life satisfaction (Nyqvist, Forsman, Giuntoli, & Cattan, 2012; Pearlin & Skaff, 1996). Early research into this relationship suggests that aging adults ultimately value their social support as much or more than their health status (Farquhar, 1995), and social capital, including social support, is linked to health outcomes in older populations (Vogelsang,

2014). Elders who have experienced the loss of a spouse often experience an increase in social support following this devastating SLE. With this increase in social support comes a decrease in loneliness. Dementia related conditions and diabetes related conditions alone result in significant costs annually with poor social support and isolation being associated with an increased incidence in both conditions (Cacioppo & Cacioppo, 2013). Those elders who do not have meaningful social support experience a higher incidence of loneliness (Utz, Swenson, Caserta, Lund, & deVries, 2014) and hospital readmissions (Mistry, Rosansky, McGuire, McDermott, & Jarvik, 2001) which highlights the importance of long-term social support in health outcomes.

Autonomy. The third research question asks about the role of autonomy as a buffer on the relationship between SLE's and life satisfaction. Autonomy is conceptualized as having the ability to affect outcomes through personal choice (Lachman & Weaver, 1998). One key aspect of autonomy is a sense of control, which is positively associated with life satisfaction among older populations (Farquhar, 1995; Marshall, 2009). Through hierarchal multiple regression of a sample of 999 individuals, Gabriel and Bowling (2004) found that a low sense of self-efficacy was associated with poorer health and functioning. Poor health can lead to abrupt changes in living arrangements and the findings of Gabriel and Bowling (2004) suggest that choice and control over one's living situation is relevant to successful aging strategies (Marshall, 2009) and maintenance of life satisfaction (Kostka & Jachimowicz, 2010). When elders have a sense of involvement prior to and after relocating, which for older adults usually occurs following a SLE, it is reflected in more favorable long term emotional responses and adjustment (Lees, 2013; Smider, 1996).

Higher autonomy following relocation specifically results in more favorable emotional responses and adjustment (Perry, Anderson, & Kaplan, 2013; Smider, Essex, & Ryff, 1992; Zisberg, Kaabiya, & Seigel, 2014). Autonomy also acts as a moderator between the multiple roles

of women and well-being (Ryff, 2014). This is relevant to the elderly in particular as women may find themselves changing roles following SLEs experienced by their loved ones and/or spouse. The ability to maintain control and influence through the life course supports adaptation strategies that positively influence life satisfaction (Åberg, Sidenvall, Hepworth, O'Reilly, & Lithell, 2005). When considering with health status and disability, autonomy plays a larger role in determining well-being in elders (Davison, McCabe, Knight, & Mellor, 2014).

Financial Security. The fourth research question focuses on the role of perceived financial security as a buffer on the relationship between SLE's and life satisfaction. An elder's perception of their personal financial security is not about the amount of money they have, but rather their overall sense of the ability to meet their financial needs. For those over 60, the sense of being able to manage financially is a strong determinant of life satisfaction (Smith, Avis, & Assman, 1999). Smith, Sim, Schart, & Phillipson (2004) found that financial management among a sample of older adults living in community settings was positively associated with life satisfaction. When elders feel their lives are meaningful and feel financially secure, it is reflected by a higher life satisfaction and sense of well-being (Hsu & Jones, 2012).

When elders experience a loss of financial resources and a decline in the sense of financial security over time, subjective well-being declines (Bishop, Martin, & Poon, 2005).While those who are in poverty self-report a lower life satisfaction, the impact of financial worries has an effect on overall well-being (Dukeov, Eklöf, Cassel, Selivanova, & Murguletz, 2001; Hsu, 2011) The concept of the perception of financial security differs significantly from the importance of SES that strongly contributes to life satisfaction in younger populations. In a longitudinal study of 2,584 elders, the examination of three waves between 1993 and 2007 found higher economic satisfaction was predictive of higher life satisfaction over time (Hsu, 2011).

Social Support and Race. The fifth research question asks if the role of social supports on the relationship between SLEs and life satisfaction is different for Black and White elders. The role of social support and culture must be examined in relation to the life satisfaction of elders (Utsey, Payne, Jackson, & Jones, 2002). There is a low correlation between SLEs and well-being due to the buffering effect of other factors (Cohen & Hoberman, 1983; Maschi, Viola, & Morgen, 2013) and perhaps, it is these other factors (i.e.: personal resources) that impact changes in life satisfaction. Ethnically diverse groups have fewer social supports in the form of friends and community connections. The seminal work of Gibson (1982) confirmed that black elders have and utilize their social networks in a distinctly different way than White elders. Black elders overwhelmingly rely on family for their social support (Hsu, 2011; Mendes & Glass, 2004). As one ages, this family support can be a concern because peer family supports are aging too (Park, Jang, Lee, Ko, & Chiriboga, 2013) which is an additional, often unrecognized, stressor.

African American and Hispanic cultures have rich histories that include kin and non-kin support systems that vary greatly from non-Hispanic white culture (Taylor, Chatters, Woodward, & Brown, 2013). Older African Americans have stronger family and fictive kin support networks while older non-Hispanic Whites have stronger friend support networks (Taylor, Chatters, Woodward, & Brown, 2013). Fictive kin networks consist of non-related individuals who are considered part of the family. Because minority elders tend to use their kin networks for support, they may not be eligible for assistance programs that exclude those with family support (Mutchler & Angel, 2000). This systemic exclusionary criteria blatantly does not take cultural differences between white and black families in to account and further marginalizes the already fragile and vulnerable minority elder population.

Research about the meaning of these various support networks is contradictory (Taylor, Chatters, Woodward, & Brown, 2013) and discrepancies vary depending on the age (Griffin, Amodeo, Clay, Fassler & Ellis, 2006) of the population being studied, SES, and whether support is examined in the context of a crisis (Sarkasian & Gerstel, 2004). A well-studied phenomenon observed in aging black populations is the racial mortality crossover effect (Jackson, Hudson, Kershaw, Mezuk, Rafferty & Tuttle, 2011; Kelley-Moore & Ferraro, 2004). This effect identifies that black elders have higher mortality rates than their white counterparts until they are in the oldest-old category when the oldest black elders have a lower mortality rate than their white counterparts (Gibson, 1991). Additionally, African American's positive mental health outcomes need to be examined with consideration to resilience mechanisms in their lives as social support has not been found to be significantly different between races (Mouzon, 2014). This research will specifically address this key gap in the literature by examining elders at two different time points following SLEs.

Financial Security and Race. The sixth research question asks if the role of financial security on the relationship between SLEs and life satisfaction is different for Black and White elders. The perception of financial security is different than actual SES. Perception captures the fact that people compare themselves mainly with those who are similar and familiar to them (Franzini & Fernandez-Esquer, 2004). Subjective measures of social status may capture subtle variations in status hierarchy that traditional SES measures miss (Wolff, Subramanian, Acevedo-Garcia, Weber, & Kawachi, 2010). For example, White women tend to have larger drops in their income when widowed, but economic security is more unstable for black elder women due to entering their retirement years with historically lower incomes and fewer assets (Angel, Jiménez, & Angel, 2007). This is relevant because Black women do not relate their actual SES with their

perception of financial security (Ostrove, Adler, Kupperman, & Washington, 2000) or standing in the community (Goodman et al., 2003).

The buffering effect of the perception of financial security is largely unknown. However, there is a predictive relationship between the perception of financial security and mental health outcomes (Franzini & Fernandez-Esquer, 2006), and psychological distress (Sakurai, Kawakami, Yamaoka, Ishikawa, & Hashimoto, 2010) – both factors related to life satisfaction and well-being. Researchers posit that sociocultural differences act as a buffer between the perception of financial security and health outcomes (Franzini & Fernandez-Esquer, 2006), those very differences that are captured in subjective measures. Examination of perceived financial security in Black elders is greatly lacking in the literature and this research will contribute to the growing field of subjective factors influencing life satisfaction in this vulnerable and growing population.

Policy Considerations

A key component in aging research and public-policy agendas is life satisfaction (Smith, Sim, Schart, & Phillipson, 2004). How life satisfaction is defined or measured remains to be explicitly stated in any elder policy or consistently measured in research. Life satisfaction is a seemingly abstract concept that is assumed to be guaranteed with the delivery of approved medically related support services. The Nursing Home Reform Act (NHRA) (1987) was formulated specifically with the well-being and quality of life of elders in mind. This legislation was enacted in direct response to a study in a Congressional study that found that nursing home residents, most often the elderly, were being neglected, abused, and not given adequate care (Special Committee on Aging, 2007). While the NHRA (1987) is not directly related to the topic of this research, it is a clear example of a direct Congressional mandate based on ensuring the psychosocial well-being of the elderly.

The Special Committee on Aging found that the nursing home monitoring system responsible for enforcing the standards in the NHRA (1987) equates the quality of life of nursing home residents with fines and citations received by the facility rather than the actual life satisfaction of the residents (Special Committee on Aging, 2007). In fact, this particular hearing discusses quality measures and other various aspects of quality of care – but the term "well-being" is mentioned only once – when quoting the purpose of the act. Yet, funding is mentioned 11 times demonstrating that although well-being and quality of care may be at the forefront of a policy driven by advocacy efforts – implementation and monitoring may not be focused on quality of life. In fact, 25 years after the implementation of the NHRA (1987), despite a federally mandated assessment tool (Centers for Medicare & Medicaid Services, 2014) - the Minimum Data Set, how exactly to measure resident quality of life in nursing homes continues to be an issue that aging policy researchers struggle with (Special Committee on Aging, 2007; Xu, Kane, & Shamilyan, 2013).

The problem with naming quality of life or life satisfaction as a crux to the provision of elder services is not exclusive to the NHRA (1987). The OAA (1965) specifically states "…services are appropriate to improve the quality of life of older adults; particularly those with the greatest economic or social need, with special attention to low-income minorities." The OAA (1965) however, makes no mention of how to actually measure quality of life or how services will ensure or improve the life satisfaction of the elder. The assumption that receiving services to remain in the community will lead to an improvement or maintenance of life satisfaction and/or quality of life. In fact, the use of available resources with the specific aim to keep elders in their homes even when physically challenged to do so do not necessarily equate a higher life satisfaction (Fernández-Ballesteros, 2011; Golant, 2008). Consideration for those subjective factors that have

a high impact on well-being, such as concern over finances, needs to be a focus for policy interventions and formulation (Dukeov et al., 2001; Fernández-Ballesteros, 2011).

When resources are tied to medical need it overlooks other approaches to elder based services, such as proactive versus reactive services. By acknowledging the level of stress that occurs when a spouse dies or a change in health status occurs – systems can be sensitive to the experience and reality after SLEs. Instead of creating roadblocks by cutting benefits or having qualifying criteria based on medical condition, policies can consider how the personal resources in a person's daily life are connected to SLEs and life satisfaction. There is a current debate within the academic community suggesting that life satisfaction is not attached to health care status or housing situations (Golant, 2009) which this research intends to strengthen by examining the buffering effect of personal resources.

A current trend in health care delivery and a focus of current aging policy debate is the facilitation of services via patient centered care. Patient centered care specifically posits there are better outcomes when both the patient and doctor are actively involved in the care process (Herald & Alexander, 2012). The concept of choice and autonomy directly relates to person-centered care and is also a factor in determining life satisfaction in the aging population (Farquhar, 1995; Marshall, 2009). Patient-centered care is extremely relevant to the life satisfaction of elders. Patient-centered practices have a positive impact on decreasing emergency room usage (Herald & Alexander, 2012) and logically, on cost. Thus, policies supporting patient-centered practices facilitate a sense of autonomy, which enhances life satisfaction, are certainly an appropriate approach to formulating future aging policy.

Lawmakers acknowledge that current debates regarding aging policy are similar to those that have been raised in congressional hearings for over four decades (Aging in America, 2011;

Special Committee on Aging, 2007). Concern about the speed at which healthcare costs are rising for the aging population has led to a focus on funding evidence based programs. The focus of policy on not only the funding of aging programs, but their efficacy has created an urgency to re-evaluate system delivery to ensure maximum benefits to the aging population's quality of life (Special Committee on Aging, 2011). The impending retirement of the baby-boomer generation has created a situation that has opened a political window and a pressing need to examine aging policies. This is an opportunity where lawmakers, the public and governmental systems are paying attention to any particular issue (Kingdon, 1995) and in this case, the aging population. There is little chance of this window closing as it has in the past as evidenced by the testimony heard by the Senate at the Special Committee on Aging hearing (2011), and aging policy is quickly becoming a legislative priority.

Limitations in the Current Literature

Life satisfaction studies tend to be based on a specific population with a specific issue rather than studying across the general population. Studies of older populations in particular are centered on health status or functionality (Strawbridge, Wallhagen, & Cohen, 2002). Because of the research focus on health-related issues, there is an extensive body of literature supporting health status as a predictor of quality of life (Halvorsrud, Kirkevold, Diseth, & Kalfoss, 2010; Smith, Avis, & Assmann, 1999). There is additional support that the perception of health status is a predictor of health outcomes (Nybo et al., 2003). For the elderly, the perception of health is relatively stable even when there are poor health conditions present (Leinonen, Heikkinen, & Jylha, 2002). There has been less attention to the role of personal resources have on quality of life following SLEs as the health related variables. Because of this focus, other potential impacting

factors, such as personal resources are not included or considered in many studies (Dannefer, 2013). This research will directly address the gap in the literature by examining all respondents.

Another limitation is that quality of life research in the elderly is dominated by health-related quality of life (HRQOL) studies. The quality of life of healthy elders or comparisons between those with different diagnoses cannot be generalized to a typical person in this life stage. Because of this narrow parameter; HRQOL research does not consider the influence of buffering factors in predicting life satisfaction of elders. Many measures of life satisfaction, especially those that are based on health, often contain cause indicators (Dannefer, 2013; Fayers, Hand, Bjordal, & Groenvold, 1997). These cause indicators, such as symptoms of illness, are thought to contribute to changes in life satisfaction. The predictive relationship between health and life satisfaction is well documented in the research. However, the assignment of symptoms as predictors may give them more weight than is really present (Dannefer, 2013; Feder, Komisar, & Niefeld, 2000) without consideration of other external or confounding factors.

The effect of resources on the determination of life satisfaction has been found to have both moderating and mediating effects. Ensel and Lin (2000) found that social resources mediate the effects of stressors, but only temporarily when strong social resources, a personal resource, are present. Adversely, personal coping abilities (personal resource) and community support (structural resource) moderate the relationship between SLEs and life satisfaction (Hutchison, 2008). These conflicting findings on the mediating or moderating effect of resources complicate defining a conceptual and research model examining the impact of personal resources on life satisfaction following SLEs. Additionally, examining the life satisfaction of those who have had a close family member or friend pass away is almost exclusively limited to those who have acted in

a caregiver role (Kim & Given, 2008). These moderating and mediating influences are problematic in the examination of life satisfaction.

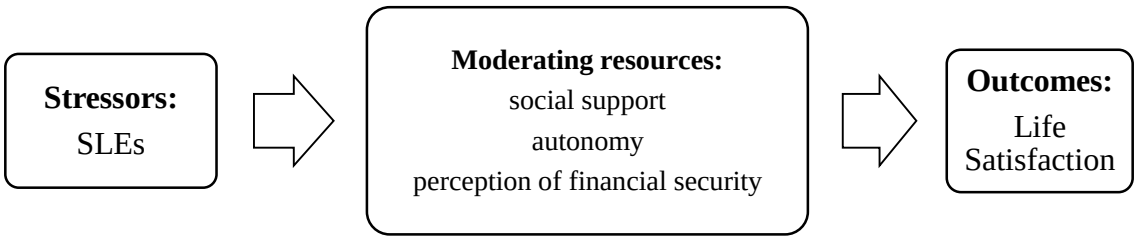
Another limitation of this research is the potential secondary stress caused following SLEs by creating changes in previously available resources (Pearlin, 2010; Pearlin & Skaff, 1996). For example, the death of a spouse can lead to changes in income and subsequent financial strain, a secondary stressor. Even seemingly positive SLEs, such as a marriage or retirement can trigger a secondary stress due to a disruption in routine or expectations. Conditions within the elder's environment or neighborhood can also contribute to secondary stress. Elders who live in neighborhoods with declining conditions or other shortcomings in providing essentials such as transportation, grocery stores, and other services may experience secondary stress because of this lack of resources (Pearlin & Skaff, 1996). Therefore, predicting life satisfaction without consideration to the secondary stressors caused by SLEs can lead to seemingly high correlations between predictors and life satisfaction.

The death of a spouse and injury or illness are not only predictors of life satisfaction, they are also ranked as the most stressful life events. Secondary stress after this SLE can include changes in living arrangements, income, and social interaction. Social Security retirement benefits may no longer be collected for both spouses which creates a secondary stressor of financial insecurity due to a decline in income and the sense of financial security has been shown to contribute to the outcome of perception of life satisfaction (Smith, Sim, Scharf, & Phillipson, 2004). Additionally, the grief reaction that is associated with the death of a loved one, a secondary stressor, has been found to be negatively associated with life satisfaction (Boelen & Prigerson, 2007).

Theoretical Foundations

The Stress Model. Personal resources play a role in the ability to cope with stress and their subsequent negative outcomes (Cohen, 2004; Lin, Woelfel, & Light, 1985). The buffering role of resources is apparent in the conceptual model of the stress process. Figure 1 illustrates how the stress process model encompasses stressors, moderating resources, and outcomes (Hsu & Jones, 2012; Pearlin & Bierman, 2013; Pearlin, Menaghan, Lieberman, & Mullan, 1981: Pearlin & Skaff, 1996) as relevant to this research. There is a reciprocal relationship between stress and the aging process when considered through this lens. This is mirrored by the life-stress model, which focuses on three areas: stressors, resources, and psychological distress (Ensel & Lin, 2000). Essentially, when an elder experiences a stressor (SLE) their available resources (social support, autonomy, & financial security) affect their psychological distress (changes in life satisfaction). For example, following one or more SLEs, a combination of lifestyle and resources determine how elders perceive their life satisfaction over and above any single variable, such as health status or the SLE considered separately. The stress model suggests elders have a higher life satisfaction (Perry, Kaplan, & Anderson, 2013) and have fewer instances of institutionalization (Lees, 2013) when given time to adjust to changes and choices when faced with one particular SLE, relocation (Ryff, 2014). This is one example of how the stress model applies to the way individuals react to a stressful event and how the long-term impact on life satisfaction can be impacted by buffers.

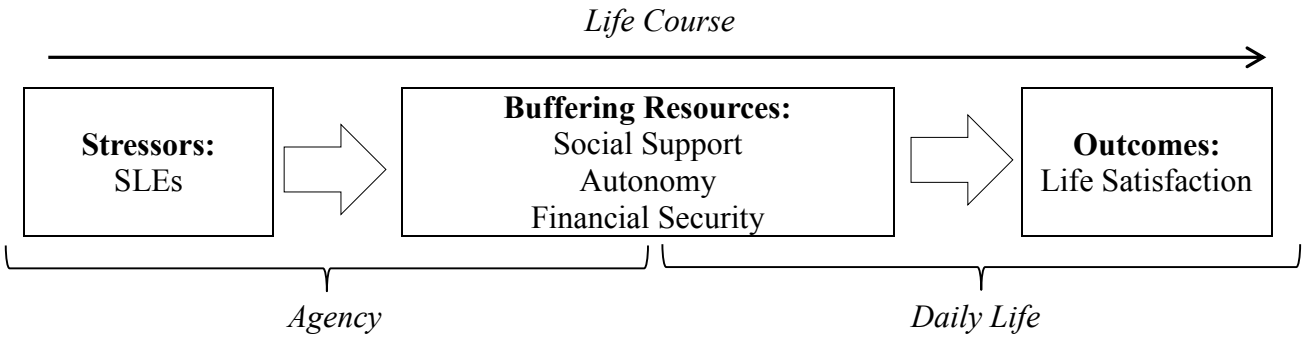
Figure 1: The Stress Model applied to SLEs, Personal Resources, and Life Satisfaction



The Life Course Perspective. The life course can be defined as a sequence of socially defined events and roles that the individual enacts over time (Giele & Elder, 1998; Moll & Cott, 2012) through choices and actions (Pearlin, 2010). The life-course theoretical perspective was first described by Cain (1964) and then later expanded by Riley (1982) with the overarching concept that aging is affected by environmental and social change (Marshall, 2009). All hypotheses in this research are supported by the life course model. It provides a perspective to examine the experience of elders following SLEs as complex and on a larger scale than just an individual problem (Giele & Elder, 1998; Moll & Cott, 2012) while still examining their collective cohort experiences at an individual level (Pearlin, 2010).

Life-course theory has three foundational themes (a) the individual level, which encompasses the belief that human beings will adapt to and learn through the society to which they belong (Dannefer & Kelley-Moore, 2009) and that people are inherently flexible when faced with challenges and changes in their circumstances (Rogoff, 2002); (b) the social aspect of daily life, which posits that social structure exists on an individual level through every day routines and on a larger scale through institutionalized mechanisms that allocate resources, such as the availability of safe housing or accessible transportation; and (c) human agency in making choices (Hutchison, 2005; Dannefer & Kelley-Moore, 2009). Application of the Life Course perspective with the stress model can be seen in Figure 2.

Figure 2: Stress Model & the Life Course Perspective



Social science research has a special interest in examining the correlates and predictors that influence stability and change over time (Dannefer & Kelley-Moore, 2009). Seminal works by Elder (1975) and Clausen (1993) suggest the impact of circumstances in the life course are integral to understanding social change over time. Studying the aging population longitudinally captures changes that happen as people age and have different and meaningful experiences. There is an expectation that behaviors and attitudes change as people cross from one life course stage to another (Cockerham, 1997; Dannefer & Kelley-Moore, 2009), including those stages in later life. By studying older populations longitudinally, one can begin to discern the differences between late maturity (55-65 years of age) and the oldest-old (85 and older) as people move from one stage to another (Dannefer & Kelley-Moore, 2009).

Theoretical Contributions of the Proposed Study

For over two decades, researchers have been making the case to utilize a life-course model to develop aging theory and gain new perspectives on the aging process of the current cohorts and aging population (Peace, 1987). Dannefer and Kelly-Moore (2009) suggest that life-course perspective as applied to the aging population lacks a general sense of cohesiveness often not treated as a theoretical perspective nor applied effectively in empirical research. This suggests that while the identification of aging process through the life-course model has been recognized in a gap in the research, it continues to need work.

Attempts at comprehensive approaches to study the person-environment perspective for the aging population continue to be under-represented in the literature (Wahl & Oswald, 2010). Life-course research has found that life satisfaction measures are greatly weakened when current health and socio-economic measures are introduced in analytic models (Blane, Higgs, Hyde, & Wiggins, 2004). This research will not focus on cohorts or health status as predictors, but rather

will examine the aging experience through changes in buffers and life satisfaction with a post hoc analysis by cohort and other demographics. This approach will enable a better understanding of the complex relationship between SLEs and life satisfaction through the life course without simplifying or isolating the results to cohort or diagnosis.

It is important to note the different models used in the formulation of disability policy are relevant to the formulation of aging policy. Being elderly and disabled is the general perception of the aging population, yet this negative connotation is rarely shared by the elderly themselves (Oldman, 2002). The medical model, under which much of aging policy is based, assumes a "sick role" of dependence (Wyatt, 2011). However, disability policy has been successful in supporting policies that encourage independence and decision making versus dysfunction and dependence (Oldman, 2002). Younger people with disabilities report high satisfaction with their lives and indicate a good life satisfaction despite chronic health issues (Albrecht & Devlinger, 1999, Wyatt, 2011). Older adults tend to normalize disability much the same as the younger disabled do (Oldman, 2002). This normalization makes physical limitation a non-issue over time as coping with the challenges along the life course becomes the norm.

Research Questions and Hypothesis

There can be considerable differences in the availability of resources to older adults (Hendricks & Hatch, 2009) based on gender, ethnicity or economic status (Coke, 1995; Mendes & Glass, 2004; Park et al., 2013). These differences contribute to the aging experience and potentially the overall perception of life satisfaction. Gender alone can be a factor in the availability of resources (Burt, 1998), SES and coping mechanisms (Cockerham, Hinote, & Abbott, 2006). Minorities, specifically African-Americans, may retire earlier than others in their cohort due to physical disability (Gayman, Pai, Kail, & Taylor, 2013), which can determine the level of personal

resources. Historic events also impact aging adults differently, creating varied perceptions than those of a younger or older cohort (Park et al, 2013; Elder, 1975). Additionally, there was no significant research done on minority elders until the early 1990's, and many of the policies in place today were originally enacted prior to then. Each of these factors alone contributes potentially valuable information to policy makers and I would be remiss to not include them in the final analysis of this research. A summary of all buffering hypotheses can be seen in Table A1 of the Appendix.

In order to have a better picture of the influence personal resources have on life satisfaction over time, this study will specifically examine changes at two time points. Examination at only one time point does not reveal any changes that may or may not occur specifically due to events along the life course (Dannefer, 2013). Analysis from just one point in time also minimizes the larger contextual weights on daily life and changes in perceptions over time (Dannefer, 2013). (Hagestad & Dannefer, 2001). This method of research will better inform intervention strategies for policy (Kuh, Cooper, Hardy, Richards, & Ben-Shlomo, 2014) to support those factors that help to buffer the negative influence of SLEs versus reactive health-related interventions that currently exist. This specific multidisciplinary gap is one that this research will address.

This research will answer six research questions through six hypotheses supported by the life course model and the stress model (See Table A1). This perspective specifically considers individual factors (Giele & Elder, 1998; Moll & Cott, 2012) and collective cohort experiences at an individual level (Enkvist, Ekström, & Elmståhl, 2012; Pearlin, 2010). SLEs have a predictive relationship on life satisfaction but this relationship is influenced by personal resources drawn upon during times of stress. Capturing the combination of factors that buffer against the stress of

SLEs is done in this research by incorporating the stress model. These objectives will be met through the testing of the following hypotheses:

Research Question 1: Do significant life events predict changes in life satisfaction?

H1: Elders who experience higher levels of stressful life events are more likely to experience a decline in life satisfaction over time (Main effects)

The first hypothesis will test for the predictive relationship between SLEs and life satisfaction. Elders experience multiple stressors as they age, sometimes concurrently and consecutively (Hutchison, 2008). SLEs such as the death of a spouse (Wiggins, Higgs, Hyde, & Blane, 2004) can have significant negative impacts on life satisfaction for long periods of time following the event (Halvorsrud, Kirkevold, Diseth, & Kalfoss, 2010).

Research Question 2: Do changes in social support buffer the relationship between SLEs and changes in life satisfaction?

H2: Social support will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in social support will have higher life satisfaction over time than those with declines in social support (longitudinal buffer effect/testing the interaction SLE x SS)

The second hypothesis will test the buffering effect changes in social support have on the relationship between changes in SLEs and changes in life satisfaction over time. Early research into this relationship suggests that aging adults ultimately value their social support as much or more than their health status (Farquhar, 1995).

Research Question 3: Do changes in autonomy buffer the relationship between SLEs and changes in life satisfaction?

H3: Autonomy will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in autonomy will have higher life satisfaction over time than those with declines in autonomy (longitudinal buffer effect/testing the interaction SLE x Autonomy)

The third hypothesis will test the buffering effect changes in autonomy have on the relationship between SLEs and changes in life satisfaction over time. Autonomy plays a larger role

in determining well-being in elders than health status or disability (Davison, McCabe, Knight, & Mellor, 2014). Higher autonomy following relocation specifically results in more favorable emotional responses and adjustment (Perry, Anderson, & Kaplan, 2013; Smider, Essex, & Ryff, 1996). When elders have a sense of involvement prior to and after relocating, which for older adults usually occurs following a SLE, it is reflected in more favorable long term emotional responses and adjustment (Lees, 2013; Smider, Essex, & Ryff, 1996).

Research Question 4: Do changes in financial security buffer the relationship between SLEs and changes in life satisfaction?

H4: Perception of financial security will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in PFS will have higher LS over time than those with declines in PFS (longitudinal buffer effect/testing the interaction: SLE x PFS)

The fourth hypothesis will test the buffering effect changes in financial security have on the relationship between SLES and changes in life satisfaction over time. When elders feel their lives are meaningful and feel they are financially secure, it is reflected by a higher life satisfaction and sense of well-being (Hsu, 2011). An elder who has sufficient retirement income every month to pay their bills may experience a sense of financial security while another elder with substantially higher income may experience stress about paying their bills and maintaining a home, even though their income suggests a higher life satisfaction. This seemingly contradictory reality demonstrates how higher annual income does not necessarily equate a sense of financial security or higher life satisfaction. For those over 60, the sense of being able to manage financially is a strong determinant of life satisfaction (Smith, Avis, & Assman, 1999). Social supports (Griffin et al., 2006) and the perception of financial security (Hsu, 2011) are of specific interest for the minority elderly as the meaning of these resources may be different over the age of 65 (Broman, 1997).

Research Question 5: Do changes in social support impact changes in life satisfaction after an SLE differently for Black and White elders?

H5: The relationship between stressful life events and LS will be buffered by both race and changes in SS. Specifically, the effect of social support will be different for African American elders than White elders over time (longitudinal buffer effect/testing the interaction stressful life events x SS x Race)

The fifth hypotheses will test the buffering effect changes in social support and race have on the relationship between SLEs and changes in life satisfaction over time. Minority elders have an added stressor along the life course, experiences of racism. Racism at any age is an indicator for lower life satisfaction (Ayalon, & Gum, 2011; Utsey, Payne, Jackson, & Jones, 2002). Comparisons between minorities and non-minorities following SLEs are for the most part, missing from the current body of literature (Taylor et al., 2013). The cultural experiences and social structures (Gibson, 1982) of Black and White adults can be vastly different. These differences are expected to be detected when the buffering effect of changes in social support is examined and Black and White elders compared.

Research Question 6: Do changes in financial security impact changes in life satisfaction after an SLE differently for Black and White elders?

H6: The relationship between stressful life events and LS will be buffered by both race and changes in the perception of financial security. Specifically, the effect of the perception of financial security will be different for African American elders than White elders over time (longitudinal buffer effect/testing the interaction stressful life events x SS x Race)

The sixth and final hypotheses will test the buffering effect of the perception of financial security and race has on the relationship between SLEs and changes in life satisfaction over time. The perception of financial security is key to understanding the difference between White elders and Black elders. Because Black elders historically come in to old age with fewer resources (Angel, Jiménez, & Angel, 2007), examining the perception of financial security versus SES will enable examination of the cultural differences between the two groups (Wolff, Subramanian, Acevedo-Garcia, Weber, & Kawachi, 2010). Black women in particular do not equate high SES

with their overall financial security (Ostrove, Adler, Kupperman, & Washington, 2000). The buffering effect of the perception of financial security is largely unknown and this research will specifically tease out the complex relationships contributing to life satisfaction over traditional comparative nature of research based on between group differences (Taylor et al., 2013). Examination of perceived financial security in Black elders is greatly lacking in the literature and this research will contribute to the growing field of subjective factors influencing life satisfaction in this vulnerable and growing population.

CHAPTER 3: Methods

Research Design

Existing data sets and cross-sectional longitudinal surveys are rich sources of data and larger datasets in particular, allow for greater precision in estimation in determining causal relationships over time versus smaller samples (Vartanian, 2011). This secondary data analysis used the Health and Retirement Study (HRS) which has a distinct purpose to gather information specific to the older population. The survey is intentionally designed to inform researchers and policy makers how actions and interventions impact health and wealth in retirement (National Institute on Aging, 2007). Use of validated measures embedded in the HRS enables results to be used in the formulation of theoretical constructs and to make policy recommendations (Birren, Lubben, Rowe, & Deutchman, 1991; Hagerty et al., 2001). Analysis for all six hypotheses was conducted using a multiple regression approach

I specifically addressed the influence of personal resources on life satisfaction following a SLE. In order to ensure a parsimonious outcome following the analysis, those personal resources and SLEs with the strongest empirical support were chosen. SLEs were measured by (a) death of a spouse; (b) divorce; (c) marital separation; (d) death of a close family member; (e) personal injury or illness; (f) marriage; (g) retirement; (h) change in living conditions; (i) change in residence; and (j) change in financial state (See Table 2A). Personal resources were measured by: (a) social support; (b) autonomy; and (c) the perception of financial security (See Table A3). Life satisfaction was measured by Diener's Measure of Life Satisfaction (Diener, Emmons, Larsen, & Griffen, 1985; Pavot & Diener, 1993) (See Table A4).

Dataset and Selection

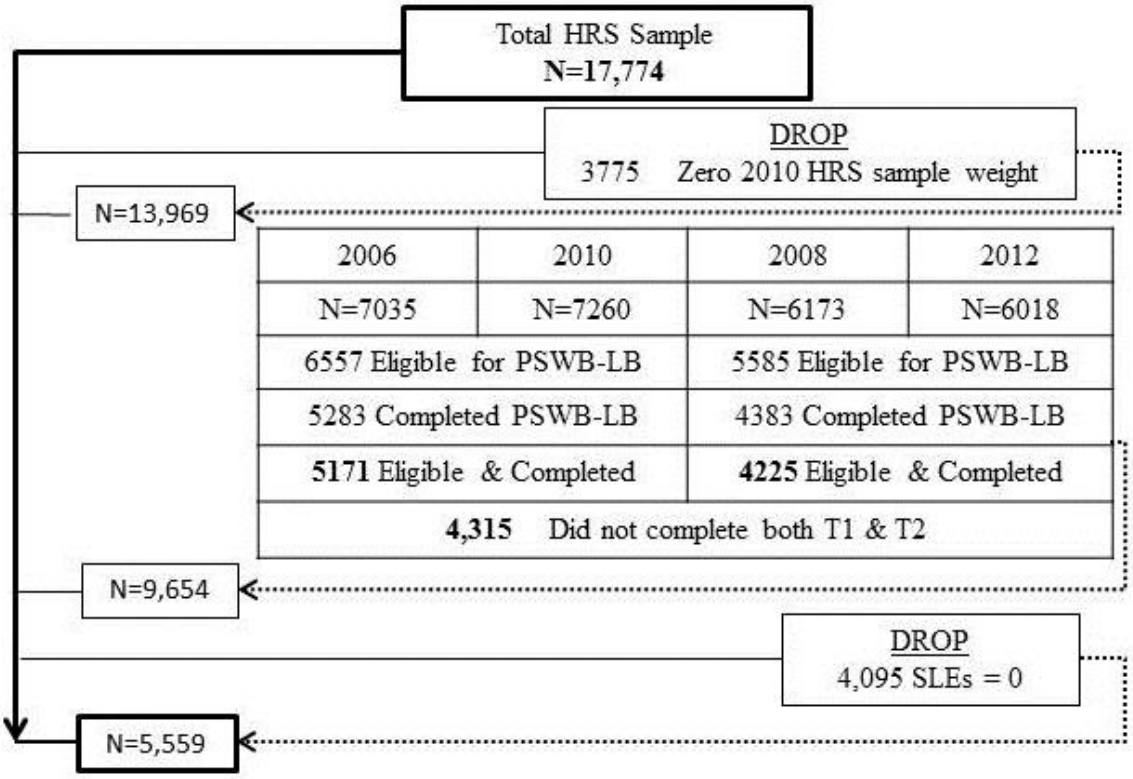
This study analyzed respondent level data collected in the HRS during the years 2006, 2008, and 2010, and 2012. The HRS, a multi-staged, area-clustered, stratified sample design longitudinal survey launched in 1992 was administered by The University of Michigan with an oversample of Blacks, Hispanics, and residents of Florida (University of Michigan, 2013). Every two years, Americans over the age of 50 were asked a series of questions regarding their income, assets, work, pension plans, health insurance, physical health and functioning, and other relevant areas (University of Michigan, 2013). The HRS data for this research was compiled from three datasets in each year examined: core, imputation files, and the PSWB-LB survey.

Psychosocial Leave-Behind Survey (PSWB-LB). The HRS is a nationally representative sample of individuals 50 years and older in the United States and use of the PSWB-LB as generalizable to the U.S. population is supported by current research efforts (Ayalon & Gum, 2011). The overall response rate for completion of the PSWB-LB in 2006 was 74 percent; 2008 was 71 percent, 2010 and 2012 were not available (Smith, Fisher, Ryan, Clarke, House, & Weir, 2013). The PSWB-LB gathered more detailed data in six substantive areas: subjective well-being; lifestyle and stress; quality of social ties; personality; work-related beliefs; and self-related beliefs.

Data Analysis Selection. Analysis began with 2006 as the DV was not included in previous waves. Starting in the 2006 survey cycle, the PSWB-LB was offered to 50 percent of those who completed the in-person core survey. The other 50 percent were asked in alternating survey years to complete the PSWB-LB. Over four cycles all respondents were offered the survey. This structure allows for a four year gap between surveys compared to two years for the DV in this research. This research was conducted using two time points for each respondent. Subsequently, the data were examined in four year increments versus two year increments as the survey was administered. The sampling

methods for administering the PSWB-LB survey determined the baseline, or Time 1 (T1), for each respondent. As described, those who took the HRS in 2006 and were administered the PSWB_LB that same year had 2010 as Time 2 (T2). Likewise, if the HRS & PSWB-LB were taken in 2008, T2 was 2012. Accordingly, 2006 (T1a) corresponds with 2010 (T2a) and 2008 (T1b) corresponds with 2012 (T2b).

Figure 3: Analytic Sample Derivation



In an effort to ensure maximum external validity, exclusion criterion was minimal. The sample derivation was conducted as follows and is outlined step by step in Figure 3. The HRS is organized by year and all data was merged based on the response to the PSWB survey. Before sample selection was made, the 2006 and 2010 (N=18,469) data were combined in to one file and the 2008 and 2012 (N=17,217) data were combined in to one file with a starting sample of N=17,744. The first sequential drop was conducted at T1. Those who had a zero HRS sample

weight in 2010 (n= 3,775) were removed from the sample. The variables for analysis were created at this point. The next sequential drop removed those who did not have a dependent variable at T1 & T2 (n=4,315) and those who had zero SLEs (n=4,095). This created the final sample size (N=5,589).

Measures

Independent variable: Stressful life events. There were ten SLEs represented on the SRRS that are relevant to older adults as discussed in chapter two and also represented in the HRS. These events are (a) death of a spouse; (b) divorce; (c) marital separation; (d) death of a close family member; (e) personal injury or illness; (f) marriage; (g) retirement; (h) change in financial state; (i) change in living conditions; and (j) change in residence. If the event occurred, then it was recoded in to the index variable measuring SLEs with a value ranging from 100 to 0 based on the corresponding value on the SRRS. The SRRS ranks SLEs by impact, magnitude, and the length of time needed to adjust to the changes created by a life event (see Table A2). The higher the number assigned on the scale, the larger the disruption to life patterns and stress (Holmes & Rahe, 1967). Creation of the variables used in this analysis incorporated the values assigned to events in the SRRS. Use of the SRRS as a guide for this variable was an innovative way to use a validated measure when the measure itself was not administered by using existing measures in the HRS. For example, death of a spouse has a value of 100 on the SRRS and was coded with a value of 100 in the variable "SLE". By summing, the concurrent occurrence of SLEs commonly occurring in older populations was captured. This method of specifically examining events in the time frame they are most likely to affect the individual effectively addressed microfication. Considering the DV over time and in the context of current life events (Hagestad & Dannefer, 2001) ensures a more accurate analysis of the impact of changes over time than at just one time point.

The measure for SLEs was calculated as follows: (a) ***death of a spouse*** was calculated using the following question at T2: "Did you divorce or become widowed since (last interview)?" Respondents who responded "yes" were then asked which – widowed or divorced. Those who reported "widowed" were coded with a value of 100; (b) ***divorce*** was calculated using the following question at T2: "Did you divorce or become widowed since (last interview)?" Respondents who responded "yes" were then asked which – widowed or divorced. Respondents who reported divorced were coded with a value of 73; (c) ***marital separation*** was calculated using the following question at T2: "Would you say you are currently married, separated, divorced, or widowed?" The response was compared to the response in the previous wave to determine if the event occurred in the reporting period. Those who had a response of "married" in the previous wave and "separated" in the current wave was considered to be separated in the appropriate time frame and coded with a value of 65; (d) ***death of a close family member*** was calculated using three questions. Death of a parent was calculated using the question: "Since the last reporting period, has your mother died?", "Since the last reporting period, has your father died?" at T2. Respondents who reported "yes" to either question were coded with a value of 63. Death of a sibling was calculated using the question: "What year did your sibling(s) die?" at T2. A response within the two years previous to T2 was considered to be in the appropriate reporting period, and was coded with a value of 63; (e) ***personal injury and illness*** was calculated using the following questions: "In what year were you first diagnosed with diabetes?"; "In what year was your most recent cancer diagnosis?"; "In what year was your most recent heart attack?"; "What year were you diagnosed with heart failure?"; "What year were you diagnosed with abnormal heart rhythm?"; "In what year was your most recent stroke?"; and If responded "yes" to the question "Did you have a fall in the last two years?" the follow up question "Did you suffer an injury with this fall?". Respondents

who indicated the year of their most recent diagnosis was in 2008 (2010 respondents only), 2009 (2010 respondents only), 2010 (2010 and 2012 respondents), 2011 (2010 and 2012 respondents), 2012 (2012 respondents only), and 2013 (2012 respondents only) were coded with a value of 53 for each injury or illness. For the question "Did you suffer an injury with this fall?" respondents who responded "yes" were coded with a value of 53. This coding scheme allowed for multiple injuries and illnesses to be captured; (f) ***marriage*** was calculated using the following question at T2: "Would you say you are currently married, separated, divorced, or widowed?" The response will be compared to the response in the previous wave to determine if the event occurred in the reporting period. Those who had a response of "separated", "divorced", or "widowed" in the previous wave and "married" in the current wave was considered to be married in the appropriate time frame and coded with a value of 50; (g) ***retirement*** was calculated using the following question at T2: "What year did you retire?" A response within the two years previous to T2 was considered to be in the appropriate reporting period, and was coded with a value of 45; (h) ***change in financial state*** was calculated using imputed income and wealth variables from the RAND imputation files (Servais, 2010). For 2008, the income variable for 2006 was compared to 2008 and for 2012; the income variable for 2012 was compared with 2010. If a decline of 20% or more occurred between T1 and T2, then it was considered as the event having occurred and coded with the value of 38; (i) ***change in living conditions*** was calculated using the following question at T2: "Have you moved to a worse residence or neighborhood in the last five years?" A response of "yes" was coded with a value of 25; (j) ***change in residence*** was calculated using the following interviewer variable: "HH (Household) moved since previous wave". A response of "yes" was coded with a value of 20. Lastly, no event was calculated if the sum of all variables equals 0 and was coded with a value of 0.

Buffers: Personal resources. Personal resources were measured by four indicator variables (a) changes in social support; (b) changes in autonomy; (c) ability to pay bills; and (d) changes in the perception of financial security. Some of the measures had psychometrics run by HRS researchers, and were included where available. All variables were reverse coded as necessary higher values indicate positive responses or higher level of satisfaction.

Change in social support. Change in social support covers both positive and negative aspects of social interactions between spouses, children, family, and friends and was on a four point Likert-type Scale ranging from a lot (1) to not at all (4). Psychometrics for this variable in the HRS were as follows: Positive Social Support for 2006 – Spouse (Alpha = .81), Children (Alpha=.83), Family (Alpha=.86) & Friends (Alpha=.84); Positive Social Support for 2008 - Spouse (Alpha = .82), Children (Alpha=.82), Family (Alpha=.86) & Friends (Alpha=.83); Positive Social Support for 2010 - Spouse (Alpha = .82), Children (Alpha=.82), Family (Alpha=.86) & Friends (Alpha=.85); Negative Social Support for 2006 - Spouse (Alpha = .78), Children (Alpha=.78), Family (Alpha=.78) & Friends (Alpha=.76); Negative Social Support for 2008 - Spouse (Alpha = .79), Children (Alpha=.78), Family (Alpha=.78) & Friends (Alpha=.76); and Negative Social Support for 2010 - Spouse (Alpha = .78), Children (Alpha=.76), Family (Alpha=.78) & Friends (Alpha=.76). Psychometric values for 2012 wave were not available (Smith et al., 2013).

The change in social support variable was created by first reverse coding the positively worded questions at both T1 and T2 so that a high score indicated higher levels of perceived support. Responses were then averaged with the final score and set to missing if more than one item was missing. The four negative questions were also averaged and set to missing if more than two items were missing (Clarke, Fisher, House, Smith & Weir, 2008). Next, the positive and

negative questions related to the four sources of support (family, friends, spouse, and children) were combined in a single variable. Lastly, in order to calculate a change in score over time, T1 was subtracted from T2.

Change in Autonomy. Change in autonomy was calculated from the Midlife Developmental Inventory (MIDI) (Lachman & Weaver, 1998; Pearlin & Schooler, 1978). This scale used eleven questions set on a Likert-type scale ranging from strongly disagree (1) to strongly agree (6) measuring mastery and constraint. Mastery was the sense of efficacy one feels and constraint was the perception of obstacles to achieve their goals. Higher values indicated higher mastery and lower constraint (Lachman & Weaver, 1998). Psychometrics for the variable as it presented in the HRS were as follows: Constraints - 2006 Alpha=.86; 2008 Alpha=.87; 2010 Alpha=.88; 2012; Mastery – 2006 Alpha=.89; 2008 Alpha=.89; 2010 Alpha=.90. Psychometric values for 2012 wave were not available (Smith et al., 2013).

The change in autonomy variable was created by first averaging all questions and set to missing when more than three items were not answered (Clarke et al., 2008) for each time point resulting in a T1 score and a T2 score. In order to indicate a change in score over time, T1 was subtracted from T2.

Change in the financial security. Change in financial security was based on two questions from the HRS measuring experience of financial strain. The first question "How difficult is it for you or your family to meet monthly payments on your bills" was measured on a five point Likert-type scale ranging from not at all difficult (1) to completely difficult (5). The second question asked "How satisfied are you with your present financial situation?" was also measured on a five point Likert-type scale ranging from not at all satisfied (1) to completely satisfied (5). Psychometrics were not available for this variable (Smith et al, 2013).

The continuous change in financial security variable was created by first reverse coding the first question to indicate the ability to pay bills being not at all difficult as the highest value and completely difficult as the lowest value. The mean of the first and second questions were then used to create one variable measuring "perception of financial security". Next, both questions were averaged and set to missing when more than three items were not answered (Clarke et al., 2008) for each time point resulting in a T1 score and a T2 score. In order to indicate a change in score over time, T1 was subtracted from T2.

Buffer: Race. Race was calculated from the Race/Ethnicity variable located in the Tracker File. Race is a focus of this research as a mechanism to make direct comparisons between the experiences of Black elders and White elders. By using a dummy variable to identify group membership along with interaction terms, the different effects across the groups can be better identified (Williams, 2014). This categorical variable was recoded in to a dummy variable with Black =1 and White = 0 as the reference group.

Dependent Variable: Change in Life Satisfaction. Change in life satisfaction was calculated from Diener's Measure of Life Satisfaction Scale (Diener, Emmons, Larsen, & Griffen, 1985; Pavot & Diener, 1993). This measure has been well established and has considerable evidence of construct reliability and instrument validity (Ayalon & Gum, 2011). The questions in the measure were based on a six point Likert-type scale ranging from strongly disagree (1) to strongly agree (6). Psychometrics for this variable are: 2006 Alpha=.89; 2008 Alpha=.88; 2010 Alpha=.89 (Smith et al., 2013).

The continuous change in life satisfaction variable was created by averaging the scores across all five items with the final score set to missing if more than three items are missing (Clarke et al., 2008) for each time point resulting in a T1 score and a T2 score. Higher values indicated

higher life satisfaction. In order to indicate a change in score over time, T1 was subtracted from T2.

Control Variable: Level of Education. Level of education was calculated from the question "What is the highest degree of education obtained?" from the HRS tracker file. The options for response were: (1) no degree; (2) GED; (3) High School; (4) two year degree; (5) four year degree; (6) Professional degree; and (7) some college. This variable was recoded so that some college fits in the hierarchy of level of education and thus, an ordinal level variable is created with the lowest value indicating the lowest level of education and this highest value indicating the highest level of education. The variable was recoded to: (1) no degree; (2) GED; (3) High School; (4) some college; (5) two year degree; (6) four year degree; (7) professional degree.

Control Variable: Perception of Health Status. Perception of health status was calculated from the question "Would you say your health is excellent, very good, good, fair, or poor?" at T2. The question was based on a five point Likert-type scale ranging from excellent (1) to poor health (5). This variable was recoded so higher values indicate excellent health (5) and lower values indicate poor health (1). Psychometrics were not available for this question.

Weights. The HRS provided weights for each sample year in the cross-wave tracker files. These weighted variables were post-stratified to the year of data collection and (Health and Retirement Study, 2013) accounted for oversampling of AHEAD, EBB, MBB cohorts and African-American and Hispanic respondents at a rate of about 2 to 1 (Ofstedal, Weir, Chen, & Wagner, 2011). Because the HRS used the baseline weight as the starting point for generating subsequent sample weights and is not uniquely calculated based on *only* the year the data were collected (Ofstedal, Weir, Chen, & Wagner, 2011), only the weight from one year was applied to the analysis. Other large scale surveys, such as the General Social Survey (GSS), recommended applying

sampling weights to the *case* which results in an extremely large N – which can create false significant findings. In order to combat this problem, yet still use the weight to accurately represent the aging population in the United States, it was necessary to re-base the weight to the sample (Humphrey, n.d.) and it is this final weight that was used in the analysis using the weight cases function in SPSS (See Table 1).

To account for the stratified survey design, two additional variables were applied using the *svy* command in STATA. The first variable STRATUM found in the HRS tracker file defines the sampling error computation strata of the HRS data. The second variable SECU, also found in the HRS tracker file, is the stratum half-sample code for analysis of sampling error using the BRR method.

Table 1: Original Data, Original Weighted Data and Rebased Weighted Data Comparisons

Highest Level of Education	Original Data		Original Weight Applied		Rebased Weight Applied	
	N	%	N	%	N	%
No Degree	804	14.5%	2985740	11.5%	1152	11.5%
GED	272	4.9%	1203181	4.6%	464	4.6%
High School	2841	51.1%	12987880	49.9%	5013	49.9%
Some College	11	0.2%	81646	0.3%	32	0.3%
2 year Degree	273	4.9%	1391821	5.3%	537	5.3%
4 year Degree	754	13.6%	3974037	15.3%	1534	15.3%
Master's Degree	460	8.3%	2601872	10.0%	1004	10.0%
Professional Degree	144	2.6%	818316	3.1%	316	3.1%

Analysis Plan

Data Screening and Testing Assumptions. Multiple regression analysis has two sets of assumptions. One set of assumptions is concerning the raw scale variables and the second is about the residuals. The raw scale assumptions are (a) the IV is fixed (b) The IVs are measured without error and (c) The relationship between the IV and DV is linear. The residual assumptions are (d) the mean for each observation on the DV over many replications is zero, (e) individual observation errors on the DV are independent of errors associated with other DV observations, (f) Errors are

not correlated with the IVs, (g) variance of the residuals across IVs is constant (homoscedasticity) and (e) errors are normally distributed. These assumptions can, for the most part, be tested through standard data screening procedures (Mertler & Vannatta, 2005).

Assumptions (c), (e), and (f) are concerned with linearity and normality. Univariate normality was visually assessed by reviewing the histogram for skewness and normal distribution. Skewness was examined in the final composite variable and all values for skewness were found to be within normal limits. QQ plots showed normality of the variable with a relatively straight line. Linear relationship and normality was be visually confirmed by a scatterplot matrix and all variables showed elliptical shapes. Additionally, the residual scatterplot was sufficient for all three of these assumptions (Mertler & Vannatta, 2005) and for the data, a visual confirmation of points clustered along the regression line in a somewhat rectangular pattern supported tests of linearity and normality.

Assumption (g) is concerned with homoscedasticity which was assessed through interpretation of the Box's M Test. An insignificant value for all independent variables demonstrated the assumption had not been violated. The residual scatterplot with observation points clustered along the horizontal line in a fairly rectangular pattern, which visually confirmed the Box's M Test for homoscedasticity. Assumption (h) is concerned with normality. To confirm this assumption had been violated, the residual scatterplot matrix displayed an even distribution of points both above and below the horizontal line.

Multivariate data screening for all IVs and the DV was conducted following accepted methods for continuous variables. Outliers were identified by calculating the Mahalanobis Distance to determine which cases exceed the chi square (x^2 df=(4)=20.51, p<.001) and 130 cases did exceed the critical value, but are under 5% of the entire sample, so they were left in the final

sample. The residuals plot was reviewed and revealed no multivariate homoscedasticity and confirmed normality of the data.

Linear Regression Analysis. This study explored six hypotheses that examined the longitudinal buffering relationship of personal resources on life satisfaction following SLEs. A sequential multiple regression analysis using the enter method was used to systematically test the role of personal resources. This method of analysis was possible because the values for SLEs were summed for a cumulative effect and thus, influence of the first time-point was not a consideration as it would be for pre-test post-test designs of longitudinal research (Cohen, Cohen, West, and Aiken, 2003). The model for each hypothesis was as follows:

H1: The first hypothesis tested for the main effects prediction of SLEs on changes in life satisfaction. To test this hypothesis, the current study used a two-step multiple regression. Step 1 controlled for level of education and perception of health status. Step 2 tested the main effects of SLEs on changes in life satisfaction.

H2: The second hypothesis tested the interaction effect changes in social support had on the relationship between SLEs and changes in life satisfaction. To test this hypothesis, the current study used a four-step multiple regression. Step 1 controlled for level of education and perception of health status. Step 2 tested the main effects of SLEs on life satisfaction. Step 3 tested the main effects of change in social support on change in life satisfaction. Finally, Step 4 tested the two-way interaction effect between SLEs and change in social support.

H3: The third hypothesis tested the interaction effect changes in autonomy had on the relationship between SLEs and changes in life satisfaction. To test this hypothesis, the current study used a four-step multiple regression. Step 1 controlled for level of education

and perception of health status. Step 2 tested the main effects of SLEs on life satisfaction. Step 3 tested the main effects of change in autonomy on change in life satisfaction. Finally, Step 4 tested the two-way interaction effect between SLEs and change in autonomy.

H4: The fourth hypothesis tested the interaction effect changes in financial security had on the relationship between SLEs and changes in life satisfaction. To test this hypothesis, the current study used a four-step multiple regression. Step 1 controlled for level of education and perception of health status. Step 2 tested the main effects of SLEs on life satisfaction. Step 3 tested the main effects of change in perception of financial security on change in life satisfaction. Finally, Step 4 tested the interaction effect between SLEs and change in perception of financial security.

H5: The fifth hypothesis tested the interaction effect changes in social support and race had on the relationship between SLEs and changes in life satisfaction. To test this hypothesis, the current study used a six-step multiple regression. Step 1 controlled for level of education and perception of health status. Step 2 tested the main effects of SLEs on life satisfaction. Step 3 tested the main effects of change in social support and race on change in life satisfaction. Step 4 tested the two way interaction between SLEs and change in social support, SLEs and race, and change in social support and race. Step 5 tested the three way interaction SLEs x change in social support x race.

H6: The sixth and final hypothesis tested the interaction effect changes in financial security and race had on the relationship between SLEs and changes in life satisfaction. . To test this hypothesis, the current study used a six-step multiple regression. Step 1 controlled for level of education and perception of health status. Step 2 tested the main effects of SLEs on life satisfaction. Step 3 tested the main effects of change in perception of financial

security and race on change in life satisfaction. Step 4 tested the two way interaction between SLEs and perception of financial security, SLEs and race, and change in social support and race. Step 5 tested the three way interaction SLEs x change in perception of financial security x race.

Regression equation. In the regression equation, *y* represented the outcome (changes in life satisfaction), *b* represented the coefficient, *x* represented the independent variables (Degree = x_1, Perception of Health Status = x_2, SLEs = x_3, and race = x_4), and *z* represented the buffer variable (changes in social support = z_1, autonomy = z_1, or financial security = z_1) (Preacher, Curran, & Bauer, 2006). The regression equation for the two way interaction was as follows:

$$y_1 = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4z_1 + b_5x_3z_1 + c$$

The regression equation for the three way interaction was as follows:

$$y_1 = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_4z_1 + b_5x_3z_1 + b_5x_4z_1 + b_6x_3x_4 + b_7x_3\,x_4z_1 + c$$

The crux of this research was to determine the buffering effect of personal resources on life satisfaction. In order to thoroughly examine this relationship, three outputs were considered: (a) model summary, (b) ANOVA table and (c) coefficient output. The model summary was used to determine how well the model predicts life satisfaction. The Pearson Correlation (R value) showed the correlation between the predicted DV value and the actual DV value while the (R^2) coefficient was the amount of variance when all variables were combined. Since the sample size was large (>100), the (R^2) coefficient was examined. This (R^2) indicated the percentage of variance explained by the model value and the closer this value was to 1.00, the more variance was explained (Meyers, Gamst, Guarino, 2006).

Limitations

The relationships between SLE, personal resources, and life satisfaction are complicated and not exclusively predictive or buffering. A significant limitation in designing a research model examining the relationship between personal resources, SLEs, and life satisfaction is the way in which previous research has been conducted. In fact, a great challenge to designing the examination of these factors is limiting the analysis to one specific area as relationships have been found between many of the factors as predictors, moderators, **and** mediators. It could be entirely possible to make an argument for personal resources to moderate or mediate the relationship between SLEs and life satisfaction based on the available literature. For example, one aspect of personal resources that will be examined in this research is social support. Cohen and Hoberman (1983) specifically examined the moderating effect of social support between positive events and life change stress.

Life change stress specifically will not be examined in this research and in fact, stress is an explicit limitation that will not be addressed. Stressful life events are of interest to researchers and guides current pursuits in the identification of moderators and mediators following life events. However, for purposes of this research, the stress model is used as the foundation for pursuing SRRS variables as a measure of SLEs only. The HRS includes variables that ask about depressive symptoms, but will not be included in this research due to the inability to confirm any diagnosis or treatment. Many symptoms of depression may be severe or mild or even situational and without a specific focus on mood and depression, could potentially cloud the results.

CHAPTER 4: Results

Initial Data Exploration

Sample Demographics. A total of 5,589 individuals between the ages of 58 and 101 were included in the final dataset. Data were weighted using re-based initial 2010 individual level weights provided by the HRS by using the weight cases function in SPSS. This weighting resulted in a sample size of 10,053 used in the final analysis. All tables and results reflect weighted values. The average age of respondents in this study was 69.5 years of age. Blacks represent 12.5% of the sample while Whites represent 83.6%. 44.3% of the sample is male and 55.7% are female. 55.5% of White respondents were female while 63.7% of Black respondents were female. 14.1% of the total sample fell below $18,181 and the average household income for all respondents is $52,402.88. When compared by race, 15.1% of Black elders fell below the poverty level with an average household income of $43,329.63 as compared to 3.6% of White households with an average household income of $82,632.81 (See Table 2).

Table 2: Frequencies: Sample Demographics

	n	%
Gender		
Male	4457	44.3%
Female	5596	55.7%
Race		
Black	9026	89.8%
White	676	6.7%
Other/Unknown	347	3.5%
Income		
Poverty level (under $10,458)		
$10,459 - $14,999	465	4.6%
$15,000 - $24,999	518	5.2%
$25,000 - $34,999	1266	12.6%
$35,000 - $49,999	1227	12.2%
$50,000 - $74,999	1532	15.3%
$75,000 - $99,000	1728	17.3%
$100,000 and above	1037	10.4%

Independent Variable: Stressful Life Events. SLE summed scores ranged between 20 and 328 with an average summed score of 71.36. However, the mode was a score of 38, which alone represents 32.5% of the sample while 18.4% have scores 100 or above. When comparing the individual SLEs by race, 82.8% of Black elders experienced a decline in their income as compared to 79.0% of White elders. 5.7% of Black elders experienced a change in their living situations while only 3.0% of White elders had this experience. More Black elders were separated (2.1%), divorced (2.9%) and widowed (4.0%) than their White (separated 0.2%; divorced 1.6%; widowed 1.1%) counterparts. White elders had higher rates of relocating (18.1%) than Black elders (17.3%). The most common SLE for both Black and White elders was a change in income, with White elders (79.0%) having a lower incidence than Black elders (82.8%). The second most common SLE was a new injury or illness with minor differences between Black (24.4%) and White (23.7%) elders (See Table 3).

Table 3: Frequencies: Independent Variable – Stressful Life Events

			Black		White	
	n	%	n	%	n	%
Stressful Life Events						
Relocated	1,827	18.2%	116	17.3%	1,637	18.1%
Change in living situation	313	3.1%	38	5.7%	263	3.0%
Change in income	7,958	79.2%	560	82.8%	7,128	79.0%
Retired	1,317	13.2%	81	11.9%	1,195	13.2%
Married	17	0.2%	1	0.1%	16	0.2%
Injury or illness	2,360	23.5%	165	24.4%	2,137	23.7%
Death of a family member	1,277	12.7%	74	10.8%	1,166	12.9%
Separated	35	0.3%	14	2.1%	19	0.2%
Divorced	182	1.7%	20	2.9%	190	1.6%
Widowed	129	1.3%	27	4.0%	93	1.1%

When comparing by race, Black elders had a mean SLE score of 76.8 with 20.9% having a summed SLE score between 100 and 199 and 1.7% with SLEs over 200, while White elders had

a mean summed SLE score of 70.94 with 17.4% experiencing SLEs between 100 and 199 and 0.9% with SLEs over 200 (See Table 4).

Table 4: Descriptives: IV - Stressful Life Events

	N	M	SD
SLEs	10,053	71.36	39.66
Black	676	76.77	43.67
White	9,026	70.94	39.43

Buffer: Change in Social Support. Change in social support summed scores ranged from -1.57 to 2.04 with negative values indicating a decline in social support and positive values indicating an increase in social support. When comparing changes in social support by race, the mean score for Black elders (M=.022) and White elders (M=.033), both of which are within the range indicating no change in social support (See Table 5).

Table 5: Descriptives: Buffer – Change in Social Support

	n	M	SD
Change in Social Support	10,028	.034	.337
Black	673	.022	.375
White	9,010	.033	.331

Buffer: Change in Autonomy. Change in autonomy summed scores ranged -4.44 to 4.00 with negative values indicating a decline in autonomy and positive values indicating an increase in autonomy. When comparing changes in autonomy by race, the mean score for Black elders (M=-.075) shows decline while White elders (M=.033) was within the range indicating no change in autonomy (See Table 6).

Table 6: Descriptives: Buffer – Change in Autonomy

	n	M	SD
Change in Autonomy	9,874	-.098	.899
Black	660	-.075	1.00
White	9,010	.033	.331

Buffer: Change in Perception of Financial Security. Change in financial security summed scores ranged from -3.0 to 3.0 with negative values indicating a decline in the perception of financial security and positive values indicating an increase in the perception of financial security (See Table 7). When comparing changes in the perception of financial status by race, the mean score for White elders (M=-.250) shows a larger decline than Black elders (M=-.175).

Table 7: Descriptives: Buffer – Change in Financial Security

	n	M	SD
Change in PFS	9,826	.252	1.44
Black	676	.178	1.63
White	9,026	.250	1.42

Dependent Variable: Change in Life Satisfaction. Change in life satisfaction summed scores ranged from -6.0 to 6.0 with negative values indicated a decline in life satisfaction and positive values indicating an increase in life satisfaction (See Table 8). When comparing the changes in the life satisfaction by race, the mean score for White elders (M=.250) shows a larger increase than Black elders (M=.178).

Table 8: Descriptives: DV – Change in Life Satisfaction

	n	M	SD
Change in Life Satisfaction	10,053	.252	1.44
Black	676	.178	1.63
White	9.26	.250	1.42

Control Variable: Highest Level of Education. The majority of the sample (49.9%) had a high school diploma. When comparing by race, a very large difference in education is evident between Black elders and White elders. 23.4% of Blacks did not finish high school while only 9.7% of Whites did not have their high school diploma (See Table 9). More Black elders (5.1%) have a two-year degree than Whites (4.8%), but more Whites (15.7%) have completed a four-year degree than Blacks (9.2%).

Table 9: Frequencies: Control Variable – Highest Level of Education

			Black		White	
	n	%	n	%	n	%
Level of Education						
No degree	1152	11.5%	171	25.3%	892	9.9%
GED	464	4.6%	37	5.5%	392	4.3%
High School	5013	49.9%	318	47.1%	4550	50.4%
Some College	32	0.3%	0	0.1%	31	0.3%
Two Year college degree	537	5.3%	35	5.1%	486	5.4%
Four Year college degree	1534	15.3%	68	10.1%	1431	15.9%
Master's degree	1004	10.0%	41	6.1%	942	10.4%
Professional degree	316	3.1%	5	0.7%	301	3.3%

Control Variable: Perception of Health Status. Almost half of the sample rate their health as very good or better (45.9%). When comparing by race, more Whites (47.8%) than Blacks (28.5%) rate their health as very good or better. However, if good or better is considered, the gap is a full 10% points closer between Black (69.1%) and White (79.9%) elders indicating an overwhelming number of elders perceive their health status as good or better (See Table 10). Furthermore, a much higher percentage of Black (40.6%) elders identify as being in good health than White (32.1%) elders.

Table 10: Frequencies: Control Variable – Perception of Health Status

			Black		White	
	n	%	n	%	n	%
Perception of Health Status						
Poor	537	5.3%	42	6.2%	463	5.1%
Fair	1611	16.0%	165	24.6%	1353	15.0%
Good	3287	32.7%	274	40.6%	2899	32.1%
Very Good	3471	34.5%	163	24.2%	3222	35.7%
Excellent	1144	11.4%	29	4.3%	1088	12.1%

Linear Regression Analysis.

While demographic comparisons are meaningful in this research to discern differences between by race, answering the research questions through analysis will yield significant predictors of changes in life satisfaction for the general aging population. This study explores six hypotheses, and the results of each of which will be summarized in this section. The specific interactions tested have been described in Chapter 3 and can be further examined in Table 5A in the Appendix. This chapter will end with an analysis of the impact personal resources have on elders at different stages of the aging process and by race.

Research Question: Do significant life events predict changes in life satisfaction?

H1: Elders who experience higher levels of stressful life events are more likely to experience a decline in life satisfaction over time (Main effects)

A linear regression was used to determine if SLEs significantly predicted changes in life satisfaction over time when controlling for level of education and perception of health status. To ensure multicollinearity was not a problem, the tolerance and VIF statistics were reviewed. All tolerance values were >.01 and all VIF values were <10, therefore there are no multicollinearity concerns with this analysis.

Model summary results showed that the main effects model was significant in predicting changes in life satisfaction, $R_2 = .005$, $R_{2adj} = .004$, $F_{change}(1, 5119) = 141.407$, $p<.001$, $F(3, 5119) = 55.276$, $p<.001$. This suggested that 0.40% of the variance in change in life satisfaction could be explained by SLEs. The coefficient analysis for the main effects model indicated that perception of health status was significant, $b = .097$, $t(3) = 4.677$, $p<.001$, uniquely accounting for 0.01% of the variance in changes in life satisfaction. For every one unit change in perception of health status, the change in life satisfaction score changed by 0.10 points. Likewise, SLEs were also significant, $b = -.006$, $t(3) = 11.891$, $p<.001$, uniquely accounting for 3.00% of the variance in changes in life satisfaction. SLEs (B=-.006) had a weak negative correlation to changes in life satisfaction. For

every one unit increase in SLEs, the change in life satisfaction score decreased by .006 points. Conversely, decreases in SLEs by one unit would see an increase in change in life satisfaction score by .006 points. However, level of education was not significant, b = -.008, $t(3)$ = .755, p = .450 (See Table 11).

Table 11: Means, Standard Deviations, and Intercorrelations for Change in Life Satisfaction and Predictor Variable: SLEs

Variable	*M*	*SD*	*1*
Change in Life Satisfaction	.314	1.404	-.164*
Predictor Variables			
1. SLEs	69.795	38.432	--

**Note:* Indicates significance at the $p \leqslant 0.001$ level

These findings indicate that SLEs are significant predictors of life satisfaction after controlling for level of education and perception of health. The weak negative correlation with changes in life satisfaction demonstrates that higher summed SLEs in the time frame measured resulted in declines in life satisfaction over the same time frame. Conversely, lower summed SLEs resulted in increases in life satisfaction (See Table 18). When accounting for stratification with STATA, the coefficients also showed a weak negative correlation (See Table 19). Thus, while the hypothesis predicting declines in life satisfaction with higher SLEs is supported by a significant predictive relationship between SLEs and changes in life satisfaction, it is imperative that the weak coefficient not be interpreted as a strong finding, rather suggests further examination of the relationship.

Research Question: Do changes in social support buffer the relationship between SLEs and changes in life satisfaction?

H2: Social support will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in social support will have higher life satisfaction over time than those with declines in social support (longitudinal buffer effect/testing the interaction SLE x SS)

A linear regression was used to determine if the changes in social support significantly buffered the relationship between SLEs and changes in life satisfaction when controlling for level of education and perception of health status. Linear regression was conducted with change in life satisfaction as the dependent variable, SLEs as the independent variable, and change in social support as the buffer variable. To ensure multicollinearity was not a problem, the tolerance and VIF statistics were reviewed. All tolerance values were >.01 and all VIF values were <10, therefore there are no multicollinearity concerns with this analysis.

Model summary results showed that the interaction effects model was significant in predicting changes in life satisfaction, $R_2 = .052$, $R_{2adj} = .051$, $F_{change}(1, 5105) = 7.144$, $p=.008$, $F(5, 5110) = 56.467$, $p<.001$. The interaction between SLEs and change in social support did make a significant contribution ($p<.001$) to the prediction of changes in life satisfaction in the final two-way interactions model (See Table 12). This suggested that 5.20% of the variance in change in life satisfaction could be explained by the interactions between SLEs and change in social support. The coefficient analysis for the two-way interaction effects model indicated that SLEs were significant, $b = -.006$, $t(5) = -11.738$, $p<.001$, uniquely accounting for 2.79% of the variance in changes in life satisfaction. SLEs (B=-.006) had a low negative correlation to changes in life satisfaction. For every one unit increase in SLEs, the change in life satisfaction score was predicted to decrease by .006 points. Conversely, decreases in SLEs by one unit would see an increase in change in life satisfaction score by .006 points. Likewise, changes in social support was also significant, $b = .957$, $t(5) = 7.006$, $p<.001$, uniquely accounting for .011% of the variance in changes in life satisfaction. Changes in social support (B=.957) had a strong positive correlation to changes in life satisfaction. For every one unit change in the changes in social support score, the change in life satisfaction score changed by .957 points. Finally, the two-way interaction

between SLEs and change in social support was significant, b = -.004, $t(5)$ = -2.667, p = .008, uniquely accounting for .014% of the variance in changes in life satisfaction (See Table 18).

Table 12: Means, Standard Deviations, and Intercorrelations for Change in Life Satisfaction and Predictor Variable: SLEs and Buffer: Change in Social Support

Variable	*M*	*SD*	*1*	*2*	*3*
Life Satisfaction	.315	1.404	-.164*	.137*	.095*
Predictor Variables					
1. SLEs	69.831	38.459	--	.019	.078*
2. Change in Social Support	.038	.313	--	--	.893*
3. Change in Social Support x SLEs	3.318	28.506	--	--	--

**Note:* Indicates significance at the $p \leqslant .001$ level

These findings indicated that SLEs and changes in social support were significant predictors of life satisfaction after controlling for level of education and perception of health. Changes in social support had the largest coefficient in the model with a very strong positive correlation and thus, contributed the largest amount to the prediction of changes in life satisfaction. Additionally, the interaction between SLEs and change in social support was also a significant predictor of changes in life satisfaction with a weak negative correlation. The weak negative correlation indicated a positive change in the interaction term results in a negative change in life satisfaction. Therefore, the hypothesis change in social support buffers the impact of SLEs on changes in life satisfaction is supported.

When accounting for survey design with STATA, the coefficient for the main effect changes in social support had a strong positive correlation and was also significant. However, the coefficient for the interaction term was smaller and was not significant (See Table 19 for STATA results). Thus, while the hypothesis predicting declines in life satisfaction by the buffering effect of changes in social support was supported by a significant predictive relationship, the weak interaction coefficient cannot be interpreted as a strong finding.

Research Question: Do changes in autonomy buffer the relationship between SLEs and changes in life satisfaction?

H3: Autonomy will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in autonomy will have higher life satisfaction over time than those with declines in autonomy (longitudinal buffer effect/testing the interaction SLE x Autonomy)

A linear regression was used to determine if the change in autonomy significantly buffered the relationship between SLEs and changes in life satisfaction when controlling for level of education and perception of health status. Linear regression was conducted with change in life satisfaction as the dependent variable, SLEs as the independent variable, and change in autonomy as the buffer variable. To ensure multicollinearity was not a problem, the tolerance and VIF statistics were reviewed. All tolerance values were >.01 and all VIF values were <10, therefore there are no multicollinearity concerns with this analysis.

Model summary results showed that the interaction model was significant, R_2 =.047, R_{2adj} =.046, $F_{change}(1,5039)=5.151$, p=.023, $F(5, 5044) = 49.756$, p<.001. The interaction between SLEs and change in autonomy did make a significant contribution (p<.001) to the prediction of changes in life satisfaction in the final two-way interactions model (See Table 13). This suggested that 4.6% of the variance in change in life satisfaction could be explained by the interactions between SLEs and change in autonomy. The coefficient analysis for the two-way interaction effects model indicated that SLEs were significant, b = -.006, t(5) = -11.275, p<.001, uniquely accounting for 2.46% of the variance in changes in life satisfaction. SLEs (B=-.006) had a weak negative correlation to changes in life satisfaction. For every one unit increase in SLEs, the change in life satisfaction score declined by .006 points. For every decrease in SLEs, the change in life satisfaction score increased by .006 points. Likewise, changes in autonomy was also significant, b = .323, t(5) = 6.184 p<.001, uniquely accounting for .76% of the variance in changes in life satisfaction. Change in autonomy (B=.323) had a moderate positive correlation to changes in life

satisfaction For every one unit change in the change in autonomy the change in life satisfaction score changed by .323 points. Finally, the two-way interaction between SLEs and change in autonomy was significant, b = -.001, t(5) = -2.270, p = .023, uniquely accounting for .01% of the variance in changes in life satisfaction. The interaction term had a weak negative correlation to changes in life satisfaction. For every increase in the interaction term, changes in life satisfaction decreased by .001 points. For every decrease in the interaction term, changes in life satisfaction increased by .001 points (See Table 18).

Table 13: Means, Standard Deviations, and Intercorrelations for Change in Life Satisfaction and Predictor Variable: SLEs and Buffer: Change in Autonomy

Variable	*M*	*SD*	*1*	*2*	*3*
Life Satisfaction	.317	1.408	-.160*	.137*	.109*
Predictor Variables					
1. SLEs	69.525	38.214	--	-.042**	-.047*
2. Change in Autonomy	-.016	.820	--	--	.892*
3. Change in Autonomy x SLEs	-2.129	70.294	--	--	--

**Note:* Indicates significance at the $p \leqslant 0.001$ level

***Note:* Indicates significance at the $p \leqslant 0.05$ level

These findings indicated that SLEs and changes in autonomy were significant predictors of life satisfaction after controlling for level of education and perception of health. Additionally, the interaction between SLEs and change in autonomy was also a significant predictor of changes in life satisfaction with the weak negative correlation indicating a positive change in the interaction term results in negative change in life satisfaction. Changes in autonomy had the largest coefficient in the model with a moderate positive correlation and thus, contributed the largest amount to the prediction of changes in life satisfaction. Additionally, the interaction between SLEs and change in autonomy was also a significant predictor of changes in life satisfaction with a weak negative correlation. The weak negative correlation indicated a positive change in the interaction term results in a negative change in life satisfaction. Therefore, the hypothesis change in autonomy

buffers the impact of SLEs on changes in life satisfaction is supported. When accounting for survey design with STATA, the coefficient for changes in autonomy had a moderate positive correlation and was significant. However, the coefficient for the interaction term was similar to the main analysis, but was not significant (See Table 19 for STATA results). Thus, while the hypothesis predicting declines in life satisfaction by the buffering effect of changes in autonomy was supported by a significant predictive relationship, the weak interaction coefficient cannot be interpreted as a strong finding.

Research Question: Do changes in financial security buffer the relationship between SLEs and changes in life satisfaction?

H4: Perception of financial security will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in financial security will have higher LS over time than those with declines in PFS (longitudinal buffer effect/testing the interaction: SLE x FS)

A linear regression was used to determine if the change in perception of financial security significantly buffered the relationship between SLEs and changes in life satisfaction when controlling for level of education and perception of health status. Linear regression was conducted with change in perception of financial security as the dependent variable, SLEs as the independent variable, and change in perception of financial security as the buffer variable. To ensure multicollinearity was not a problem, the tolerance and VIF statistics were reviewed. All tolerance values were >.01 and all VIF values were <10, therefore there are no multicollinearity concerns with this analysis.

The two-way interaction model summary results showed that the model was significant, R_2 =.035, R_{2adj} =.034, $F_{change}(1, 5008) = 18.593$, p=.000, $F(5, 5013) = 36.135$, p<.001 (See Table 14). The interaction between SLEs and change in perception of financial security did make a significant contribution (p<.05) to the prediction of changes in life satisfaction in the final two-

way interactions model. This suggested that 3.5% of the variance in change in life satisfaction could be explained by the interactions between SLEs and change in perception of financial security.

Table 14: Means, Standard Deviations, and Intercorrelations for Change in Life Satisfaction and Predictor Variable: SLEs and Buffer: Change in Financial Security

Variable	*M*	*SD*	*1*	*2*	*3*
Life Satisfaction	.311	1.398	-.161*	-.042**	-.047*
Predictor Variables					
1. SLEs	69.951	38.559	--	.091*	-.045**
2. Change in Financial Security	-.416	.816	--	--	.868*
3. Change in PFS x SLEs	-31.681	72.656	--	--	--

**Note:* Indicates significance at the $p \leqslant 0.001$ level

***Note:* Indicates significance at the $p \leqslant 0.05$ level

The coefficient analysis for the two-way interaction effects model indicated SLEs was significant, $b = -.006$, $t(5) = -12.096$, $p<.001$, uniquely accounting for 2.82% of the variance. SLEs had a weak negative correlation to changes in life satisfaction. For every one unit decrease in SLEs, the change in life satisfaction score increased by .006 points. For every one unit increase in SLEs, the change in life satisfaction score decreased by .006 points. Changes in financial security was also significant, $b = .149$, $t(5) = 3.006$, $p = .003$, uniquely accounting for .18% of the variance. Changes in financial security had a weak positive correlation to changes in life satisfaction. For every one unit change in changes in financial security, the change in life satisfaction score changed by .149 points. Likewise, the interaction between SLEs and perception of financial security was significant, $b =-.002$, $t(5) = -4.312$ $p<.001$, uniquely accounting for .37% of the variance. The interaction between SLEs and change in financial security (B=-.002) had a weak negative correlation to changes in life satisfaction. For every one unit decrease in this interaction term, the change in life satisfaction score increased by .002 points. Conversely, with a one unit increase in the interaction term, the change in life satisfaction score decreased by .002 points (See Table 18).

Figure 4: The Buffering Effect of Autonomy on the Relationship Between SLEs and Life Satisfaction

These findings indicated that individually, SLEs and change in the perception of financial security are significant in predicting changes in life satisfaction. The interaction between SLEs and change in financial security was also a significant predictor of life satisfaction after controlling for level of education and perception of health. Additionally, the interaction between SLEs and change in financial security was also a significant predictor of changes in life satisfaction with a weak negative correlation (See Figure 4). The weak negative correlation indicated a positive change in the interaction term results in a negative change in life satisfaction. Therefore, the hypothesis change in financial security buffers the impact of SLEs on changes in life satisfaction is supported. When accounting for survey design with STATA, the coefficient for changes in financial security was not significant. Additionally, the coefficient for the interaction term was slightly lower than the main analysis, but was not significant (See Table 19 for STATA results). Thus, while the hypothesis predicting declines in life satisfaction by the buffering effect of changes in financial

security was supported by a significant predictive relationship, the weak interaction coefficient cannot be interpreted as a strong finding.

Research Question: Do changes in social support impact changes in life satisfaction after an SLE differently for Black and White elders?

H5: The relationship between stressful life events and LS will be buffered by both race and changes in SS. Specifically, the effect of social support will be different for African American elders than White elders over time (longitudinal buffer effect/testing the interaction stressful life events x SS x Race)

A linear regression was used to determine if change in social support and race significantly buffered the relationship between SLEs and change in life satisfaction when controlling for level of education and perception of health status. Linear regression was conducted with change in life satisfaction as the dependent variable, SLEs as the independent variable, and change in social support and race as the buffer variables.

The correlation matrix for this model showed that bivariate correlations were present between several variables (See Table 16). There was a weak negative correlation between SLEs and changes in life satisfaction, r = -.131, p<.001, with a R^2 = .017. Thus, 1.7% of the variance in changes in life satisfaction is accounted for by SLEs. There was a weak positive relationship between changes in social support and changes in life satisfaction, r=.123, p<.001, with a R_2=.015, accounting for 1.5% of the variance. There was a weak negative relationship between the two-way interaction SLEs and changes in social support and changes in life satisfaction, r=.101, p<.001, with a R_2=.010, accounting for 1.0% of the variance. There was a very weak positive relationship between the two-way interaction changes in social support and race and changes in life satisfaction, r=.029, p≤.05, with a R_2=.008, accounting for 0.8% of the variance. There was also a very weak negative correlation between the two-way interaction SLEs and race and changes in life satisfaction, r=-.031, p≤.05, with a R_2=.009, accounting for 0.9% of the variance. Finally, there

was a weak positive correlation between the three-way interaction SLEs, changes in social support, and race and changes in life satisfaction, r=.025, p≤ .05, with a R_2=.006, accounting for .6% of the variance.

Table 16: Means, Standard Deviations, and Intercorrelations for Change in Life Satisfaction and Predictor Variable: SLEs and Buffers: Change in Social Support and Race (Three-way Interaction)

Variable	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Life Satisfaction	.309	1.402	-.131*	.123*	-.011	.101*	.029**	-.031**	.025**
Predictor Variables									
1. SLEs	69.691	38.320	--	.013	.038*	.088*	.023**	.179*	.036*
2. Change in Social Support	.040	.309	--	--	-.007	.867**	.294**	.004	.245**
3. Race	.045	.208	--	--	--	.004	.060*	.862*	.079*
4. Change in Social Support x SLEs	2.501	28.203	--	--	--	--	.282*	.023**	.337*
5. Change in Social Support x Race	.002	.099	--	--	--	--	--	.088*	.837*
6. SLEs x Race	5.33	22.669	--	--	--	--	--	--	.126*
7. Change in Social Support x SLEs x Race	.205	9.551	--	--	--	--	--	--	--

*Note: Indicates significance at the p ⩽ 0.001 level

**Note: Indicates significance at the p ⩽ 0.05 level

Model summary results showed that the three-way interaction model was significant, R_2 =.038, R_{2adj} =.038, $F_{change}(1, 9670)$ = .105, p=.746, $F(9, 9680)$ = 42.990, p<.001. The three-way interaction between SLEs, change in social support, and race did make a significant contribution ($p<.001$) to the prediction of changes in life satisfaction in the final three-way interaction model. This suggested that 3.8% of the variance in change in life satisfaction could be explained by the three-way interaction between SLEs, change in social support, and race. To ensure multicollinearity was not a problem, the tolerance and VIF statistics were reviewed. All tolerance values were >.01 and all VIF values were <10, therefore there are no multicollinearity concerns with this analysis.

The coefficient analysis for the three-way interaction effects model indicated that SLEs was significant, b = -.005, $t(9)$ = -12.196, p<.001, uniquely accounting for 1.51% of the variance. SLEs had a weak negative correlation (B=-.005) to change in life satisfaction. For every one unit decrease in SLEs, the change in life satisfaction score was predicted to increase by .005 points. Conversely, with a one unit increase in SLEs, the change in life satisfaction score was expected to decrease by .005 points. Change in social support was also significant, b =.474, $t(9)$ = 5.149, p<.001, uniquely accounting for .27% of the variance. Change in social support had a moderate positive (B=.474) correlation to change in life satisfaction. For every one unit change in change in social support, the change in life satisfaction score was predicted to change by .474 units.

However, some relationships were not significant. Race was not a significant predictor of changes in life satisfaction, b = .085, t(9) = .744, p = .457. This indicates that race does not significantly predict changes in life satisfaction. With race included in the model, the two-way interaction between SLEs and changes in social support was also not significant, b = .001, t(9) = .775, p = .439. The two-way interaction between SLEs and race was not significant, b = -.001, t(9) = -.723, p = .469. This indicated that there were no significant differences between Black and White elders and how SLEs predicted changes in life satisfaction. The two-way interaction between changes in social support and race was also not significant, b = -.149, t(9) = -.531, p = .595. This finding indicated that there were no significant differences between Black and White elders and how changes in social support predicted changes in life satisfaction. Finally, the three-way interaction between SLEs, change in social support, and race was not significant in predicting change in life satisfaction, b = .001, $t(9)$ = .324, p = .746. This finding indicates there are no significant differences in the buffering effect of changes in social support between SLEs and life satisfaction for Black or White elders (See Table 18).

The lack of significance in the three-way interaction indicates there is no significant difference between Black and White elders in regards to the buffering effect of change in social support on change in life satisfaction, thus the hypothesis is not supported. However, there were several significant bivariate relationships, including that between the two-way interactions change in social support and race as well as SLEs and race. The bivariate relationship between the three-way interaction SLEs, changes in social support and race and changes in life satisfaction was also significant (See Table 15). This indicates while the interactions were significant in their predictive relationship, there were correlations between the interaction effects and the changes seen in life satisfaction. When accounting for survey design with STATA, the coefficients for SLEs was just slightly lower than the main analysis but was not significant. The coefficient for change in social support was higher than the main analysis, but was not significant. As with the main analysis, race was also not significant. Additionally, the coefficient for the three-way interaction term was slightly lower than the main analysis and was also not significant (See Table 19 for STATA results).

Research Question: Do changes in financial security impact changes in life satisfaction after an SLE differently for Black and White elders?

H6: The relationship between stressful life events and LS will be buffered by both race and changes in the perception of financial security. Specifically, the effect of the perception of financial security will be different for African American elders than White elders over time (longitudinal buffer effect/testing the interaction stressful life events x FS x Race)

A linear regression was used to determine if change in perception of financial security and race significantly buffered the relationship between SLEs and change in life satisfaction after controlling for level of education and perception of health status. Linear regression was conducted with change in life satisfaction as the dependent variable, SLEs as the independent variable, and change in perception of financial security and race as the buffer variables

Model summary results showed that the three-way interaction model was significant, R_2 =.024, R_{2adj} =.023, $F_{change}(1, 9470) = 4.050$, p=.044, $F(9, 9480) = 25.594$, $p<.001$ (See Table 17). The three-way interaction between SLEs, change in financial security, and race did make a significant contribution (p<.001) to the prediction of changes in life satisfaction in the final three-way interaction model. This suggested that 2.3% of the variance in change in life satisfaction could be explained by the three-way interactions between SLEs, change in financial security, and race. To ensure multicollinearity was not a problem, the tolerance and VIF statistics were reviewed. All tolerance values were >.01 and all VIF values were <10, therefore there are no multicollinearity concerns with this analysis.

Table 17: Means, Standard Deviations, and Intercorrelations for Change in Life Satisfaction and Predictor Variable: SLEs and Buffers: Change in Financial Security, and Race (Three-way Interaction)

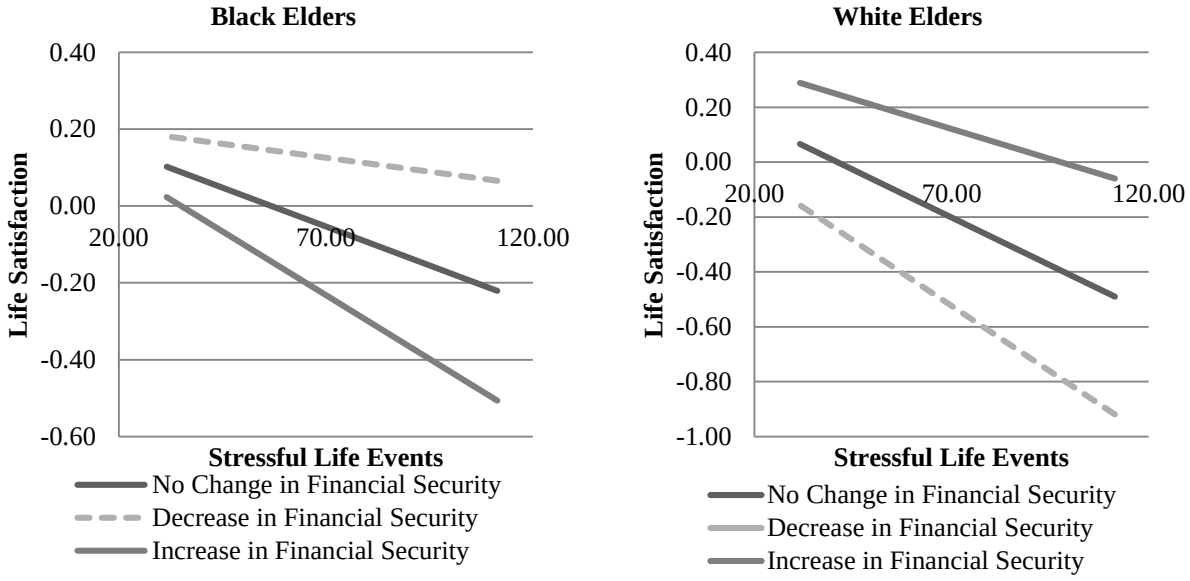
Variable	M	SD	1	2	3	4	5	6	7
Life Satisfaction	.249	1.426	-.128*	-.045*	-.007	-.026**	-.027**	-.014	-.020**
Predictor Variables									
1. SLEs	71.485	39.915	--	.040*	.041*	-.152*	.182*	-.031**	-.059*
2. Change in FS	-.318	.864	--	--	.048*	.853*	.029**	.276*	.233*
3. Race	--	--	--	--	--	.023**	.861*	-.165*	-.214*
4. SLEs x FS	-21.376	59.940	--	--	--	--	-.008*	.265*	.303*
5. SLE x Race	5.325	22.752	--	--	--	--	--	-.185*	-.271*
6. FS x Race	-.011	.252	--	--	--	--	--	--	.868*
7. SLE x FS x Race	-1.122	19.325	--	--	--	--	--	--	--

*Note: Indicates significance at the $p \leq 0.001$ level
**Note: Indicates significance at the $p \leq 0.05$ level

The coefficient analysis for the three-way interaction effects model indicated that SLEs was significant, $b = -.005$, $t(9) = -11.233$, $p<.001$, uniquely accounting for 1.32% of the variance (See Figure 5). SLEs had a weak negative correlation (B=-.005) to change in life satisfaction. For every one unit decrease in SLEs, the change in life satisfaction score was predicted to increase by .005 points. Conversely, with a one unit increase in SLEs, the change in life satisfaction score was

expected to decrease by .005 points. The three-way interaction between SLEs, change in financial security and race was also significant, b =-.003, $t(9)$ = -2.012, p = .044, uniquely accounting for .04% of the variance. The three way interaction had a weak negative (B=.003) correlation to change in life satisfaction. For every one unit increase in the interaction term, the changes in life satisfaction score for Black elders declined by .003 units more than White elders. Conversely, with every one unit decrease in the interaction term, the change in life satisfaction score for Black elders also increased, but remained .003 units lower than White elders.

Figure 5: Buffering Effect of Changes in Financial Security: Black and White Comparison



Including race in the model resulted in change in financial security being not significant, b=.003, t(9) = .085, p = .933. Race was also not significant, b=.106, t(9) = .905, p = .366. This finding indicated that there was no significant difference between changes in life satisfaction scores for Black and White elders. The two-way interaction between SLEs and changes in financial security was also not significant, b=-.001, t(9) = -1.509, p = .131. The two-way interaction between SLEs and race was also not significant, b=-.001, t(9) = -.965, p = .355. This finding indicated that there was no significant difference in predictive relationship of SLEs for Black and White elders.

The two-way interaction between change in financial security and race was also not significant, b = .160, t(9) = 1.309, p = .190. This finding indicated there was no significant difference in the predictive relationship of changes in financial security on changes in life satisfaction for Black and White elders (See Table 18).

These findings indicated the three-way interaction between SLEs, change in financial security and race significantly predicted change in life satisfaction and thus, the hypothesis was supported. There are significant differences between Black and White elders and the buffering effect of change in financial status on the relationship between SLEs and change in life satisfaction. When both factors were present, there was a predictable impact on the change in life satisfaction. When accounting for survey design with STATA, the coefficient for SLEs was just slightly higher than the main analysis and also significant. The coefficient for change in financial security was higher than the main analysis, but was not significant. However, race was significant in this analysis and not significant in the main analysis. Additionally, the coefficient for the three-way interaction term was slightly lower than the main analysis and was also not significant (See Table 19 for STATA results).

Table 18: Regression Analysis Summary for Changes in Social Support, Autonomy, Financial Security, and Race on Changes on Life Satisfaction

	Hypothesis 1		Hypothesis 2		Hypothesis 3		Hypothesis 4		Hypothesis 5		Hypothesis 6	
	b	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Predictor												
Stressful Life Events (SLEs)	-.006*	.001	-.006*	.001	-.006*	.001	-.006*	.001	-.005*	.000	-.005*	.000
Change in Social Support			.957*	.137					.474*	.092		
Change in Autonomy					.323*	.052						
Change in Financial Security							.149‡	.050			.003	.036
Race									.085	.115	.106	.117
Buffer/Interaction Term												
SLEs x Social Support			-.004*	.002					.001	.001		
SLEs x Autonomy					-.001‡	.001						
SLEs x Financial Security							-.002*	.001			-.001	.001
SLEs x Social Support x Race									.001	.003		
SLEs x Financial Security x Race											-.003‡	.002
Control Variables												
Education	.008	.010	.008	.010	.004	.010	.006	.010	.007	.008	.004	.008
Perception of Health	.097*	.021	.095*	.021	.085*	.021	.096*	.021	.099*	.014	.095*	.015
Constant	.505	.064	.480	.064	.530	.065	.521	.066	.213	.058	.231	.059
Adjusted R^2	.031		.051		.046		.034		.038		.023	

*Note: Indicates significance at the $p \leq 0.001$ level
‡Note: Indicates significance at the $p \leq 0.05$ level

Table 19: Regression Analysis Summary for Changes in Social Support, Autonomy, Financial Security, and Race on Changes on Life Satisfaction (STATA analysis)

	Hypothesis 1		Hypothesis 2		Hypothesis 3		Hypothesis 4		Hypothesis 5		Hypothesis 6	
	b	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Predictor												
Stressful Life Events (SLEs)	-.005*	.001	-.005	.003	-.005*	.001	-.006*	.001	-.004	.003	-.006*	.001
Change in Social Support			.571*	.084					.561	.086		
Change in Autonomy					.324*	.062						
Change in Financial Security							-.059	.036			-.072	.037
Race									.075	.132	.201‡	.131
Buffer/Interaction Term												
SLEs x Social Support			-.000	.002					-.001	.001		
SLEs x Autonomy					-.000	.001						
SLEs x Financial Security							.000	.001			.001	.001
SLEs x Social Support x Race									.000	.001	-.001	
SLEs x Financial Security x Race											-.003‡	.001
Control Variables												
Education	.003	.012	.002	.013	-.000	.013	.001	.013	.007	.013	.005	.014
Perception of Health	.095*	.021	.092*	.022	.066	.020	.086	.022	.099*	.024	.095	.023
Constant	.306	.086	.299	.086	.414	.087	.309	.089	.258	.092	.247	.098
Adjusted R^2	.024		.040		.056		.023		.041		.026	

*Note: Indicates significance at the $p \leq 0.001$ level

‡Note: Indicates significance at the $p \leq 0.05$ level

Post-Hoc Analysis. Because of the complexity of this population, it is relevant to examine other non-predictive factors. The life course perspective is most often applied in cohort research and thus, specifically focuses on the differences between birth cohorts (Dannefer & Kelley-Moore, 2009). Because the use of cohorts is a widely accepted way of examining the aging population, the HRS specifically defines birth cohort to aid in the study of elders based on their life course. The cohorts present in the HRS were used as a guide to create the groups used for the post-hoc analysis in this research. Cohorts were not used in this research as a predictor or buffer variable, but rather, using the split-file function in SPSS results could be examined by cohort to learn about the impact of buffers on different cohorts. Additionally, the regression analysis confirmed the buffering effect of personal resources on the relationship between SLEs and change in life satisfaction. However, specific differences between Black and White elders was not clear but when examining the differences that were detected, SLEs and change in financial security, it is clear that further analysis to determine where specific differences lie.

Table 20: Demographics: Birth Cohorts

Birth Cohort	N	M	SD	Minimum age	Maximum age
Early Baby Boomers	3915	62.4	2.73	58.0	72.2
War Baby	1763	68.2	1.30	66.0	72.2
Pre-war Era	2949	74.8	3.15	70.0	81.0
Children of Depression Era	990	83.4	3.52	72.2	88.0
Pre-depression Era	436	88.6	7.29	89.0	102.0

The U.S. Census Bureau (2009) defines Baby Boomers as those who were born between 1946 and 1964. Because the HRS is specifically aimed at collecting data from older Americans, younger Baby Boomers have not yet been surveyed. The latest birth year included in this analysis is 1953 and is categorized as “Early Baby Boomers”. These cohorts were based on year of birth and age at time of survey. Early Baby Boomers were those born between 1946 and 1953 with an average age of 62.4 years at time of survey; War Baby were those born between 1942 and 1945

with an average age of 68.2 years at time of survey; Pre-War Era were those born between 1931 and 1941 with an average age of 74.8 years at time of survey; Children of the Depression Era were those born between 1924 and 1930 with an average age of 83.4 years at time of survey and those born in 1923 or earlier were classified as Pre-Depression Era with an average age of 88.6 years at time of survey (See Table 22).

Table 21: Mean Change in Life Satisfaction Scores by Cohort and Variable

Buffer	Early Baby-Boomer		War-Baby		Pre-war Baby		Children of Depression Era		Pre-Depression Era	
	M	SD	M	SD	M	SD	M	SD	M	SD
Change in Social Support										
Decline	-.304	2.859	.716	2.911	-.192	1.518	-.012	3.397	-.874	2.147
No Change	.429	2.564	.226	2.479	.190	1.644	.103	1.901	--	--
Increase	.596	2.998	.774	2.719	.719	1.662	.405	1.628	.718	1.675
Change in Autonomy										
Decline	.062	2.699	-.015	2.630	-.182	1.903	-.149	2.051	-.138	2.361
No Change	.488	2.522	.246	2.235	.284	1.462	.148	1.818	.474	1.543
Increase	.579	2.725	.730	2.870	.602	1.558	.631	1.894	.567	1.986
Change in Financial Security										
Decline	.374	2.649	.328	2.329	.255	1.629	.239	1.980	.210	2.018
No Change	.422	2.411	.029	2.681	.069	1.693	.003	1.917	-.124	2.085
Increase	.400	2.872	.512	2.811	.299	1.562	.275	1.614	.414	1.586
Stressful Life Events										
Low SLEs >99	.246	1.526	.149	1.436	.231	1.342	.368	1.380	.401	1.428
Medium SLEs 100-199	.012	1.303	-.404	1.762	.012	1.403	.008	1.686	.099	1.510
High SLEs <200	1.134*	.921	1.389*	2.134	-.101	1.218	-.322	1.643	.942*	1.291

*n<10

The difference between the youngest cohort entering older age (Early Baby Boomers) and other cohorts is crucial to garnering a greater understanding of the currently aging population. In preparation for this analysis, the buffer variables were restructured so that group comparisons based on increase (0.5 to highest value), no change (-.51 to .49) and decreases (-.50 to lowest value) in the buffer variables could be made. In order to begin to discern the differences between the cohorts, an ANCOVA analysis with a Tukey post-hoc test was conducted. This analysis will

enable examination of the different cohorts to determine the significant group differences were for all hypotheses.

Table 22: Frequencies – Change in Social Support, Autonomy, Financial Security & Life Satisfaction by Race

Variable	Black		White	
	n	%	n	%
Change in Social Support	673		9004	
Decline	54	8.0%	487	5.4%
No Change	558	82.6%	7921	88.0%
Increase	60	9.0%	596	6.6%
Change in Autonomy	660		8875	
Decline	221	33.5%	2557	28.8%
No Change	288	43.7%	4494	50.6%
Increase	151	22.9%	1823	20.5%
Change in Financial Security	654		8829	
Decline	321	49.1%	4858	55.0%
No Change	162	24.8%	2460	27.9%
Increase	171	26.1%	1512	17.1%
Stressful Life Events	676		9026	
Low SLEs >99	523	77.4%	7369	81.6%
Medium SLEs 100-199	141	20.9%	1575	17.4%
High SLEs <200	12	1.7%	83	0.9%

Change in Social Support. Change in life satisfaction scores were subjected to a two-way analysis of variance having six levels of the interaction term (Low SLEs/Decline in SS, Mid SLEs/Decline in SS, High SLEs/Decline in SS, Low SLEs/Increase in SS, Mid SLEs/Increase in SS, and High SLEs/Increase in SS). The interaction between SLEs and change in social support was significant, $F(4,9940)=4.56$, $p=.002$ (See Table 23 for all results).

Table 23: Analysis of Covariance of the Buffering Effect of Changes in Social Support Between SLEs and Changes in Life Satisfaction by Cohort

Variable	df	SS	MS	F	Ω^2
Intercept	8	43.96	43.96	8.61	.001
SLEs	2	82.27	41.14	8.06**	.002
Changes in Social Support	2	46.79	23.40	4.58*	.001
SLEs x Change in SS	4	93.10	23.28	4.56*	.002

**Note:* Indicates significance at the $p \leqslant 0.001$ level

***Note:* Indicates significance at the $p \leqslant 0.05$ level

A post hoc Tukey test showed that the Early Baby-Boomer cohort differed significantly from the War Baby, Pre-War Era and Children of Depression Era cohorts at $p<.05$. In general, changes in social support and SLEs contributed more to changes in life satisfaction for those in the Early Baby-Boomer cohort (*M*=.38, *SD*=2.60) than other cohorts (See Figure 6 & Table 24).

Figure 6: Mean Changes in Life Satisfaction Score by Changes in Social Support and SLE for the Early Baby Boomer Cohort

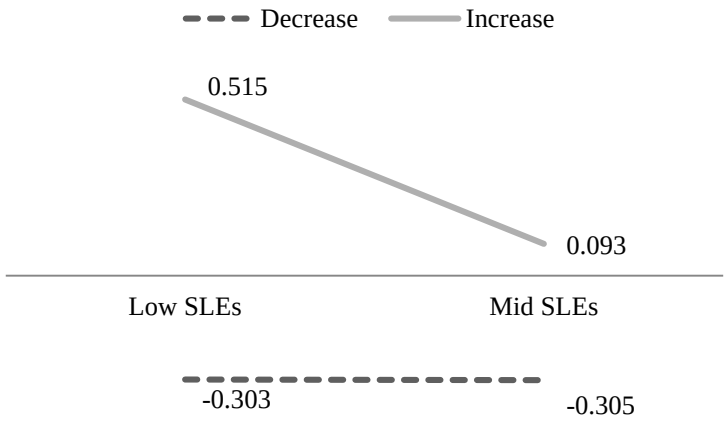


Table 24: Mean Change in Life Satisfaction Scores: SLE/SS Interaction by Cohort

Buffer	Early Baby-Boomer		War-Baby		Pre-war Baby		Children of Depression Era		Pre-Depression Era	
	M	SD	M	SD	M	SD	M	SD	M	SD
Low SLEs/ decline in SS	-.303	2.242	.330	2.163	-.209	1.513	.498	3.172	-.907	2.162
Mid SLEs / decline in SS	-.305	4.015	2.284	3.708	-.227	1.529	-.964	3.621	.418	1.838
High SLEs / decline in SS	--	--	--	--	1.400	.000	--	--	--	--
Low SLEs / increase in SS	.515	2.486	.331	2.363	.227	1.626	.141	1.895	.312	2.043
Mid SLEs / increase in SS	.093	2.767	-.142	2.805	-.011	1.726	-.280	1.847	.018	1.629
High SLEs / increase in SS	.398	2.607	-.391	1.827	-.290	1.448	1.496	2.365	1.518	.416

Change in Autonomy. Change in life satisfaction scores were subjected to a two-way analysis of variance having six levels of the interaction term (Low SLEs/Decline in autonomy,

Mid SLEs/Decline in autonomy, High SLEs/Decline in autonomy, Low SLEs/Increase in autonomy, Mid SLEs/Increase in autonomy, High SLEs/Increase in autonomy). There was not a significant main effect for the interaction between SLEs and change in autonomy, $F(4, 9795)=1.78$, $p=.129$ (See Table 25).

Table 25: Analysis of Covariance of the Buffering Effect of Changes in Autonomy Between SLEs and Changes in Life Satisfaction by Cohort

Variable	df	SS	MS	F	Ω^2
Intercept	1	145.30	145.30	28.95	.003
SLEs	2	314.69	157.34	31.36*	.006
Change in Autonomy	2	100.68	50.34	10.03*	.002
SLEs x Change in Autonomy	4	35.80	8.95	1.78	.001

**Note:* Indicates significance at the $p \leqslant 0.001$ level

Because the model was significant, a post hoc Tukey test was conducted and showed that the Early Baby-Boomer cohort differed significantly from the War Baby, Pre-War Era and Children of Depression Era cohorts at p<.05. In general, changes in autonomy and SLEs contributed more to changes in life satisfaction for those in the Early Baby-Boomer cohort ($M=.35$, $SD=2.61$) than other cohorts (See Figure 7).

Figure 7: Mean Changes in Life Satisfaction Score by Changes in Autonomy and SLE for the Early Baby Boomer Cohort

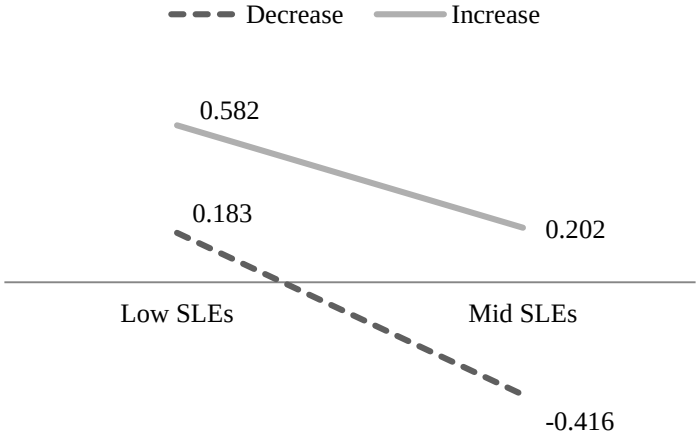


Table 26: Mean Change in Life Satisfaction Scores: SLE/Autonomy Interaction by Cohort

Buffer	Early Baby-Boomer		War-Baby		Pre-war Baby		Children of Depression Era		Pre-Depression Era	
	M	SD	M	SD	M	SD	M	SD	M	SD
Low SLEs/ Decline in Auto	.183	2.560	.017	2.355	-.153	1.821	-.026	1.969	-.142	2.395
Mid SLEs / Decline in Auto	-.416	2.958	-.130	3.467	-.275	2.296	-.788	2.299	-.075	2.021
High SLEs Decline in Auto	.512	3.189	.154	.151	-1.914	.943	--	--	-.200	--
Low SLEs / Increase in Auto	.582	2.413	.384	2.225	.314	1.465	.149	1.832	.488	1.549
Mid SLEs / Increase in Auto	.202	2.817	-.337	1.953	.105	1.444	.007	1.440	-.109	1.323
High SLEs / Increase in Auto	.062	2.313	.449	2.641	.615	1.095	2.526	2.146	1.400	.000

Change in Financial Status. Change in life satisfaction scores were subjected to a two-way analysis of variance having six levels of the interaction term (Low SLEs/Decline in financial security, Mid SLEs/Decline in financial security, High SLEs/Decline in financial security, Low SLEs/Increase in financial security, Mid SLEs/Increase in financial security, High SLEs/Increase in financial security). The interaction between SLEs and change in financial security was significant, $F(4, 9740)=3.53$, $p=.007$ (See Table 27).

Table 27: Analysis of Covariance of the Buffering Effect of Changes in Financial Security Between SLEs and Changes in Life Satisfaction by Cohort

Variable	df	SS	MS	F	Ω^2
Intercept	1	18.47	18.47	3.62	.000
SLEs	2	483.31	241.66	47.30*	.010
Change in financial security	2	37.61	18.81	3.68**	.001
SLEs x Change in financial security	4	72.10	18.02	3.53**	.001

**Note:* Indicates significance at the $p \leqslant 0.001$ level

***Note:* Indicates significance at the $p \leqslant 0.05$ level

In general, changes in financial security and SLEs contributed more to changes in life satisfaction for those in the Early Baby-Boomer cohort ($M=.39$, $SD=2.60$) than all other cohorts. A post hoc Tukey test showed that the Early Baby Boomer cohort differed significantly from the

War Baby, Pre-War Era and Children of Depression Era cohorts at p<.05 (See Figure 8 & Table 28).

Figure 8: Mean Changes in Life Satisfaction Score by Changes in Financial Security and SLE for the Early Baby Boomer Cohort

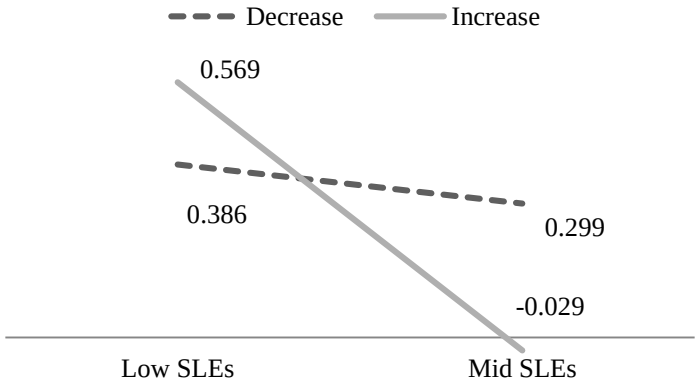


Table 28: Mean Change in life satisfaction scores: SLE x Financial Security Interaction by Cohort

Buffer	Early Baby-Boomer		War-Baby		Pre-war Baby		Children of Depression Era		Pre-Depression Era	
	M	SD	M	SD	M	SD	M	SD	M	SD
Low SLEs/ Decline in FS	.386	2.516	.485	2.244	.299	1.611	.289	1.957	.202	2.062
Mid SLEs / Decline in FS	.299	3.111	-.162	2.363	.005	1.706	-.287	2.111	.375	1.230
High SLEs / Decline in FS	.909	2.135	.566	2.782	-.871	1.032	.948	1.926	-.200	--
Low SLEs / Increase in FS	.569	2.316	.138	2.479	.081	1.676	.059	1.832	-.172	2.123
Mid SLEs / Increase in FS	-.029	2.506	-.451	3.301	-.026	1.790	-.392	2.277	-.079	1.238
High SLEs / Increase in FS	.113	2.498	.049	.308	.579	.952	4.400	--	1.400	.0000

Change in Social Support by Race. Change in life satisfaction scores were subjected to a two-way analysis of variance having six levels of the interaction term (Low SLEs/Decline in social support, Mid SLEs/Decline in social support, High SLEs/Decline in social support, Low

SLEs/Increase in social support, Mid SLEs/Increase in social support, High SLEs/Increase in social support) identified by race for direct comparisons. There was a significant main effect for changes in social support, $F(2, 9587)=7.38$, $p=.009$. The interaction between SLEs and race was also significant, $F(2, 9587)=6.83$, $p=.010$ (See Table 29).

Table 29: Analysis of Covariance of the Buffering Effect of Changes in Social Support Between SLEs and Changes in Life Satisfaction by Race

Variable	df	SS	MS	F	Ω^2
Intercept	1	8.06	8.06	.526	.282
SLEs	2	36.46	18.23	.936	.469
Change in Social Support	2	46.06	23.03	7.38*	.576
Race	1	22.08	22.08	1.52	.405
SLEs x Change in Social Support	4	26.33	6.58	2.38	.539
SLEs x Race	2	41.53	20.76	6.83*	.522
Race x Change in Social Support	2	3.87	1.93	.639	.094
Race * SLEs x Change in Social Support	3	6.42	2.14	.419	.000

**Note:* Indicates significance at the $p \leq 0.05$ level

Changes in social support and SLEs contributed more to changes in life satisfaction for the Early Baby-Boomer cohort ($M=.40$, $SD=2.63$) than all other cohorts. Low SLEs and an increase in social support differed significantly from Black and White elders with Mid SLEs and an increase in social support at $p<.05$ (See Table 30 & Figure 9).

Figure 9: Change in Life Satisfaction Mean Score by SLE with Increase in Social Support: Black and White Elders in the Early Baby Boomer cohort

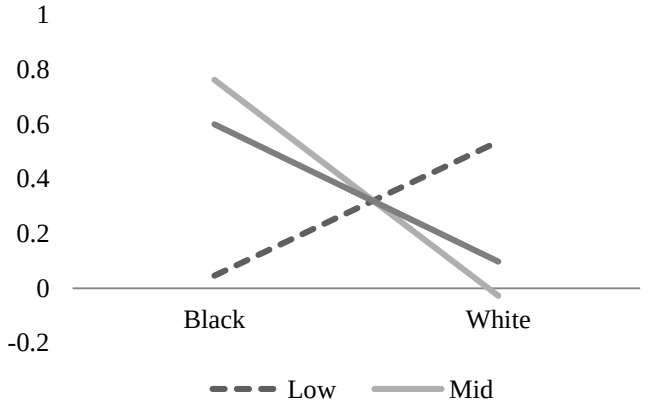


Table 30: Mean Change in Life Satisfaction Scores: SLEs x Changes in Social Support Interaction by Cohort and Race

Buffer	Early Baby-Boomer		War-Baby		Pre-war Baby		Children of Depression Era		Pre-Depression Era	
	M	SD	M	SD	M	SD	M	SD	M	SD
Low SLEs/ Decline in SS										
Black	.773	2.200	.308	2.131	.057	1.351	.279	1.966	.686	1.793
White	.369	2.557	.526	2.259	.314	1.630	.286	1.967	.179	2.080
Mid SLEs / Decline in SS										
Black	.277	1.071	.674	1.710	-.400	.928	-.600	--	-.104	1.595
White	.279	3.228	.212	2.398	.047	1.798	-.281	2.133	.781	1.116
High SLEs Decline in SS										
Black	-.860	.492	.949	1.680	--	--	--	--	--	--
White	.989	2.157	.539	3.199	-.871	1.031	.200	.000	-.200	--
Low SLEs / Increase in SS										
Black	.046	1.638	1.301	2.960	.023	1.165	.383	1.716	1.605	2.742
White	.537	2.312	.113	2.367	.090	1.641	.044	1.852	-.220	2.026
Mid SLEs / Increase in SS										
Black	.763	2.273	-2.887	3.428	.210	1.914	-.254	2.361	1.400	--
White	-.028	2.586	-.203	3.012	-.044	1.797	-.404	2.361	-.220	1.166
High SLEs / Increase in SS										
Black	.600	--	--	--	.790	1.564	--	--	--	--
White	.098	2.581	.049	.308	.520	.797	4.400	--	1.400	.000

Change in Financial Security by Race. Change in life satisfaction scores were subjected to a two-way analysis of variance having six levels of the interaction term (Low SLEs/Decline in financial security, Mid SLEs/Decline in financial security, High SLEs/Decline in financial security, Low SLEs/Increase in financial security, Mid SLEs/Increase in financial security, High SLEs/Increase in financial security) identified by race for direct comparisons and five categories for cohort (Early Baby-Boomer, War Baby, Pre-War Era, Children of Depression Era, and Pre-Depression Era). There was not a significant main effect for birth cohort, $F(4,7719)=3.07$, $p=.411$.

There was a significant main effect for the interaction term, $F(11, 7719)=3.34$, $p<.001$. The interaction between SLEs, change in financial security and cohort was significant by race, $F(38, 7719)=3.14$, $p<.001$ (See Table 31).

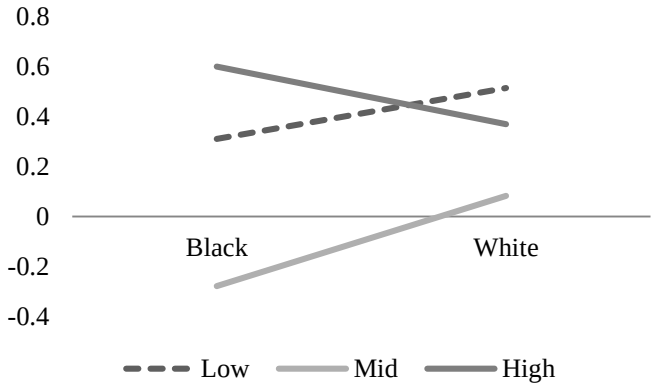
Table 31: Analysis of Covariance of the Buffering Effect of Changes in Financial Security Between SLEs and Changes in Life Satisfaction by Cohort and Race

Variable	df	SS	MS	F	Ω^2
Intercept	1	.287	.287	.011	.011
SLEs	2	262.44	131.22	4.28	.811
Change in Financial Security	2	35.86	17.93	2.22	.690
Race	1	26.06	26.06	2.57	.583
SLEs x Change in Financial Security	4	125.49	31.37	1.48	.597
SLEs x Race	2	61.30	30.65	1.51	.423
Race x Change in Financial Security	2	16.12	8.06	.915	.123
Race * SLEs x Change in Financial Security	4	84.80	21.20	4.16*	.002

**Note:* Indicates significance at the $p \leqslant 0.05$ level

In general, when considered by race, changes in financial security and SLEs contributed more to changes in life satisfaction for the Early Baby Boomer cohort (M=.37, SD=2.63) than the other cohorts (See Table 31).

Figure 10: Change in Life satisfaction Mean Score by SLE with Increase in Financial Security: Black and White Elders in the Early Baby Boomer cohort



A post hoc Tukey test showed that the Early Baby Boomer cohort differed significantly from the other cohorts at p<.05. Change in life satisfaction scores for White elders with Mid SLEs and an increase in financial security differed significantly from Black elders with Mid SLEs and

an increase in SLEs as well as Black elders with Low SLEs and an increase in SLEs at p<.05. White elders with High SLEs and an increase in financial security differed significantly from Black elders with Mid SLEs and an increase in financial security at p<.05 (See Figure 10 & Table 32).

Table 32: Mean Change in Life Satisfaction Scores: SLEs x Changes in Financial Security Interaction by Cohort and Race

Buffer	Early Baby-Boomer		War-Baby		Pre-war Baby		Children of Depression Era		Pre-Depression Era	
	M	SD	M	SD	M	SD	M	SD	M	SD
Low SLEs/ Decline in FS										
Black	.118	1.481	.629	2.464	.182	1.066	-.651	2.078	.054	.896
White	-.300	2.328	.258	2.085	.224	1.537	.532	3.280	-.950	2.249
Mid SLEs / Decline in FS										
Black	-.613	.838	.000	--	-1.006	1.830	--	--	--	--
White	-.296	4.207	2.629	3.641	-.178	1.600	-.964	3.621	.418	1.838
High SLEs Decline in FS										
Black	--	--	--	--	--	--	--	--	--	--
White	--	--	--	--	1.400	.000	--	--	--	--
Low SLEs / Increase in FS										
Black	.311	1.764	.616	2.404	.086	1.297	.347	1.776	.923	2.100
White	.514	2.551	.333	2.351	.233	1.633	.145	1.886	.284	2.040
Mid SLEs / Increase in FS										
Black	-.278	1.905	-.510	3.468	-.168	1.151	-.194	3.160	.702	2.088
White	.083	2.839	-.115	2.718	.008	1.790	-.159	1.623	-.013	1.677
High SLEs / Increase in FS										
Black	.600	--	-2.034	2.058	-.180	--	--	--	--	--
White	.369	2.681	-.156	1.515	-.241	1.465	.860	2.227	1.518	.416

CHAPTER 5: Discussion and Conclusions

The research findings demonstrate that changes in social support, changes in autonomy, and changes in financial security buffer the relationship between SLEs and changes in life satisfaction. The coefficients for all interaction terms were small, indicating a weak effect while the coefficient for the main effects, were all much stronger. For example, the main effects for changes in social support, autonomy, and financial security were all the largest contributors to changes in life satisfaction in each model. Moreover, after survey design was considered through use of STATA, the weak results were further confirmed as only the SLE x Financial Security x Race interaction was significant in both analyses. This surprising result led to the post-hoc ANCOVA analysis that gleaned some valuable information about the differences between increases and decreases in the buffers. The remainder of this chapter will discuss the implications of the research findings, the limitations of this work, demonstration of the contribution to theoretical foundations, real-world applications through suggestions to adapt policies, and finally future research that can be framed using the findings from this study.

Stressful Life Events

Summary of Results. The first hypothesis suggested a relationship between SLEs and life satisfaction was supported: as expected, life satisfaction declined when more SLEs were experienced. However, the relationship between SLEs and changes in life satisfaction was a weak relationship, suggesting while this was a significant finding, in both models SLEs were a very small part of what determined life satisfaction in elders. When examining the types of SLEs, 18.2% of elders relocated and 23.5% had a new injury or illness but the mean score for SLEs is 76.77 for Black elders and 70.94 for White elders. This confirmed that SLEs do often occur concurrently and strongly suggested that decline in income (SLE score 38) was possibly a secondary stressor created by a primary SLE. 79.2% of the sample experiencing a 20% or more decline in income,

the most common SLE. Of those who had a decline in income, 54% also had a new injury or illness. A decline in income was also seen concurrently among elders who relocated (14.3%), when there was a death of a family member (64%) and also, death of a spouse (51%). This compounding of stressors created situations where life satisfaction was negatively impacted by more than just the initial SLE.

Theoretical Contributions. Because this research focused on changes over time, the weak predictive nature of SLEs on changes in life satisfaction could be explained by Rapkin and Schwartz's (2004) Response Shift Theory (RST). This theory posits our quality of life is subject to adjustments in our expectations and daily lives when faced with changes created by SLEs. By measuring the changes in life satisfaction over time, those in this study have had time to adjust to the changes in their lives and thus, the impact of SLEs is potentially minimized, resulting in the very weak predictive relationship.

These findings are consistent with the disability paradox described by Albrecht and Devlinger (1999) if applied to an aging population. Their work demonstrated that disabled populations have long reported a good life satisfaction in spite of what would be perceived by the general public as a dismal existence. Young adults report higher feelings of stress following SLEs due, in part, because of a lack of maturity that enables adjustment to life changes (Jackson, & Finney, 2002) but this research shows that all aging cohorts continue to have increases in life satisfaction in the presence of SLEs over time. By all of the cohorts, including those considered the "oldest old" having positive mean changes in life satisfaction, the concepts of the disability paradox are confirmed in the aging population. This highly suggests that the application of the disability paradox to the aging population, including the oldest-old, is appropriate.

Policy Implications. SLEs are just a small portion of what determines changes in life satisfaction. While this research demonstrates that SLEs do negatively impact life satisfaction, it is logical that programs that address elders following SLEs would positively impact life satisfaction. However, the SLEs that most policies are centered on, health related services following an injury or illness and keeping elders in the community (avoiding relocation), are actually very low on the stress scale (53 and 20 respectively). Home and community based services (HCBS) are based on the premise to improve life satisfaction by keeping elders in the community, but can be heavily focused on cost savings over nursing home placement. While the premise of HCBS programs in particular is founded on sound research, there are areas that are overlooked that this research demonstrates are potentially underserved needs in the aging population.

As described throughout this research, elder policy is often crafted with the premise of enhancing or maintaining the life satisfaction of elders. HCBS programs and interventions do often improve quality of life (Shapiro & Taylor, 2002) but in order to qualify for such services, there must be a risk of placement in a nursing home. Therefore, participants in these studies are already potentially dealing with chronic conditions or over the term of receiving interventions, are adjusting to the changes their conditions have brought to their level of functioning. Thus, the services offered by HCBS may provide some additional support that enable elders to adjust to their conditions. Additionally, HCBS programs do not provide services in the absence of a health related condition therefore potentially overlooking the impact of losing a spouse or other more stressful events on putting elders at risk of nursing home placement.

Current policies potentially exacerbate the stress caused by the loss of a spouse or family member. For example, Social Security and retirement incomes change for the surviving spouse after the death of a spouse or family member. Therefore, when there is a significant loss of a loved

one, a decline in income also occurs. This compounding of events can have an enormous negative impact on life satisfaction leading to additional stressors spurred by the loss of income and loved one, such as loneliness and isolation – both of which have been found to increase the odds of using hospital services (Newall, McArthur, & Menec, 2014) and use of outpatient services (Taube, Kristensson, Sandberg, Midlöv, & Jakobsson, 2014). Therefore, expansion of HCBS services to those who have lost a spouse or loved one regardless of their health status, could potentially strengthen these already helpful programs and increase cost saving measures.

Buffer: Change in Social Support

Summary of Results. The second hypothesis examined the role of changes in social support as a buffer between SLEs and changes in life satisfaction. This hypothesis was partially supported. Specifically, a significant but weak relationship was found in the interaction between SLEs and changes in social support, a relationship was not supported when stratification variables were controlled. However, there were a number of interesting results concerning the main effect of social support that was significant in both models. Specifically when there were increases in social support, it was reflected by an increase in life satisfaction. Subsequently, declines in social support were associated with declines in life satisfaction. The relationship between changes in social support and changes in life satisfaction clearly illustrated how important social networks continue to be in old age. In fact, change in social support was a very strong predictor of changes in life satisfaction.

Examination by level of SLEs and increase or decrease in social support revealed some significant differences between groups and cohorts. When considering the results by cohort, those with low SLEs and a decline in social support had higher mean change in life satisfaction scores across all the cohorts than those with mid-range SLEs and declines in social support. Specifically,

the Baby Boomer cohort had a decline in their change in life satisfaction score with low SLEs and a decline in social support while they experienced an increase score in life satisfaction with the same SLE level but with an *increase* in their social support. This same trend was noted in the oldest-old cohort. Additionally, for all cohorts, life satisfaction increased more when there were low SLEs coupled with an increase in social support than when there were mid-level SLEs. This post-hoc analysis revealed how important social support can be for both the Early Baby Boomers and the oldest-old. In both cohorts, there was a decline in life satisfaction when social support declined with low SLEs and an increase in life satisfaction when social support *increased* with low SLEs. The buffer effect of change in social support, specifically when social support increases is clear. This finding in particular supports the work of Nyqvist, Forsman, Giuntoli, & Cattan (2013) that social capital is indeed a strong factor in determining the life satisfaction of older adults and that ultimately, elders value their relationships over their health status (Farquahar, 1985). This research confirms that maintaining social relationships is indeed a relevant and important part of growing older and can effectively counteract SLEs.

Changes in Social Support and Race. The fifth hypothesis examined the role of changes in social support as a buffer between race, SLEs and changes in life satisfaction. This hypothesis was partially supported. Specifically, no relationship was found in the interaction between race, SLEs and changes in social support, a relationship that also was not supported when stratification variables were controlled. However, there were a number of interesting results concerning the main effect of social support. Specifically when there were increases in social support, it was reflected by an increase in life satisfaction. Subsequently, declines in social support were associated with declines in life satisfaction. This relationship was not supported in both models. Although race was

not a significant predictor of changes in life satisfaction in either model, there were some interesting findings to discuss.

First, SLEs are on average 8% higher for Black elders than White elders. Based on the comparison of Black and White elders, the buffering effect of social support did not differ for either population. This finding suggested that changes in social support do not influence the life satisfaction differently by race and that social support is equally important for both Black and White elders. When examined by level of SLE and increase/decrease in social support, there were some significant differences between the groups. For example, for the Early Baby Boomer cohort, with low SLEs and a decrease in social support, both Black and White elders had positive changes in life satisfaction, but Black Elders had 71% higher mean change in life satisfaction score than White elders.

When examining the oldest-old, this trend continued with Black elders experiencing a 117% higher change in their life satisfaction scores than White Elders. However, when comparing by low SLEs and an *increase* in social support, the positive change trend continues. In this group, White Early Baby Boomers experienced 168% higher mean change in life satisfaction scores than Black elders. However, among the oldest-old cohort, Black elders continued to have increases in their life satisfaction scores, but White elders had declines. This finding reveals the buffering effect increases in social support when the SLE remains constant amongst the oldest-old cohort but declines have stronger negative impacts for White elders. These findings build on the work of Gibson and Jackson (1987) demonstrating social networks can have an insulating effect against stress among Black elders.

Theoretical Implications. Life Course Theory describes the manner in which individual level factors, such as personality and health conditions, determine social structures. This research

found that social structures in the form of social support are only slightly influenced by SLEs, but overall have the strongest impact on changes in life satisfaction over time. For example, events along the life course could determine family structure, friend networks, employment and other factors that impact social supports in old age. The resulting perceptions of social support could have an impact of the relevance or buffering effect social support has on life satisfaction. For example, as previously discussed, lonely elders have higher odds of using hospital services (Newall, McArthur, & Menec, 2014) and loneliness could be determined based on choices and events earlier in life. However, regardless of the cause social support can alleviate loneliness and thus, reduce the odds of using hospital services, thus changing the life course.

Older adults are more selective of their social networks and generally feel they receive less support in older years than they did when younger (Birditt, Antonucci, & Tighe, 2012), yet this research found that mean scores for life satisfaction improve when there were increases in social support, suggesting these smaller, more selective networks continue to be meaningful. For the Early Baby Boomer cohort, social support is a consistent buffer against declines in life satisfaction. For other cohorts however, the impact was different – thus reinforcing the different experiences along the life course impact social support networks between the different cohorts. This is infinitely important when considering aging policy because social support may be defined differently by cohort.

Disparity between Blacks and Whites is well documented and these differences are exacerbated in the elderly as a population particularly susceptible to poverty and social isolation. Black elders in the oldest-old age group had much higher increases in life satisfaction than White oldest old when both increases and decreases in social support were present. Thus, the crossover effect of mortality seen between Black and White elders could also be applied to life satisfaction.

In addition to the crossover effect applying to life satisfaction, this could also be a product of well documented resilience in minorities (Lee, 2013). This resilience is built through the life course as an adaptive reaction to life circumstances thus RST could potentially explain the resilience seen in minorities and in the findings of this research.

Policy Implications. One of the overtly stated objectives of the OAA (1965) is to "support programs that encourage elder's options for "Participating in and contributing to meaningful activity within the widest range of civic, cultural, educational and training and recreational opportunities" and that services shall focus on "unserved older individuals with greatest social need (including low-income minority individuals and older individuals residing in rural areas)" (OAA 89–73, 79 Stat. 218 §101). Access to these programs is generally limited by physical or income eligibility guidelines. As previously discussed, elders have smaller, more select social support systems. Because older adults are more at risk of health related SLEs social interaction may come in the form of caregivers, which are highly valued as a form of social support (Heppenstall, Keeling, Hanger, & Wilkinson, 2014). Therefore, the use of caregivers provides not only medical assistance, but potentially provides elders with social support. Through application of the findings of this research to the positive quality of life outcomes for HCBS programs it could be proposed that it is the social support aspect of caregiver services that buffers the impact of health related SLEs. Since this research did not limit examination by diagnosis or income, it is a logical assumption that social support is an important aspect of maintaining life satisfaction for all aging cohorts.

Buffer: Change in Autonomy

Summary of Results. The third hypothesis examined the role of changes in autonomy as a buffer between SLEs and changes in life satisfaction. This hypothesis was partially supported.

Specifically, a significant but weak relationship was found in the interaction between SLEs and changes in autonomy, a relationship was not supported when stratification variables were controlled. However, there were a number of interesting results concerning the main effect of autonomy, specifically when there were increases in autonomy it was reflected by an increase in life satisfaction. Subsequently, declines in autonomy were associated with declines in life satisfaction. Change in autonomy was a factor in predicting changes in life satisfaction in this research. As expected, there was a positive relationship between change in autonomy and change in life satisfaction with a moderate relationship and in fact, was the strongest predictor in both models.

This predictive relationship confirms the importance of autonomy of life satisfaction. However, change in autonomy did act as a buffer between SLEs and changes in life satisfaction, but the relationship was very weak. When considering the effect of an increase in autonomy in the Early Baby Boomer cohort, those with low SLEs had a mean change in life satisfaction score 104% higher than those with a decline in autonomy. The oldest-old cohort also experienced a similar trend between decline in autonomy at low level SLES and increase in autonomy at the same level of SLEs. In fact when comparing the Early Baby Boomer life satisfaction scores decreased 37% less than the oldest-old cohort. This supports the findings of Davison, McCabe, Knight, & Mellor (2014) that autonomy contributes more to well-being that health status and furthers the understanding of the importance of autonomy throughout the life course.

Theoretical Implications. Life course theory posits that agency, or the ability to choose and determine our behaviors based on events can change and determine our life course. As this research demonstrates, autonomy does impact changes in life satisfaction following an SLE. Resources can potentially be restricted or limited if decision making declines, thus altering the life

course. Thus, being able to maintain autonomy in making decisions following an SLE is imperative in assuring that the life course of elders is not determined by losing their voice.

Policy Implications: Some elders have a sense of inevitability when it comes to becoming dependent on others for their day to day care and feel their life satisfaction is higher when they can act in their own time regarding long term care placement (Heppenstall, Keeling, Hanger, & Wilkinson, 2014). Programs spurred by the Olmstead Act are specifically in place to address elders having a choice in where they live and that highest life satisfaction is maintained in the community. The OAA (1965) specifically states one of its purposes to provide elders with:

> "Freedom, independence, and the free exercise of individual initiative in planning and managing their own lives, full participation in the planning and operation of community based services and programs provided for their benefit, and protection against abuse, neglect, and exploitation."

Another policy impacting the autonomy of elders is the Olmstead Decision which stemmed from a disabled woman who wanted to live independently over in a hospital and that she, although mentally challenged, should have a choice in her living situation. By applying the ruling to Medicaid eligible individuals, it allows for HCBS to elders who are either already in an institutional setting, but those that possibly qualify for an institutional setting. This decision prompted programs to be created and overseen by Area Agencies on Aging (AoA) which were created by the OAA (1965). The OAA (1965) specifically "promotes the well-being of older individuals by providing services and programs designed to help them live independently in their homes and communities." Therefore, current OAA sponsored programs do work to maintain independence and autonomy in decision making. As discussed earlier, structural lag plagues many current policies and with distinct cohorts in the aging population, it is of particular concern for future programming. Early Baby Boomers are greatly influenced by their sense of autonomy and

as they enter retirement age one way to potentially avoid structural lag is to ensure that autonomy is at the forefront of future program planning.

Buffer: Change in Financial Security

Summary of Findings. The fourth hypothesis examined the role of changes in financial security as a buffer between SLEs and changes in life satisfaction. This hypothesis was partially supported. Specifically, a significant but weak relationship was found in the interaction between SLEs and changes in financial security, a relationship was not supported when stratification variables were controlled. However, there were a number of interesting results concerning the main effect of financial security, specifically when there were increases in financial security, it was reflected by an increase in life satisfaction. Subsequently, declines in financial security were associated with declines in life satisfaction.

With just over 79% of elders having experienced declines of 20% or more in income, financial security is potentially of great concern for the older population. Financial security did predict changes in life satisfaction, but it was a weak predictor. As with the other buffers examined, financial security did significantly buffer the relationship between SLEs and life satisfaction, but it too was a very weak relationship and not supported by both models. When comparing groups based on levels of SLEs and whether or not there was an increase or decrease in financial security, some significant group differences are noted. With declines in financial security, Early Baby Boomers had 25% lower positive mean change in life satisfaction scores when there were mid-level SLEs than when there were low SLEs. However, when there were low SLEs and an *increase* in financial security, there was a positive change in the mean life satisfaction score but a decline when SLEs were at a mid-range level. Because the relationship between financial security and life satisfaction was weak, this result revealed more about the impact of different levels of SLEs than

financial security and suggests a potentially more complex relationship between financial security, SLEs and life satisfaction than was examined in this work.

Change in Financial Security by Race. The fifth hypothesis examined the role of changes in financial security as a buffer between race, SLEs and changes in life satisfaction. This hypothesis was supported. Specifically, a relationship was found in the interaction between race, SLEs and changes in financial security, a relationship that also was supported when stratification variables were controlled. There were also a number of interesting results concerning the main effect of financial security. Specifically when there were increases in financial security, it was reflected by an increase in life satisfaction. Subsequently, declines in financial security were associated with declines in life satisfaction. This relationship was not supported in both models. However, in addition to some interesting findings, race was a significant in just the stratified model.

Comparison between Black and White elders reveals some interesting differences. For example, 82.8% of Black elders experienced a decline in their income, but only 49% felt they had a decline in their financial security and 26% felt more financially secure in the measured time frame. By comparison, 79% of White elders also had a decline in their income, but 55% felt they had a decline in their financial security and only 17% felt they were more financially secure. For White elders, an increase in financial security is a positive buffer. In the Early Baby Boomer cohort, low SLEs and a decline in financial security showed Black elders continued to have positive mean changes in their life satisfaction while White Elders had declines. However, at mid-range SLEs, White elders continue to have a mean decline in life satisfaction fairly equal to that seen with low SLEs, but Black elders have a much larger decline in their life satisfaction scores. When there were increases in financial security, this same cohort had mean increases in life satisfaction scores with low SLEs, but Black elders had a decline in their scores with mid-level

SLEs and White elders continued to have slight increases in their life satisfaction scores. Therefore, financial security did buffer SLEs for Black elders at low levels of SLEs, but even with increases there was a decline in life satisfaction at mid-level SLEs, but it was less than what was seen when there is a decline. Thus, specifically for the Early Baby Boomer cohort financial security does buffer for both Black and White adults, but had a stronger impact for White adults.

Theoretical Implications. As previously discussed, the Life Course Perspective posits that individual experiences impact the social structure they interact with. Financial security is obviously influenced by particular SLEs, such as retirement. Less obvious however, are the changes in financial security as a secondary effect to SLEs. Illness or injury could create new expenses or changes in the ability to work, negatively impacting financial security. This puts elders in contact with structural influences that impact the life course and autonomy, such as becoming eligible for HCBS programs. Participation in these programs alters the life course and is often a direct result of an SLE.

For example, the differences in financial security between Black and White elders could be a result of the very different life course experiences of Black elders. Income disparities between Black and White elders are well documented and through resilience, the impact of lower income is less as they entered this life stage with lower income and savings than their White peers. For Black elders, financial security may be in the form of Medicaid or Social Security benefits coupled with a change in health status or living situation. Therefore, this financial security comes with a price, SLEs that trigger a situation wherein the elder may qualify for income assistance, thus a decline in life satisfaction may be experienced due to the SLE. While more needs are being met and financial security is improved, SLEs have increased and in this situation, financial security has

a negative impact on life satisfaction. In this situation, financial security does not act as a buffer in the same way for Black elders as White elders.

The work of Gibson (1982) first explored differences in Black and White experiences as a potential explanation for stark differences seen at all ages. These findings demonstrate the crossover effect clearly as it is likely that the collective experiences of Black elders is significantly different than that of White elders and thus, financial security means different things and thus, the buffering impact is greatly different when direct comparisons are made.

Policy Implications. Well-being is inherently a primary premise for the establishment of the OAA (1965), in fact, the first objective of the act is to ensure "an adequate income in retirement in accordance with the American standard of living". This act also proved that those older adults with "greatest economic need (including low-income minority individuals and older individuals residing in rural areas"

Social Work Implications

Work with older adults has long held a stigma for new social workers. Few students graduate with the intention to work with this population and even in the enlightened social work curriculum, there is much work to be done to integrate aging content. The reality for social work though is that this population is poised to be a very large segment of the community in the coming years. Resources that were plentiful in previous generations may be impacted by the sheer volume of Baby Boomers entering retirement and exiting the workforce, something social workers need to be aware of. With this demographic shift, social workers who previously had not worked with this population may find themselves with older clients and thus, must understand the differences in not only race, but cohort. EBB cohorts do not have the same needs or perceptions as the WB cohort, and so on. The need for continued social support, autonomy in decision making and the

impact financial security has must be included in curriculum alongside an understanding of "traditional" challenges, such as physical declines and changing family dynamics, of the older population.

Limitations

There are several limitations in this research that must be noted. First, use of a secondary dataset can be challenging. Data included in this research was limited to what was available in the HRS. One such area involves the measurement of SLEs. I used an established scale (SRRS) as a model to formulate a measure for SLEs found in this research. However, the SRRS specifically asks about events in the past year while the HRS measures are in two year increments. This is a limitation and challenge for several reasons. First, it is unknown if the event happened recently or two years ago, this could significantly impact outcomes depending on the SLE measured. A chronological account of SLEs could help to discuss cause and secondary effects related to the primary SLE, data that is not available in the current HRS. Secondly, the use of SRRS values may not hold true for older adults, as the findings in this research suggest. For example, financial security may have a higher impact for elders than younger adults, resulting in a higher value.

Secondly, the sample is geographically limited. Because of masks in the HRS, this information was not available to me for this research, but after meeting proper funding requirements, this is something that could be added to future work. However, for this current study, geographic information could certainly reveal different attitudes and results depending on the location of the elder. For example, in certain states that have more retirement communities, the results may be vastly different than those is less hospitable climates or for those elders who did not relocate or even retire yet. Also, leading in to the next limitation of income and assets,

examination of the impact of these buffers by location could pin point the specific impact economic conditions have on aging populations not seen in the current literature.

Lastly, this research did not focus on assets or specific living situation when calculating SLEs. The calculation of total assets was beyond this work and was not necessarily justified to measure a decline in income as an SLE. There are asset variables available in the HRS and the survey does measure and calculate very complex income and asset variables. Use of an asset variable versus only income may have influenced this work as the recession occurred during the time frame (2004-2012) of the data used.

Future Research

Despite the limitations and weak interaction effects of this dissertation, the findings are meaningful and provide a good foundation for future work. The first endeavor stemming from this research is the creation and validation of a SLE scale specifically for the aging population. Use of the SRRS for the purposes of this dissertation was an appropriate adaptation of this well received tool. However, as this study suggests, there may be some stark differences in perception as we age. Considering response shift theory as well as the disability paradox, the creation of a measure scaled to those in this life stage would be appropriate. Examination of the impact of SLEs with accurate scaling to life stage and circumstances could impact aging research and improve the perception of the aging population.

A second study informed by this research would be to examine the results based on the SLEs experienced. Disseminating the strength of the impact of these buffers based on the SLE experienced could be revealing in regards to what is important depending on the event experienced. Being able to discern these differences could inform policy specific to circumstances to be more effective in meeting the long-term needs of elders in a proactive way versus reactive following the

SLE. Along with examination by specific event, research in the context of the economic downturn in 2008 could potentially be very revealing in discovering the impact this macro event had on the aging population.

Lastly, the HRS is part of an international consortium of aging studies. Work from this dissertation could be replicated using data from international studies that are part of this research network. This research would provide meaningful comparisons from a cultural standpoint and perhaps, a global impact of economic conditions or other circumstance. International research regarding the buffering effect of the personal resources explored in this work could provide a framework for policy makers in the United States, especially if other countries have been successful in integrating programs specifically addressing the concerns examined in this dissertation.

As previously discussed, more SLEs resulted in an increase in social support in the same time frame. This increase in social support however, could also come with a decline in autonomy. As more people are involved in the elder's life, the less control the elder may feel they have in their current situation. Additionally, when an elder becomes ill, it is not uncommon for choices to be left to family or spouses over the affected elder. So, when there is an increase in autonomy, it is happening as a result of not only the circumstances, but those who surround the elder in their time of need.

Conclusions

The findings in this dissertation provides further evidence that older adults changes in life satisfaction over time is influenced by changes in social support, autonomy, and financial security. The examination of the buffering effect of these personal resources following an SLE revealed that the buffering relationship is weak. However, when examining main effects, SLEs are a small

factor in predicting changes in life satisfaction and each of the individual buffers plays a much larger role in the prediction of life satisfaction over time than any other variable in each of the models. While SLEs were significant, their weak relationship indicates that for this population, SLEs do not have an enormous impact on changes in life satisfaction over time. The strongest contributor to changes in life satisfaction in the regression analyses, were the buffers. However, even though the SLEs have weak predictive relationships, buffers still had an impact on the relationship between SLEs and changes in life satisfaction which confirms how strong these buffers are for older adults. When examined by level of SLE and whether there was an increase or decrease in the buffer, there were differences noted between the cohorts, suggesting the number and/or combination of SLEs make a difference in the role or even the strength of the buffering effect.

The concept of shared experiences has been long suggested as the perspective by which models of aging life satisfaction research should follow (McClimans, Bickenbach, Westerman, Carlson, Wasserman, & Schwartz, 2013; Oliver, 1992). These findings are supported through theoretical foundations found in Life Course Theory and Response Shift Theory. Those with permanent disabilities who perpetually demonstrate a positive outlook and report high life satisfaction (Bowling & Gabriel, 2003) in spite of diagnosis or physical function. Application of disability research in aging research and policy is accepted practice and is applicable to explain why, given advanced age and increases in SLEs, life satisfaction increases in the oldest old.

As discussed throughout this work, many aging policies have an underlying purpose to maintain or improve quality of life for elders. What is missing however, are concrete structures to achieve this goal. Policy implications include the expansion of services to elders regardless of income or health status to ensure the highest well-being be achieved by aging adults. In order to

ensure that life satisfaction is maintained or improved, access to supportive services should not be limited by diagnosis or time. Instead, a continuation of support in the form of simple visits or transportation to places and events that promote socialization could provide the mechanism by which the life satisfaction of at risk elders is maintained or even improved. This accommodation for non-health and non-income related issues would be innovative and proactive in preventing the isolating conditions that often lead to irreversible declines in health and well-being.

APPENDIX

Table A1: Buffering hypothesis justification and support

Hypothesis	Policy Assumption	Reference	Theory	Policy
H2: Social support will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in social support will have higher life satisfaction over time than those with declines in social support	Lower health status results in lower life satisfaction	Turner, 1999 Song, 2011 Dürner, Reinecker, & Csef, 2013 Davison, McCabe, Knight, & Mellor, 2014	Life Course: individual level factors determining social structures	OAA 89–73, 79 Stat. 218, 1965
H3: Autonomy will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in autonomy will have higher life satisfaction over time than those with declines in autonomy	Staying in the home results in higher life satisfaction	Holmes & Rahe, 1967 Golant, 2009 Golant, 2008	Life Course: agency	Wilmoth, 2010 Olmstead versus L.C.
H4: Perception of financial security will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in PFS will have higher LS over time than those with declines in PFS	Higher SES results in higher life satisfaction	Oldman, 2002 Wilmoth, 2011	Life Course: structural influences	AIDD NCOA OAA 89–73, 79 Stat. 218, 1965

H5: The relationship between stressful life events and LS will be buffered by both race and changes in SS. Specifically, the effect of social support will be different for African American elders than White elders over time	Minority elders have lower life satisfaction	Pearlin & Skaff, 1996 Hagestad & Dannefer, 2001 Marshall, 2009 Wahl & Oswald, 2010 Wilmoth, 2010 Dannefer, 2013	Life Course: experiences & individual level factors impacting social structure	OAA 89–73, 79 Stat. 218, 1965
H1: Elders who experience higher levels of stressful life events (SLEs) are more likely to experience a decline in life satisfaction over time	Minority elders have lower life satisfaction	Bond, 2013 Mouzon, 2014	Life Course: individual experiences & individual level factors impacting social structure	OAA 89–73, 79 Stat. 218, 1965

Table A2: IV- Stressful Life Events variable construction and source

Variable *	Question	SRRS value	Data Source	HRS variable (s)	
				2010	2012
Death of a Spouse	Did you divorce or become widowed since (last interview)?	100	Core	MB058	NB058
Divorce	Did you divorce or become widowed since (last interview)?	73	Core	MB058	NB058
Marital separation	Would you say you are currently Married, separated, divorced, widowed, or never married?	65	Core	MZ080 (prev wave)	NZ080 (prev wave)
				MB061 (current status)	NB061 (current status)
Death of a close family member	Mother died Father died Year sibling died	63	Core	MF007/008 MF017/018 MF084	NF007/008 NF017/018 NF084
Personal injury or illness	In what year were you first diagnosed with diabetes?	53	Core	MC214	NC214
	In what year was your most recent cancer diagnosis?			MC028	NC028
	In what year was your most recent heart attack?			MC043	NC043
	What year were you diagnosed with heart failure?			MC264	NC264
	What year were you diagnosed with abnormal heart rhythm?			MC267	NC267
	In what year was your most recent stroke?			MC064	NC064
	In the last 2 years, have you had an injury resulting from a fall?			MC081	NC081
Marriage	Would you say you are currently Married, separated, divorced, widowed, or never married?	50	Core	MZ080 (prev wave)	NZ080 (prev wave)
				MB061 (current status)	NB061 (current status)
Retirement	What year did you retire?	45	Core	MJ018	NJ018

Change in financial state		38	RAND Wealth & Income Imputation Files	H8ITOT (2008) H9ITOT (2010)	H9ITOT (2010) H10ITOT (2012)
Change in living conditions	Have you moved to a worse residence or neighborhood in the past five years?	25	PSWB_LB	MLB038D	NLB038D
Change in residence	HH moved since previous wave	20	Core	MX033	NX033
No event	(All variables are summed to 0)	0	Summation of variables	No variable	No variable

Table A3: IVs- Social support, autonomy, perception of financial status variable construction and source

Variable	HRS Variable(s)		HRS Variable(s)	
	2006	2010	2008	2012
Social Supports				
Positive Social Support ††	KLB004 * KLB007 ** KLB011*** KLB015†	MLB004 * MLB007 ** MLB011*** MLB015†	LLB004 * LLB007 ** LLB011*** LLB015†	NLB004 * NLB007 ** NLB011*** NLB015†
How much do they really understand the way you feel about things? (spouse, children, family & friends)	KLB005A KLB008A KLB012A KLB016A	MLB005A MLB008A MLB012A MLB016A	LLB005A LLB008A LLB012A LLB016A	NLB005A NLB008A NLB012A NLB016A
How much can you rely on them if you have a serious problem?	KLB005B KLB008B KLB012B KLB016B	MLB005B MLB008B MLB012B MLB016B	LLB005B LLB008B LLB012B LLB016B	NLB005B NLB008B NLB012B NLB016B
How much can you open up to them if you need to talk about your worries?	KLB005C KLB008C KLB012C KLB016C	MLB005C MLB008C MLB012C MLB016C	LLB005C LLB008C LLB012C LLB016C	NLB005C NLB008C NLB012C NLB016C
Negative Social Support				
How often do they make too many demands on you?	KLB005D KLB008D KLB012D KLB016D	MLB005D MLB008D MLB012D MLB016D	LLB005D LLB008D LLB012D LLB016D	NLB005D NLB008D NLB012D NLB016D
How much do they criticize you?	KLB005E KLB008E KLB012E KLB016E	MLB005E MLB008E MLB012E MLB016E	LLB005E LLB008E LLB012E LLB016E	NLB005E NLB008E NLB012E NLB016E
How much do they let you down when you are counting on them?	KLB005F KLB008F KLB012F KLB016E	MLB005F MLB008F MLB012F MLB016E	LLB005F LLB008F LLB012F LLB016E	NLB005F NLB008F NLB012F NLB016E
How much do they get on your nerves?	KLB005G KLB008G KLB012G KLB016G	MLB005G MLB008G MLB012G MLB016G	LLB005G LLB008G LLB012G LLB016G	NLB005G NLB008G NLB012G NLB016G

Autonomy				
Constraint††				
I often feel helpless in dealing with the problems of life.	KLB022A	MLB022A	LLB022A	NLB022A
Other people determine most of what I can and cannot do.	KLB022B	MLB022B	LLB022B	NLB022B
What happens in my life is often beyond my control.	KLB022C	MLB022C	LLB022C	NLB022C
I have little control over the things that happen to me.	KLB022D	MLB022D	LLB022D	NLB022D
There is really no way I can solve the problems I have.	KLB022E	MLB022E	LLB022E	NLB022E
Mastery				
I can do just about anything I really set my mind to.	KLB023A	MLB023A	LLB023A	NLB023A
When I really want to do something, I usually find a way to succeed at it.	KLB023B	MLB023B	LLB023B	NLB023B
Whether or not I am able to get what I want is in my own hands.	KLB023C	MLB023C	LLB023C	NLB023C
What happens to me in the future mostly depends on me.	KLB023D	MLB023D	LLB023D	NLB023D
I can do the things that I want to do.	KLB023E	MLB023E	LLB023E	NLB023E
Sense of Financial Security				
Ability to Pay Bills††				
How difficult is it for (you/your family) to meet monthly payments on (your /your family's) bills?	KLB039B	MLB040	LLB040	NLB040
Perception of Financial Status				
How satisfied are you with (your/your family's) present financial situation?	KLB039A	MLB039E	LLB039E	NLB039E

*If 'yes' – continue with KLB005A-G, LLB005A-G, MLB005A-G or NLB005A-G
** If 'yes' – continue with KLB008A-G, LLB008A-G, MLB008A-G or NLB008A-G
***If 'yes' – continue with MLB012A-G
† If 'yes' – continue with MLB016A-G
†† Reverse coded

Table A4: DV- Life Satisfaction variable construction and source

Questions	HRS Variable(s)		HRS Variable(s)	
Please say how much you agree or disagree with the following statements:	2006	2010	2008	2012
In most ways my life is close to ideal.	KLB003A	MLB003A	LLB003A	NLB003A
The conditions of my life are excellent.	KLB003B	MLB003B	LLB003B	NLB003B
I am satisfied with my life.	KLB003C	MLB003C	LLB003C	NLB003C
So far, I have gotten the important things I want in life.	KLB003D	MLB003D	LLB003D	NLB003D
If I could live my life again, I would change almost nothing.	KLB003E	MLB003E	LLB003E	NLB003E

Table A5: Interactions Tested : Multiple Regression

Hypothesis	Independent Variable	Buffer Variable	Dependent Variable	Interaction
H1: Elders who experience higher levels of stressful life events (SLEs) are more likely to experience a decline in life satisfaction over time	SLEs	--	Life Satisfaction	--
H2: Social support will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in social support will have higher life satisfaction over time than those with declines in social support	SLEs	Social Support	Life Satisfaction	SLEs x Social Support
H3: Autonomy will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in autonomy will have higher life satisfaction over time than those with declines in autonomy	SLEs	Autonomy	Life Satisfaction	SLEs x Autonomy
H4: Financial security will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in FS will have higher LS over time than those with declines in FS	SLEs	Perception of Financial Security	Life Satisfaction	SLEs x Perception of Financial Security
H5: The relationship between stressful life events and LS will be buffered by both race and changes in SS. Specifically, the effect of social support will be different for African American elders than White elders over time	SLEs Race	Social Support	Life Satisfaction	SLEs x Race x Social Support
H6: The relationship between stressful life events and LS will be buffered by both race and changes in the perception of financial security. Specifically, the effect of the perception of financial security will be different for African American elders than White elders over time	SLEs Race	Perception of Financial Security	Life Satisfaction	SLEs x Race x Perception of Financial Security

Table A6: Groups tested: ANOVA Post-Hoc Analysis

Hypothesis	Independent Variable (Groups)	Dependent Variable	Examined by
H2: Social support will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in social support will have higher life satisfaction over time than those with declines in social support	Low SLEs/Decline in SS Mid SLEs/ Decline in SS High SLEs/Decline in SS Low SLEs/Increase in SS Mid SLEs/Increase in SS High SLEs/Increase in SS	Life Satisfaction	Birth Cohort
H3: Autonomy will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in autonomy will have higher life satisfaction over time than those with declines in autonomy	Low SLEs/Decline in auto Mid SLEs/ Decline in auto High SLEs/Decline in auto Low SLEs/Increase in auto Mid SLEs/Increase in auto High SLEs/Increase in auto	Life Satisfaction	Birth Cohort
H4: Financial security will buffer the relationship between stressful life events and life satisfaction. Specifically, among elders with one or more stressful life events, those with increases in FS will have higher life satisfaction over time than those with declines in FS	Low SLEs/Decline in FS Mid SLEs/ Decline in FS High SLEs/Decline in FS Low SLEs/Increase in FS Mid SLEs/Increase in FS High SLEs/Increase in FS	Life Satisfaction	Birth Cohort
H5: The relationship between stressful life events and LS will be buffered by both race and changes in SS. Specifically, the effect of social support will be different for African American elders than White elders over time	Low SLEs/Decline in SS Mid SLEs/ Decline in SS High SLEs/Decline in SS Low SLEs/Increase in SS Mid SLEs/Increase in SS High SLEs/Increase in SS	Life Satisfaction	Race Birth Cohort
H6: The relationship between stressful life events and LS will be buffered by both race and changes in the perception of financial security. Specifically, the effect of the perception of financial security will be different for African American elders than White elders over time	Low SLEs/Decline in FS Mid SLEs/ Decline in FS High SLEs/Decline in FS Low SLEs/Increase in FS Mid SLEs/Increase in FS High SLEs/Increase in FS	Life Satisfaction	Race Birth Cohort

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ABSTRACT

WHAT IMPACTS LIFE SATISFACTION OF AGING ADULTS FOLLOWING STRESSFUL LIFE EVENTS?: AN EXAMINATION OF THE BUFFERING EFFECT OF PERSONAL RESOURCES

by

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Purpose: While not all stressful life events (SLEs) are as devastating as losing your life partner, each event changes the life course and creates a new reality requiring an individual to cope and adjust. The role personal resources play can make a significant difference for elders in their ability to make these necessary adjustments to changes in their daily lives. Increases in personal resources, such as social support, autonomy, and financial security can buffer the relationship between SLEs and life satisfaction. This study hypothesizes that when examining older adults, those with increases in their personal resources over time following a SLE will tend to have greater increases in their life satisfaction.

Methods: The public use files of the Health and Retirement study between the years of 2006 to 2012 are used to explore the ways that changes in social support, autonomy, and financial security buffer the relationship between SLEs and life satisfaction. A series of multiple regressions are conducted to explore each buffer through SPSS and STATA. Post-hoc ANCOVA analysis is also conducted.

Results: The research findings in this dissertation demonstrate that increases in social support, autonomy, and financial security buffer the impact of SLEs on changes in life satisfaction over time.

AUTOBIOGRAPHICAL STATEMENT

Cassandra comes from over 20 years social work practice experience, primarily in long-term care. Aside from her doctoral studies, she is also a part-time faculty member at Wayne State University as well as Oakland University. She is currently employed as Assessment Coordinator in the Office of Institutional Research at Oakland University. She lives in Royal Oak, Michigan.