2020

The role of life events in older women's psychosocial development and well-being

Taylor Hill
taylor_hill@hotmail.com

THE ROLE OF LIFE EVENTS IN OLDER WOMEN'S PSYCHOSOCIAL DEVELOPMENT AND WELL-BEING

by

Taylor Hill

BA (Honours), Saint Mary's University, 2018

THESIS

Submitted to the Department of Psychology

in partial fulfilment of the requirements for

Master of Arts in Psychology

Wilfrid Laurier University

Abstract

Research on well-being and aging has suggested the trajectory of well-being through adulthood is U-shaped, with the lowest point typically occurring in midlife (Stone, Schwartz, Broderick, & Deaton, 2010). Toward the end of life, well-being (and in particular, life satisfaction) may surpass earlier levels and individuals tend to engage in a life review process wherein they evaluate how their life has turned out. Those who are satisfied with how their life events fit together to form their life story have been shown to have achieved ego integrity (i.e., accepting of their life to date and the limited time they have left) and to be more accepting of impending death, whereas those who have not achieved ego integrity might be less satisfied with their lives (Erikson, 1963). This secondary data study used mixed methods (content analysis of written narratives and quantitative scales) to understand the influence of life events (valence and frequency) on changes in women's later life satisfaction, and how this relationship is shaped by psychosocial development. Findings indicate that age-related life events do not hold a unique relationship with later life satisfaction above and beyond Erikson's (1963) final psychosocial developmental stage. Achieving ego integrity helped soften the impact of negative life events on life satisfaction, likely due to the integrity-defining characteristic of being able to accept the negative pieces of one's past. Ultimately, this study illuminated the way in which psychosocial developmental constructs can influence the relationship between negative life events and life satisfaction. Additionally, the ways in which older women thought about their lives, particularly during their 60s, were shaped by their engagement with close others. For these women, time spent with friends and family was perceived to be time well spent.

Acknowledgements

This thesis would literally have not been possible without my luck in securing a supervisor (Dr. Nicky Newton) who has built a career out of studying women's life experiences and who invited me into the world of rich longitudinal datasets such as the Women's Life Paths study and the Radcliffe College Class of 1964 study. Thank you for pushing me to do my best and for always sharing your knowledge and insights (even when I email you nine times in one day). Thanks to our past and present lab members for becoming familiar faces when I moved across the country to study these topics, especially to Katie who shares my love for cats and my obsession with death and dying. Thank you to my internal committee members, who supported, challenged, and guided me while I wrote this thesis: Dr Roger Buehler and Dr Eileen Wood. Thank you to Dr Kimberly Lopez for supporting me in her role as external examiner. Thank you Danielle, for being a star student in my research methods lab and for helping me code my qualitative data with care.

To my best friend Megan, who I met volunteering in our first psychology lab in our early 20s, I could not imagine simultaneously progressing through graduate school without you. My family, who encouraged me to move away and seek new opportunities such as the one offered by Wilfrid Laurier University, cheer for me in everything that I do. Particularly my dad, who instilled a love of education in me from a young age, and my mom, who is the person who loves me most in the world. Thanks to my twin for being my other half, and who I will never live far away from again for the rest of our lives. Most of all, thank you to my two feline daughters, Mackenzie and Nicola Benoit, who moved across the country and back with me to pursue this degree. You two are my life. This, and everything I do, is dedicated to you.

Table of Contents

List of Tables

List of Figures

List of Appendices

The Role of Life Events in Older Women's Psychosocial Development and Well-Being

Understanding and promoting psychological well-being in older adults has become a major goal for health researchers and social scientists (Fave et al., 2018; Gerst-Emerson & Jayawardhana, 2015), largely due to the increasing proportion of the population which can benefit from relevant research. Life expectancy has increased and effective treatments for life-threatening diseases have improved, and both continue to do so, which has led to unprecedented numbers of older adults in North America (Martel, 2015). In fact, in ten years, the older adult (i.e., 65-years and older) demographic is expected to represent one-quarter of the Canadian population; currently, there are more than 6 million older adults in Canada (Statistics Canada, 2019). As the population ages, the ratio of females to males increases – globally, females comprise 61% of those aged 80 years or older (United Nations Department of Economic and Social Affairs, 2017). Although North American women tend to outlive men by 4-7 years (Ginter & Simko, 2013), older women's health tends to be poorer relative to older men's health (Austad & Fischer, 2016). Further, women's well-being is sensitive to psychosocial factors such as their perceptions of aging (Moieni et al., 2019) and perceived social support (Ailshire & Crimmins, 2011), which presents a rich and contextual topic for researchers interested in the nuances of adult development and aging.

Considering the complexities involved in older women's experiences of aging (e.g., caregiving responsibilities; Sharma, Chakrabarti, & Grover, 2016), which shape their life course in terms of role type, timing, and duration (Moen, 2001), well-being in older women is an important topic of research. Achieving a more nuanced understanding of older women's well-

being, considering the context of their later life experiences and associated psychosocial development, is the primary objective of this thesis.

Roadmap

This thesis is a secondary data analysis study concerned with understanding the influence of life events on changes in women's psychosocial development and well-being in later life. Data are drawn from a larger longitudinal study concerning life paths, personality, health and well-being, perceived high and low points, and occupational, leisurely, and recreational engagement. As this thesis is concerned with understanding the role of life events in the relationship between age and well-being, I pull from theoretical frameworks such as Socioemotional Selectivity Theory (Carstensen, 1995), Life Review (Butler, 1963), and the final stage of Erikson's developmental theory (Erikson, 1963). The relationship between age and well-being is reviewed, followed by psychosocial adjustment to life events and the implications for psychosocial development with a specific focus on ego integrity versus despair.

Theoretical Frameworks

Socioemotional selectivity theory.

Carstensen's (1995) Socioemotional Selectivity Theory (SST) states that as individuals advance in age, the perceived time left in their lifetime continuously shrinks as time passes. According to SST, the salience of one's time horizon leads to a shifting of goals and motivations from expanding and pursuing opportunities (or knowledge-focused goals) in younger adults towards focusing on close, personal relationships in older age (or emotion-focused goals; Carstensen, 1995). The concomitant selective winnowing of relationships maximizes positive emotional experiences and minimizes negative emotional experiences (Carstensen, 1995), a

process that is not a direct product of one's chronological age, but rather a shift in time perspective which can be associated with chronological age (Carstensen, Mayr, Pasupathi, & Nesselroade, 2000). As individuals perceive their time left is decreasing, they may review their life and the presence of unresolved regrets or goals to determine how to spend their remaining time.

Life review and ego integrity versus despair.

The role of reminiscing in older adults has been shown to be important (O'Rourke, Cappeliez, & Claxton, 2011) and relevant when considering the role the life review (Butler, 1963) plays in the achievement of ego integrity (Erikson, 1963). The life review entails a personal process during which an individual evaluates their life (Butler, 2002), often following a major life event, such as a health crisis or confrontation with death and dying (Fung & Carstensen, 2006). The function of this process is to re-examine and re-evaluate one's life history, by reviewing past issues, resolving past conflicts, and ultimately achieving "hard-won serenity, a philosophical acceptance of what occurred in the past, and wisdom" (Butler, 2002, p. 5).

Relatedly, the achievement of ego integrity—the positive aspect of Erikson's eighth stage of psychosocial developmental—involves coming to terms with the life one has lived (Erikson, 1963). Each of the eight stages outlined in Erikson's psychosocial developmental theory can build on the previous stage, and involves a psychosocial crisis that results in a virtue upon successful completion (Erikson, 1963). Progression through the eight stages is not always linear; successful completion of a psychosocial crisis may require reverting to a previous stage and renegotiating a previous psychosocial crisis (Erikson, 1963). The last stage, ego integrity

versus despair, involves the life review process initially described by Butler (1963), and its core virtue is wisdom (Erikson, 1963). The negative aspect of ego integrity, despair, can result from feeling that more time is required to address past life decisions that are hindering a successful life review process (Butler, 1963; Erikson, 1963). Successful achievement of ego integrity, accompanied by low levels of despair, suggests that one perceives their life story as fitting together in a meaningful and cohesive manner, and that one accepts both the positive and negative aspects of the life they have lived (Erikson, 1963).

Theoretical model.

As the ages of the women analyzed in this thesis span from mid-50s to early-80s across nearly two decades, their age at the first time point is one of late middle age (i.e., primarily 50s and 60s) and the second time point is one of older age (i.e., primarily 60s and 70s). These women are at the point in their lives in which their trajectory of psychosocial development is approaching what Erikson considered to be the final stage, ego integrity versus despair. Moreover, at the first time point these women are considered to be nearing the stage of development wherein age-related life events (e.g., serious illness) can contribute to a shift in one's time horizon (Carstensen, 1995) and facilitate the process of a life review (Butler, 1963; see Figure 1). The life review is a defining aspect of the developmental task of negotiating ego integrity versus despair and determines the resolution of the final psychosocial crisis (Erikson, 1963).

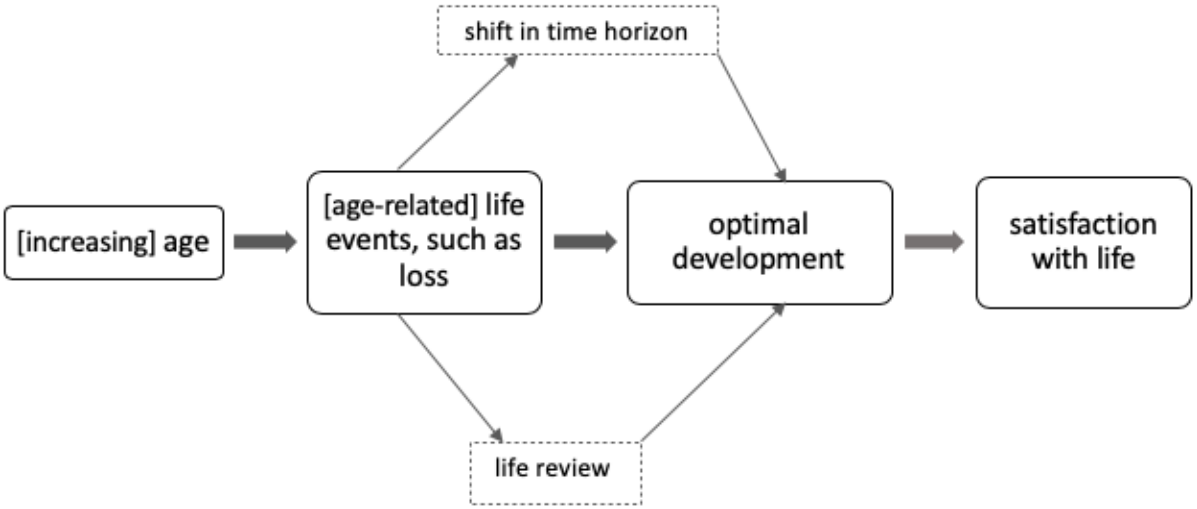

Figure 1. The theorized mechanisms underlying the relationship between age, life events, and life satisfaction.

Literature Review

Aging and well-being research.

Current research on aging and well-being developed from the biomedical model, which proposed that the absence of disease and disability was a key indicator of well-being (Breslow, 1972). Relatively recently, researchers have begun to focus on a health promotion approach to aging (Kickbusch, 1995) such as measuring positive psychological health across adulthood (e.g., successful aging; Rowe & Kahn, 1997). An established measure of well-being in adulthood is subjective well-being (e.g., Gerstorf, Ram, Röcke, Lindenberger, & Smith, 2008; Joseph Sirgy & Wu, 2009; Steptoe & Fancourt, 2019), a concept emphasizing the personal experience of the individual (Mroczek & Spiro, 2005) and not factors such as health, comfort, or wealth, as previously thought (Kammann, 1983). Also pertinent to measuring subjective well-being is the presence of positive factors (Fredrickson & Losada, 2005) in addition to the absence of negative

factors (Ryff, 1995), and a global evaluation of one's overall life (Clark, Diener, Georgellis, & Lucas, 2008; Diener, 1984; Fave et al., 2018). This definition of subjective well-being aims to satisfy the need in research for a more nuanced and multi-faceted conceptualization of well-being, rather than the sole absence of disease or disability.

In addition, research on individual differences in the relationship between age and well-being originally focused on social indicators of well-being, such as sociodemographic factors of financial and societal well-being (Andrews, 1976). The underlying assumption was that certain groups were happier than others because sociodemographic factors (i.e., financial means) facilitated well-being (Andrews, 1976). An influx of scholarship on the effects of social indicators on well-being closer to the turn of the 21st century uncovered that the effect of sociodemographic factors was modest (Diener, 1984; Ryff, 1989). In fact, those who faced "objective difficulties" were not relatively unhappy, leading to the "paradox of well-being" (Mroczek & Kolarz, 1998, p. 1333): those with poor sociodemographic factors did not always have low well-being. This is not to say that sociodemographic factors do not shape well-being; rather, it may be the circumstances associated with poor sociodemographic factors (e.g., decreased opportunity for social mobility) that are associated with well-being (Chan, 2017), and specifically, life satisfaction (Hadjar & Samuel, 2015). Hence, key indicators of well-being have evolved from sociodemographic factors.

Age was considered a main aspect of well-being, as some thought that well-being and quality of life decreased with age (Baltes, 1987). However, more recent research suggests that with age, the ability to regulate emotions increases, such that negative affect tends to stabilize in later life, and positive affect is greatest among older adults (Carstensen et al., 2000; Diehl &

Hay, 2011). Indeed, subjective well-being, which encompasses eudaimonic well-being (e.g., finding meaning and purpose in life; Ryan & Deci, 2001), evaluative well-being (e.g., life satisfaction; Diener et al., 1984), and affective well-being (balanced positive and negative affect; Diener et al., 2010), may be equivalent or greater in older cohorts than younger cohorts (Baltes, 1987; Jivraj, Nazroo, Vanhoutte, & Chandola, 2014). These findings suggest that well-being is a fluid factor that changes with age, yet the complexities uncovered yield more questions; ranging from the foundational relationship between age and well-being (e.g., changes in well-being as a result of age) to potential age-related determinants of well-being (e.g., positive life events, such as marriage and career changes, as well as negative life events, such as health crises).

Trajectories of well-being.

Research has documented patterns in the relationship between age and well-being, such as the curvilinear trajectory in global (i.e., an evaluation of one's overall life) well-being as age advances (Stone et al., 2010). A curvilinear trajectory of well-being suggests that well-being gradually declines throughout adulthood (i.e., younger adulthood to midlife) with a pronounced low point at the end of middle age, and then a gradual increase through old age (Stone et al., 2010). Although findings show that "…after the age of 50 years, Americans have increasing levels of well-being" (Stone et al., 2010, p. 9986), there is a lack of context in the interpretation of this trajectory. For instance, it is age-associated experiences (rather than chronological age itself) which shapes how individuals' think about their lives (Carstensen 1995). Perhaps, as Mroczek and Kolarz (1993) claimed, age and personality interact (along with other contextual influences) to shape the age-well-being relationship.

The experiences and events in the second half of the curvilinear trajectory is of present interest, wherein well-being reaches its lowest point during late middle age and steadily increases to surpass earlier levels of well-being (Stone et al., 2010), suggesting that levels of well-being are greatest in older age. This trajectory presents an interesting consideration, as a characteristic aspect of aging is the plethora of physical- and health-related losses that have become synonymous with aging (e.g., losses in vision and hearing; Rooth, 2017). Thus, although age is characterized by losses, the subjective well-being of those advancing in age seems to hold or increase (Stone et al., 2010). Older age also presents the experience of death-related accumulated loss, meaning that as people advance in age, the loss of friends and families gradually increases (Gomez, Krings, Bangerter, & Grob, 2009; Grob, Krings, & Bangerter, 2001). Taken together with Carstensen's (1995) findings on time horizons, research suggests that perceptions of time may play a bigger role than pure age.

Indeed, findings are mixed regarding the relationship between chronological age and change in life satisfaction. Some research has shown that chronological age has little influence on later life satisfaction (George, 2010), while other research has found evidence for increased life satisfaction in older age (Mroczek & Spiro, 2005); yet, further research has found evidence for decreased life satisfaction in older age (Gerstorf, Ram, Estabrook, Schupp, & Wagner, 2008; Gerstorf, Ram, Röcke, Lindenberger, & Smith, 2008). However, certain life events, such as retirement or bereavement, might facilitate a shift in one's time horizon and subsequent decline in life satisfaction (Luhmann, Hofmann, Eid, & Lucas, 2012). Thus, it might not be age itself that determines later life satisfaction; rather, age-associated losses and subjective constructions of life can influence one's evaluation of one's life. That is, age-related changes in

life satisfaction may be attributable to the experiences associated with age, such as the shift of one's time horizon that can follow a health crisis or reminder of human mortality (Carstensen, 1995).

Increased awareness of the finitude of human life has causes and consequences that are psychosocial in nature (Lang & Carstensen, 2002). Beyond age-related shortened time horizons, experiencing major sociocultural events can also produce a shortened time horizon leading to the altering of social goals (Fung & Carstensen, 2006). For example, experiencing the September 2001 attacks in New York had the capacity to produce a shift in the perceived time horizons of one's life, wherein life priorities were realigned to fit with the perception of the potentially limited lifetime left (Fung & Carstensen, 2006). In fact, when assessing the motivational change in social goals before and after experiencing the September 2001 attacks, previous age differences between three groups (25-35; 45-55; 65+) disappeared: individuals in every age group showed a preference for emotionally-close social partners, and social circles were narrowed to maximize time in close and meaningful relationships (Fung & Carstensen, 2006). These findings indicate that time horizons are sensitive to factors beyond chronological age, and that certain circumstances can shift motivation in a similar way to chronological age.

Aging and well-being in women.

Life events tend to be associated with particular age periods (e.g., retirement; Tackett, 2001) and hold implications for well-being (Luhmann et al., 2014). It may not be age itself that shapes later life satisfaction; rather, age-related experiences and subjective constructions of life can shape well-being. As certain life events disproportionately favour women over men (e.g., spousal loss; Goldman & Lord, 1983) and contextualize the experience of aging in terms of role

type, timing, and duration (Moen, 2001), the unique relationship between life events and well-being in older women warrants exploration.

One line of research on older women's adaption to negative life events - the adjustment to widowhood in older women - has suggested that finding a sense of meaning and purpose in the loss of a spouse can facilitate acceptance of death (Bisconti, Bergeman, & Boker, 2004; Onrust, Cuijpers, Smit, & Bohlmeijer, 2007). In turn, meaning and purpose in life, as well as of death acceptance, can be traced to the achievement of ego integrity (Erikson, 1963). Specifically, Erikson proposed that an age-related decline in the will to live may be a product of the cohesiveness and completeness perceived from an individual's life story that ultimately leads to acceptance of the finitude of human life (Erikson, 1963) in the final stage of his psychosocial developmental theory.

Ego integrity versus despair.

The final stage of Erikson's (1963) psychosocial developmental theory, ego integrity versus despair, postulates an age-specific psychosocial crisis between the positive (i.e., ego integrity) and negative (i.e., despair) aspects of that stage. Achieving ego integrity is dependent on accepting the life one has lived, and perceiving life events – both positive and negative - to fit together in a cohesive and meaningful manner (Erikson, 1963). A shortened time horizon for one's life span can act as a precursor to the onset of this psychosocial crisis, in that acknowledging the inevitable approach of death promotes a life review process (Butler, 1963). During this process, individuals reflect on their life events and decisions, and ideally come to terms with their life story as a function of their impending death (i.e., this stage resolves in a state of ego integrity). On the other hand, despair is characterized by a sense of dissatisfaction

with one's life story, or an inability to accept one's life, as well as the presence of unresolved regrets (Torges, Stewart, & Duncan, 2008, 2009): individuals feel they do not have the necessary time left in their lifetime to address their dissatisfaction with their own lives (Erikson, 1963).

The achievement of ego integrity has myriad psychosocial benefits for older adults. Having a strong sense of ego integrity is associated with high evaluative and psychological well-being in later life (e.g., life satisfaction and a sense of meaning; Afonso, Bueno, Loureiro, & Pereira, 2011; James & Zarrett, 2005), including decreased fear of death in older adults (Busch, Hofer, Poláčková Šolcová, & Tavel, 2018). The relationship between ego integrity and well-being in older adults in general has been demonstrated using different measures (Bohlmeijer, Roemer, Cuijpers, & Smit, 2007; Westerhof, Bohlmeijer, & McAdams, 2017), and in older women in particular (Newton, Stewart, & Vandewater, 2019; Torges et al., 2009). For example, measures of ego integrity and despair have been developed to assess these constructs, based on open-ended narratives to develop a scale for ego integrity (Torges et al., 2009). Separate Q-sort scales for ego integrity and despair have also been developed (Newton et al., 2019). Torges et al. (2009) found that narrative ego integrity is positively associated with closed-ended ego integrity, suggesting that both approaches assess levels of the constructs sufficiently. Measuring ego integrity and despair as separate but related constructs has recently been examined by Newton and colleagues (2019), who developed Q-sort-based scales which have been utilized in relevant research (Newton, Ottley, Williams, & Hill, under revision), using a sample of older women. The current study uses both approaches to measuring ego integrity and despair: narratives and scale measures.

Virtues associated with the later stages of Erikson's psychosocial developmental theory (1963) have been linked to individuals' orientation toward death (McCoy, Pyszczynski, Solomon, & Greenberg, 2000). The theoretical connection between ego integrity and the fear of death has been documented in the literature (Hoare, 2002; Tomer & Eliason, 2000), and ultimately supports the notion that ego integrity is negatively related to fear of death (Fortner & Neimeyer, 1999). Recently, scholars have proposed that the developmental task of finding integrity and avoiding despair mediates the relationship between forgiveness – a key aspect of ego integrity – and satisfaction with life (Derdaele, Toussaint, Thauvoye, & Dezutter, 2019). That is, achieving ego integrity and not having a sense of despair is responsible for the relationship between forgiveness and life satisfaction (Derdaele et al., 2019). Although research has identified how achieving ego integrity influences the orientation toward death, it is unclear how experiencing death-related loss influences the resolution of ego integrity versus despair. As stated, a key component of achieving ego integrity is the perception of a cohesive and meaningful life story (Veglia & Di Fini, 2017) which is likely influenced by the events that constitute that story. Taken together, research has found that experiences related to a health crisis and illness can shorten one's time horizon (Fung & Carstensen, 2006), which in turn may facilitate the life review process (Butler, 1963). However, it remains unclear whether the frequency of age-related life events can facilitate these psychosocial processes (i.e., a shift in time horizons, a life review) and if loss-specific life events present a unique relationship with psychosocial development.

Psychosocial adjustment to life events.

Experiencing age-related positive life events—such as having grandchildren (Arpino, Bordone, & Balbo, 2018; Lou, 2010; Mahdi Vidouje et al., 2017; Silverstein, Cong, & Li, 2006) or retiring (Merz, 2018; Tackett, 2001)—can contribute to evaluative well-being (e.g., life satisfaction). The majority of research concerning adjustment to life events has focused on negative events, and is generally concerned with the reaction to a single event (Seery, Holman, & Silver, 2010)**,** such as death-related loss (e.g., Bisconti et al., 2004; Leopold & Lechner, 2015; Onrust et al., 2007) or serious illness (Stinson & Kirk, 2006; Worden et al., 2017) rather than the cumulative effect of multiple events. This focus on single events does not account for the fact that many significant life events co-occur (e.g., divorce and financial hardship; Green et al., 2010) and depending on the nature of the event, can influence many domains of functioning, such as psychological well-being and health (McMahon, Grant, Compas, Thurm, & Ey, 2003).

The impact of negative life events on measures of well-being, such as life satisfaction (Diener, Lucas, & Scollon, 2006) or subjective well-being (Luhmann et al., 2014) tends to be longer-lasting than the effect of positive life events. Research into understanding normative patterns of negative life events has demonstrated that experiences of death-related loss accumulate in the second half of life, largely as a function of advancing age (e.g., Shah, 2013). Older adults typically face different types of death-related loss, including friends (e.g., due to changes in residence or death), physical functions (e.g., vision or hearing; Rooth, 2019), and employment (e.g., retirement; Johnson, 2009). With advanced age, social circles become smaller in two ways: naturally, as friends and family begin to die, and by choice, with the selective narrowing proposed by Carstensen (1995).

Inventories that assign values to specific life events are common in psychological research on coping and adapting (c.f., Dohrenwend, 2006), such as the Social Readjustment Rating Scale (SRRS; Holmes & Rahe, 1967). The SRRS has been used extensively to document the readjustment required for specific life events (e.g., Buccheri, Musaad, Bost, & Fiese, 2018; Hobson & Delunas, 2001; Scully, Tosi, & Banning, 2000), and is useful for research on stress, health, and well-being. Further, the SRRS, albeit developed quite long ago, has been adapted with adequate reliability (e.g., Buccheri et al., 2018) and even re-visited relatively recently to assess its psychometric properties and address criticisms; ultimately, the scale remains useful for health and well-being research (Scully et al., 2000). Therefore, the SRRS was chosen as a means of measuring the occurrence of life events.

Keinan and colleagues (2012) counted negative life events in adults aged 50 and over, and found a meaningful difference in adjustment between experiencing zero to two events compared to experiencing three or more events. Specifically, a "critical quantity" (p. 1154) of cumulative adversity for the largest effect on psychological well-being emerged: exposure to three or more negative life events was necessary for post-traumatic stress symptoms in later life, and less than three events were less consequential (Keinan, Shrira, & Shmotkin, 2012). Thus, rather than assessing just the presence of a particular event in a dichotomous fashion, this thesis counts the frequency of a range of life events, and ultimately measures relationships between life events, psychosocial development, and well-being in older women.

The Present Study

This secondary data analysis study aims to understand the influence of life events (valence and frequency) on changes in women's later life satisfaction and psychosocial

development. The first set of analyses are concerned with changes over time in life satisfaction, frequency of positive and negative events, and death-related loss. First, change in life satisfaction across time will be assessed to examine the mid-to-later-life increase in well-being (Stone et al., 2010). Change in the frequency of experiencing positive and negative life events, as well as death-related loss, will also be examined. Then, the second analysis assesses the influence of negative life events on life satisfaction, and the potential buffering role of achieving ego integrity. Finally, the third analysis examines the impact of loss-specific events on life satisfaction and the potential exacerbating role of despair.

By using two measures of ego integrity and one of despair, the individual constructs (ego integrity and despair) can be assessed as separate but related constructs.

Research question 1: How are the frequency of positive and negative life events, death-related loss events, and satisfaction with life associated with age?

RQ1 H1: Satisfaction with life will increase with age (i.e., greater at time 2 than time 1).

RQ1 H2: The frequency of both positive and negative life events will decrease with age (i.e., greater at time 1 (M_{TIME1} = 61.85) than time 2 (M_{TIME2} = 68.70)).

RQ1 H3: The frequency of death-related loss experiences will increase with age (i.e., greater at time 2 (M_{TIME1} = 68.70) than time 1 (M_{TIME2} = 61.85)).

Research question 2: How do changes in the frequency of negative life events and ego integrity contribute to satisfaction with life?

As a successful life review that occurs during the negotiation of ego integrity versus despair entails that positive and negative pieces of one's cumulative life experience are accepted (Butler, 2002; Erikson, 1963), having achieved ego integrity suggests that negative life

experiences are acknowledged and reconciled. In other words, the impact of negative life events on one's evaluation of their past life is buffered by the ability to accept these experiences.

RQ2 H1: Frequent negative life events will contribute to decreased life satisfaction and will be moderated by achieving ego integrity; the hypothesized moderation effect is that higher ego integrity will decrease the effect of frequent negative life events on satisfaction with life.

Research question 3: How does accumulated death-related loss and sense of despair contribute to satisfaction with life?

A sense of despair, following an unsuccessful life review process during the negotiation of ego integrity versus despair, suggests that one has not come to terms with their past life experiences (Erikson, 1963). Death-related loss is a part of the life cycle that is challenging to accept; this may be especially for true those who feel they do not have enough time left to come to terms with their experiences, such as loss.

RQ3 H1: Accumulated death-related loss will contribute to decreased life satisfaction and will be moderated by a sense of despair; the hypothesized moderation effect is that higher level of despair will increase the effect of frequent death-related loss events on satisfaction with life.

Method

Participants

Participants (N_{TIME1} = 326; N_{TIME2} = 243) were drawn from a longitudinal study of women that combined two samples: the Radcliffe College Class of 1964 (see Stewart, 1978, 1980; Stewart & Vandewater, 1993) and the Women's Life Paths Study (WLPS; see Tangri & Jenkins,

1986). Both samples have been followed separately for several decades; analyses were based on the two most recent time points for both samples (Radcliffe in 2005 and WLPS in 2008, as well as the combined Radcliffe and WLPS data collection in 2014). The Radcliffe cohort is slightly and statistically significantly older (assessed on time 2 data, $M_{Radcliffe}$ = 71.73, M_{WLPS} = 67.53, $t(144) = 16.60$, $p < .0001$); however in terms of psychosocial development, the two cohorts are at the same stage in their lives. Further, the two cohorts did not significantly differ on levels of key variables in the present study (i.e., ego integrity, despair, satisfaction with life, number of life events). Thus, the samples used in the current research were combined. At time 2 (N = 243), the Radcliffe cohort formed 44% (N = 106) of the combined sample whereas the WLPS cohort formed 56% (N = 137), due to greater missing data in the Radcliffe cohort dataset. By 2014, the majority of participants had been married (227; 93%) although many did not remain so, had children (171; 77%) and grandchildren (124; 51%), and still held some form of employment (64%). Demographics of the sample are presented in Table 1.

Measures

Data for the present study were drawn from a larger survey concerning life paths, including the high and low points of the years since the last data collection, personality, health and well-being, and occupational, leisurely, and recreational activities. The primary dependent variable is a measure of Satisfaction with Life (Diener, Emmons, Larsem, & Griffin, 1985), independent variables include measures of Ego Integrity (Ryff & Heincke, 1983), the Q-sort scales of Ego Integrity and Despair (Newton et al., 2019), and responses to open-ended questions about perceived life high and low points in the last decade. The high point and low

point questions were coded for presence/absence using the procedure described below, drawing from the Social Readjustment Rating Scale (Holmes & Rahe, 1967).

Ego integrity and despair.

Psychosocial development toward the end of life was operationalized with two constructs, ego integrity and despair, from Erikson's (1963) theory of psychosocial development, and assessed by comparing the level of ego integrity and despair at the two time points in older age, using two methods. Recently developed Q-sort measures of ego integrity and despair (Newton et al., 2019) were used to provide an index of both constructs individually. Additionally, a well-established closed-ended measure of ego integrity from Ryff and Heincke (1983) allowed for a single score assessing ego integrity versus despair.

Q-Sort measures of ego integrity and despair. Ego integrity and despair were assessed by using two scales developed from the California Adult Q-set items (CAQ; Block, 1961, 2008). The CAQ consists of 100 statements that describe an individual's personality. Descriptors are placed into nine categories ranging from 1 (extremely uncharacteristic of the participant) to 9 (extremely characteristic of the participant). Each category can only contain a certain number of descriptors (5, 8, 12, 16, 18, 16, 12, 8, 5) which forms a normal distribution. A previously-used protocol for analyzing qualitative data using the Q-sort method (Block, 1961; Helson, 1992; Newton et al., 2019) was utilized. Specifically, three independent raters sorted the Q-sort descriptors after reading approximately six pages of personal narratives about the participants' life experiences (including perceived high and low points in their lives, regrets, aspirations, family factors, and occupational experiences), drawn from a larger survey on health, well-being, and life paths. Reliability was assessed by computing Cronbach's alphas for the three ratings per

Q-sort item, which ranged from α = .60 to α = .93, with M_{alpha} = .79. Each Q-sort item was assigned a score by calculating a composite score from the three ratings.

Recent research by Newton and colleagues (2019) led to the creation and validation of scales for ego integrity and despair, enabling researchers to measure levels of both ego integrity and despair separately. The Q-sort ego integrity (QEI) scale consists of seven descriptors: “Is calm, relaxed in manner” (Q33); “Is basically distrustful of people in general; questions their motivations” (reversed; Q49); “Concerned with own adequacy as a person, either at conscious or unconscious levels” (reversed; Q72); “Is subjectively unaware of self-concern, feels satisfied with self” (Q74); “Has a clear-cut, internally consistent personality” (Q75), “Appears straightforward, forthright, candid in dealing with others” (Q77); “Able to see to the heart of important problems” (Q83). The scale exhibited moderate reliability (α = .72), with *M* = 6.25 for the sample in the current study. The Q-sort despair (QD) scale consists of six descriptors: “Feels a lack of personal meaning in life” (Q22); “Is subtly negativistic, tends to undermine and obstruct or sabotage” (Q36); “Has hostility toward others” (Q38); “Has a brittle ego-defense system, has a small reserve of integration, would be disorganized and maladaptive when under stress or trauma” (Q45); “Is self-defeating” (Q55); “Feels cheated and victimized by life, self-pitying” (Q78). In the present study, the QD scale exhibited moderate reliability (α = .73), *M* = 2.76.

Ego integrity. Ego integrity was also assessed with Ryff and Heinicke’s Ego Integrity Scale (1983), an 11-item closed-ended scale with nine reverse-scored items. Participants were asked to rate their agreement from 1 (strongly disagree) to 6 (strongly agree) on items such as “All in all, I am comfortable with the choices I made regarding my life's work,” and “There are

some disappointments in life I will never be able to accept" (reverse coded). Reliability in the original validation of this scale was moderately high (α = .80), and reliability in the current study was adequate (α = .75), with *M* = 5.06.

Satisfaction with Life (SWL).

The Satisfaction with Life scale (SWL; Diener et al., 1985) is a well-established 5-item scale used to assess individuals' global judgement of their life to date, as contentment with the ways in which one's life has unfolded is a key indicator of having achieved ego integrity (Derdaele et al., 2019; Dezutter, Wiesmann, Apers, & Luyckx, 2013). The original scale's item "If I could live my life over, I would change almost nothing" was omitted because of its considerable overlap with the nature of ego integrity, which entails accepting one's life path and perceiving a cohesive life story. On the 4-item scale, participants were asked to rate their agreement from 1 (strongly disagree) to 7 (strongly agree) on all items: (a) in most ways my life is close to my ideal, (b) the conditions of my life are excellent, (c) I am satisfied with my life, (d) so far I have gotten the important things I want in life. Reliability in the original validation of this scale was good (α = .84), and reliability in the current study was slightly higher (α = .93), with *M* = 5.35.

Life events coding scheme.

Narrative answers to the questions "Looking back over the years since the last survey [in 2005 or 2008, depending on sample] what do you consider major high points, or the most satisfying activities?" and "What do you consider the low points, or the most disturbing or upsetting aspects of the last few years?" were coded in two ways.

First, the presence or absence of positive life events and negative life events was assessed by searching the narratives for life events that are also listed in the Social

Readjustment Rating Scale (SRRS; Holmes & Rahe, 1967). Measuring cumulative life events using an inventory of life events such as the SRRS (Holmes & Rahe, 1967) tends to show similar life event frequencies between women and men (Hobson et al., 1998). Narratives that did not contain the presence of an event listed in the SRRS were assigned a score of 0. Each instance of a life event, including more than one instance of the same event, was counted as 1 to form the overall frequency of life events (see Appendix A; Holmes & Rahe, 1967). Average frequency of life events has consistently been reported near 30 per lifetime (e.g., Scully, Tosi, & Banning, 2000). When a life event (according to the SRRS) was identified in the narratives of high and low points, the frequency was calculated and recorded. This coding method generated the number of life events experienced in the years since the last data collection time point. Finally, events in the low points that explicitly concerned death (e.g., loss of a family member or friend) were counted to form the loss frequency score.

The author and research assistant each independently coded approximately the first 10% of the narratives for each valence and year (i.e., low points in 2005 and 2008, high points in 2005 and 2008, and low and high points in 2014). Inter-rater reliability was assessed and rating experiences were discussed between the two raters. The next approximate 40% of participants' narratives were split in half and coded independently by both raters. Near the halfway point in the dataset, both raters coded approximately 10% to assess for coder drift. The rest of the data were independently coded, except for the last 10% which was coded by both raters. The inter-rater reliability for the number of life events in each year and by valence were calculated; the overall Kappa coefficient for inter-rater agreement was high ($\kappa = .86$; see Appendices B and C).

Analysis Plan

Data were analyzed using R 3.5.2 (R Core Team, 2014). To examine relationships between all measures of interest, correlations were conducted on the frequency of life events, amount of death-related loss experiences, and levels of: (a) life satisfaction, (b) ego integrity, and (c) despair. When conducting regression analyses on later life satisfaction, prior life satisfaction level, age, and health status were controlled for to isolate the unique variance accounted for by the independent variables. Before conducting paired *t*-tests, a test for homogeneity of variance (of the two variables of interest) was run to assess if a student's *t*-test (equal variance) or a Welsh's *t*-test (unequal variance) would be appropriate. Tests of normality (Shapiro-Wilks) and homogeneity of variance (Levene's test) were run on relevant key variables prior to these analyses.

To compare the level of life satisfaction and frequency of both negative and positive life events across time (RQ1H1), paired *t*-tests were performed. To compare the frequency of death-related loss experiences across time (RQ1H2), a paired *t*-test was performed on death-related loss frequencies at time 1 and time 2. To assess the contribution of negative life events frequency and ego integrity on changes in later life satisfaction (RQ2H1), a step-wise regression was conducted with negative life event frequency and ego integrity as independent variables of life satisfaction. To assess the capacity of ego integrity to decrease the impact negative life events have on life satisfaction, a moderation analysis was conducted (see Figure 2 below). As previous life satisfaction, age, and health were controls, regression analyses were designed with three steps (control variables only, addition of independent variables, and addition of interaction term). To assess the contribution of loss-related events (i.e., death of a friend or

family member) and sense of despair on later life satisfaction (RQ3), a step-wise regression was conducted with frequency of loss-experiences and level of despair as independent variables of life satisfaction. A moderation analysis was conducted with despair as a potential exacerbating influence of the effect of death-related loss on decreased life satisfaction (see Figure 3 below). Using R packages *ggplot2* and *psych*, I evaluated the assumptions for regression analyses (i.e., normality, homogeneity of variance, and multicollinearity; Field et al., 2012)).

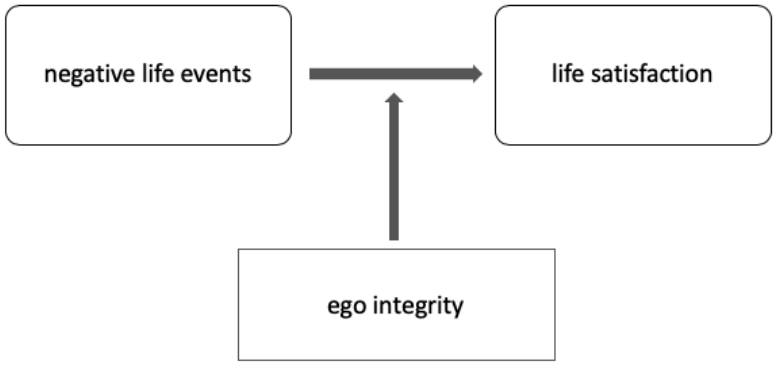

Figure 2. The hypothesized moderating role of ego integrity on the effect of negative life events on life satisfaction.

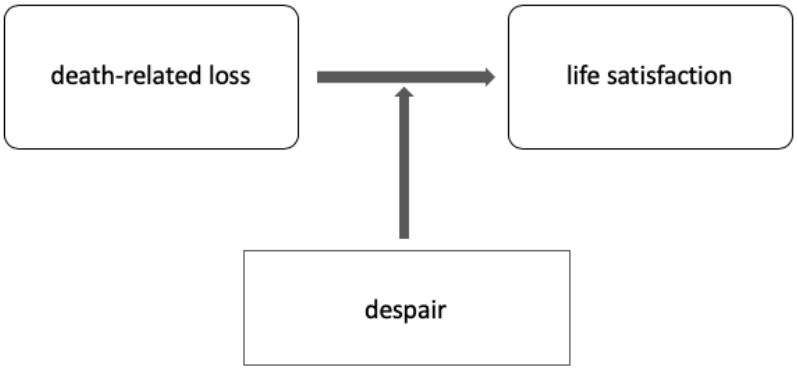

Figure 3. The hypothesized moderating role of despair on the effect of death-related loss on life satisfaction.

Results

To understand the relationship between life events (valence and frequency), psychosocial development, and life satisfaction, correlations conducted on the frequency of life

events, number of death-related loss experiences, and levels of: (a) ego integrity, (b) despair, and (c) life satisfaction were performed and are presented in Table 2. Changes in life satisfaction, positive and negative life events, and death-related loss were assessed (RQ1). Then, the relationship between negative life events and life satisfaction was assessed and the potential buffering role of achieving ego integrity was evaluated (RQ2). Finally, the relationship between loss-specific events and life satisfaction and the potential exacerbating role of despair were assessed (RQ3).

Research Question 1

How are levels of life satisfaction, frequency of positive and negative life events, and frequency of death-related loss events associated with age?

Paired *t*-tests were conducted to compare differences in satisfaction with life, frequency of positive and negative life events, and frequency of death-related loss events between time 1 and time 2 (see Table 3). The variance in levels of life satisfaction between time points was not homogenous, requiring a Welsh *t*-test to satisfy test assumptions. The Welsh *t*-test indicated that level of life satisfaction significantly increased between time 1 and time 2, $t(203) = 4.88$, $p = .0001$. The frequency of positive and negative life events did not significantly change between time 1 ($M_{POSITIVE} = 3.19$; $M_{NEGATIVE} = 2.75$) and time 2 ($M_{POSITIVE} = 3.32$; $M_{NEGATIVE} = 2.56$). Frequency of death-related loss over time was also compared using a paired *t*-test. The variance in loss frequency between time points was not homogenous, requiring a Welsh *t*-test to satisfy test assumptions. The Welsh *t*-test indicated that the frequency of loss experiences significantly increased between time 1 and time 2, $t(199) = 1.99$, $p = .05$.

Research Question 2

How do changes in the frequency of negative life events and ego integrity contribute to satisfaction with life?

Multiple linear regression analyses were used in order to examine the relationship between changes in negative life events and ego integrity between times 1 and 2 and satisfaction with life at time 2. Both measures of ego integrity were assessed (i.e., the Ryff and Heincke (1983) closed-ended scale and the Q-sort scale (Newton et al., 2019)). Change scores were calculated by subtracting time 1 values from time 2 values for all independent variables. First, the independent variables (difference in frequency of negative life events between time 1 and time 2; the difference in ego integrity between time 1 and time 2) were mean-centred to allow for meaningful interpretation and the interaction term was computed (i.e., multiplying the changes in negative life event frequency by change in levels of ego integrity). For both hypotheses, the measurement of satisfaction with life at time 2 (i.e., measured in 2014) was the dependent variable, with age and health status as controls. Model diagnostics indicated no multicollinearity (i.e., the variance inflation factor (VIF) for each independent variable was less than ten; Gareth, Witten, Hastie, & Tibshirani, 2014).

Regression using Ego Integrity (Ryff & Heincke, 1983). First, time 1 life satisfaction, age, and health status were entered into the model predicting time 2 level of life satisfaction (see Table 4). Next, the independent variables (difference scores of negative life event frequency and closed-ended ego integrity; both mean-centred) were entered in the second step of the regression analysis. In the third step of the regression analysis, the interaction term between negative life event frequency and ego integrity were entered: the model was significant, $F(6, 154) = 36.57$, $p < .0001$, $R^2 = .57$. One main effect - ego integrity ($B = 0.44$, $p = .001$), and the

interaction term of negative life event frequency and ego integrity were significant: ego integrity * negative life event frequency (B = 0.18, p = .007; see Figure 4 below). Negative life event frequency, as a main effect, was not significant: B = 0.04, p = .13. The final model, with the interaction term, explained significantly more variance in satisfaction with life than the independent variable only model, $F(1, 148) = 7.58$, p = .007, R^2 change = .02.

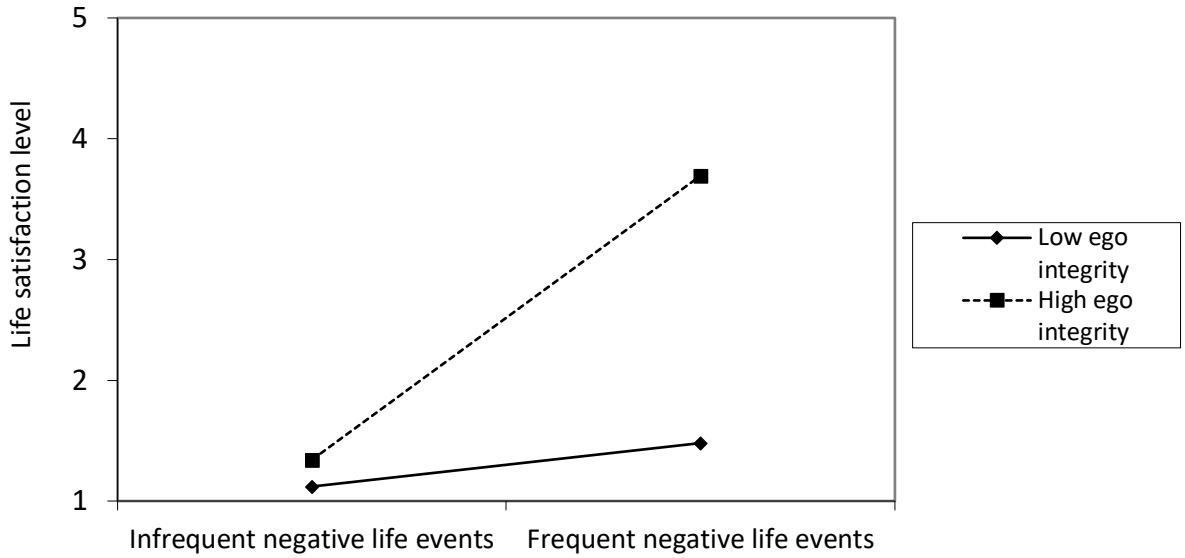

Figure 4. Interaction between change in ego integrity and negative life event frequency.

Regression using Q-sort Ego Integrity (Newton et al., 2019). First, time 1 life satisfaction, age, and health status were entered into the model predicting level of time 2 life satisfaction (see Table 5). Next, the independent variables (difference scores of negative life event frequency and Q-sort ego integrity; both mean centred)) were entered in the second step of the regression analysis. In the third step of the regression analysis, the interaction term between negative life event frequency and Q-sort ego integrity were entered: the model was significant, $F(6, 154) = 32.41$, $p < .0001$, R^2 = .57. Negative life event frequency (B = -0.20, p = 0.48) failed to reach significance, although Q-sort ego integrity was significant (B = 0.16, p = 0.05). The

interaction term of negative life event frequency and ego integrity failed to reach significance: ego integrity * negative life event frequency (B = -0.05, p = 0.23). The final model, with the interaction term, did not explain significantly more variance in satisfaction with life than the independent variable only model, $F(1, 148) = 1.49$, $p = .23$, R^2 change = .004.

Research Question 3

How does death-related loss and sense of despair contribute to satisfaction with life?

To assess the contribution of both change in death-related loss (i.e., death of a friend or family member) and sense of despair, on later life satisfaction, a multiple regression analysis was conducted with frequency of death-related loss and level of despair (both as difference scores between time points) as the independent variables and life satisfaction as the dependent variable, controlling for health, age, and life satisfaction at time 1 (see Table 6). Model diagnostics indicated no multicollinearity (i.e., variance inflation factor for each variable was less than three).

First, time 1 level of life satisfaction, age, and health status were entered into the first step of the model predicting time 2 satisfaction with life. Next, the independent variables (difference scores of death-related loss event frequency and Q-sort despair (both mean centred)) were entered in the second step of the regression analysis. In the third step of the regression analysis, the interaction term between death-related loss event frequency and Q-sort despair were entered: the model was significant, $F(6, 154) = 32.71$, $p < .0001$, $R^2 = .57$. Loss frequency (B = -0.05, p = 0.21) failed to reach significance and Q-sort despair was significant (B = -0.16, p = 0.02). The interaction term of loss frequency and despair failed to reach significance: despair * loss frequency (B = -0.08, p = 0.13). The final model, with the interaction

term, did not explain significantly more variance in satisfaction with life than the independent variable only model, $F(1, 148) = 2.30$, $p = .13$, R^2 change = .007.

Discussion

This study examined the association between life events (i.e., valence and frequency), psychosocial development, and life satisfaction in older women. Specifically, (a) the change over time in life satisfaction, frequency of positive and negative life events, and death-related loss; (b) the relationship between negative life events and life satisfaction with the potential buffering role of achieving ego integrity; and (c) the relationship between loss-specific events and life satisfaction with despair as an exacerbate moderator. In this study, level of satisfaction with life, frequency of death-related loss events, and level of ego integrity (both measures) all increased with age. Women's sense of despair significantly decreased with age. The influence of the degree of change in negative life event frequency and ego integrity on later life satisfaction was dependent on ego integrity achievement, when assessed with the closed-ended scale of ego integrity (but not the Q-sort scale).

These women's lives were shaped by their engagement with close others, their community, and broader society. Virtually all accounts of high points (across their 60s) explicitly mentioned time spent with friends and family, leisure activities, and travel. Civic engagement, whether through volunteering, community groups, or continued part-time employment, is a defining characteristic of older women's enjoyment of their later years (Son, Yarmal, & Kerstetter, 2010). Many women drew meaning from their participation in society which enabled them to engage with a collective and generative effort to improve their community.

Research Question 1

How is level of life satisfaction, frequency of positive and negative life events, and frequency of death-related loss events associated with age?

Life satisfaction. Past research documenting a curvilinear trajectory of well-being over the course of a lifetime indicated that life satisfaction reaches its lowest point at the end of midlife (Stone et al., 2010). The gradual increase in well-being documented by Stone and colleagues (2010) and Mroczek and Spiro (2005) tends to coincide with the onset of the young-old period (Neugarten, 1974); the present results support the increase in well-being during this age period. In particular, level of life satisfaction increased between time points; however, time and age are not synonymous. In fact, when assessing the degree to which chronological age contributed to increased life satisfaction (i.e., as a control variable in regression analyses), age was not related to satisfaction with life, suggesting that there are factors which contribute to well-being above and beyond chronological age. Overall, the findings of this thesis lend support to the age-relevant section of the curvilinear trajectory of well-being (Stone et al., 2010), wherein life satisfaction begins to increase for participants in the young-old age period. One explanation for the gradual increase at the onset of the young-old period is that individuals learn to cope with their life circumstances, and by this age, their 'infeasible aspirations' (Blanchflower & Oswald, 2008, p. 1747) are quieted.

Factors that contribute to the overall curvilinear trajectory of life satisfaction may be age-related trends in responsibilities and accompanying stress. For example, the gradual decline in life satisfaction (Stone et al., 2010) tends to occur with the emerging adult period (i.e., age 18-25; Arnett & Hughes, 2014), wherein the pressures of education and career coincide with fewer resources (e.g., loss of supports and structures provided by schools,

families, and health and social services; Wood et al., 2018). Moreover, this age period is developmentally characterized by Erikson's identity versus isolation stage (Erikson, 1962), which is pertinent to these women's experiences of the emerging adulthood period. At the time in which these women were negotiating their identity, according to Erikson (1962), there were external contradictory demands on their lives: they were to marry and bear children while also establishing a career - but a career that could withstand child rearing and bearing (Lopata & Norr, 1980).

According to Erikson (1962), young women should be focused on developing their identity and the capacity to build successful interpersonal relationships, ideally both of these issues being resolved by middle adulthood. Many of these women had children and married quite early, but many of them also completed graduate school. Their response to these contradictory demands and expectations led to commitments to work and family to differing degrees (Stewart, 1980; Tangri & Jenkins, 1986). Whether a woman commits more to her career, her family, or to both, there are consequences for her life experiences (e.g., choices and regrets), and the development of her personality (Newton & Stewart, 2010). In later years, responsibilities pertaining to family life may lessen (e.g., grown children move out), although other caregiving responsibilities may arise (e.g., elderly parents require care). These women enjoyed resources of both a socioeconomic (e.g., education, income) and psychosocial (e.g., health, life satisfaction) nature, which likely helped them adequately manage life's complexities as they aged. In particular, the forced negotiation of their identities and life paths around the time they graduated college may have helped them develop resiliency, which can help explain

why the frequency of negative life events experienced did not uniquely warrant decreased life satisfaction.

In this study, women became more satisfied with their lives as they progressed through their 'young-old' age period (Neugarten, 1974) which typically refers to age 60-69 (e.g., Norman, Mccluskey-Fawcett, & Ashcraft, 2002). In the United States, the young-old are "relatively healthy, relatively affluent, relatively free from traditional responsibilities of work and family" and "will develop a variety of new needs with regard to meaningful use of time" (Neugarten, 1974, p. 187). Further, the period of being young-old generally represents a life transition, as it contains the typical age of retirement for American women (U.S. Beureau of the Census, 2018), who are typically already grandmothers (Szinovacz, 1998). Although many of the women in this thesis were retired as they reached their 70s, many remained engaged with their community and broader society through recreational activities and civic participation. Past research on the young-old's adaption to life events has uncovered educational attainment as a factor promoting resiliency, such that adversity in adulthood may be better managed by those who hold higher education degrees (McGinnis, 2018). The women in the current study represent a highly-educated group, wherein the majority attended graduate school, and therefore might have learned how to reasonably manage life's complexities leading to their resilient well-being.

Negative life events

While the frequency of general negative life events did not change with age, the frequency of death-related loss events did increase with age. These women had, on average, experienced one death-related loss in their young-old period (i.e., their 60s; Neugarten, 1974).

Empirical evidence garnered from Socio-emotional Selectivity Theory (SST; Carstensen, 1995), suggests that increases in age are associated with increases in emotion-regulation. Specifically, in Carstensen's research (1995), older adults experienced a shift in time perspective as they become increasingly aware of their shrinking lifetime. This often leads to a shift in motivation goals wherein maximizing positive experiences and close relationships becomes central to their engagement with life (Carstensen, 1995). Older adults are more likely to focus on positive memories, experiences, and events, rather than negative (Carstensen & Charles, 1998). Perhaps at the second time point, being asked to recall 'major low points' brings to mind experiences that are less intense in nature than recalled experiences at the first time point. At the second time point, the experiences reported may not be significant enough to meet the criteria for a life event in the Social Readjustment Rating Scale (Holmes & Rahe, 1967). In other words, as these women have become older since time point 1, they may be recalling previous life experiences in a milder way than previously recollected, due to their bias toward reminiscing about positive events. For example, at earlier ages one may recall life experiences characterized by upheaval and disruption (e.g., forced retirement, change in residence) but in later years, come to view this experience with acceptance and less bitterness – hence recalling experiences that are milder in nature (e.g., a change in the amount of time spent with friends and family). Indeed, an increased ability to regulate emotions tends to accompany increasing age (Carstensen & Charles, 1998), which may lead to perceptions of life events as less life-changing.

Notably, recollections of one's life events are just that: subjective memories of life events that are recalled based on an explicit prompt, and potentially impacted by the incidence

and interpretation (Seidiltz & Diener, 1993) of the event and cognitive biases (Fernandes, Ross, Wiegand, & Schryer, 2008). When recalling past major life events, experiences may seem more manageable when one is able to efficiently manage their emotional reactions (Carstensen & Charles, 1998). As older adults tend to pursue maximizing positive experiences, such as time spent with friends and family, the decrease in intense negative experiences is unsurprising.

Past research on adaptation to life events has demonstrated the impact that negative life events can have on cognitive well-being (e.g., cognitive evaluations of how satisfying one's life is; Luhmann et al., 2012). Especially pertinent to older adults, negative life events tend to decrease both affective well-being (i.e., emotion) and cognitive well-being initially, but the lasting effect is on cognitive well-being (Luhmann et al., 2012). The distinguishable impact on different types of well-being may be due to older adult's emotion regulation abilities, as previously theorized (Carstensen, 1995).

The frequency of experiencing loss increased with age, indicating that experiencing loss (e.g., the death of friends and family) becomes more frequent as women progress through their 60s. This finding supports past research on the young-old, wherein loss experiences become more frequent with age (also using the SRRS; McGinnis, 2018). Research on young-old women in particular, indicates that women report more frequent negative life events in the preceding year (accounting for self-rated health status) with greater impact on subsequent psychological well-being compared to their male counterparts (Seematter-Bagnoud, Karmaniola, & Santos-Eggimann, 2010). Specifically, women aged 65-70 years have reported, on average, experiencing two negative life events in the preceding year (Seematter-Bagnoud et al., 2010). The women currently studied (who span this age bracket) also reported between two and four

negative life events, but in a longer time period than the preceding year. This discrepancy may be due to the use of life event checklists wherein a 26-item life event inventory (Seematter-Bagnoud et al., 2010) was utilized versus the 43-item life event inventory (Holmes & Rahe, 1967) used in the present study. Moreover, when these women recalled negative later-life events, there was almost always an event associated with death-related loss, such as the loss of their parents in their early 60s (i.e., at time 1). On average, American adults tend to have lost one parent by age 55, an age these women have surpassed by the first time point (Perrig-Chiello & Höpflinger, 2005). By the second time point, when these women were nearing the end of their 60s, widowhood was a frequently recalled death-related loss event. Overall, death-related loss was measured both in a unique count and captured in the count of negative life events, although only the broad category of negative life events interacted with psychosocial development and life satisfaction.

Positive life events

In this study, the frequency of positive life events did not change with age, suggesting that experiencing positive life events occurs with comparable frequently across the young-old life period. As life events were self-reported and unguided (i.e., were not identified from a life event inventory) at the second time point, these women may have reported events that did not map on to the Social Readjustment Rating Scale (Holmes & Rahe, 1967) because their recalled experiences were focused on young generations, not themselves. In fact, older adults tend to shift their focus from their own goals and accomplishments to younger generations' accomplishments (Kruse & Schmitt, 2012), especially with grandchildren (Harwood & Lin, 2000). For example, older adults may celebrate their grandchildren's accomplishments as their own,

especially because their own vocational and educational accomplishment have generally already occurred (Sheehan & Petrovic, 2008) and their aspirations for opportunity and knowledge have quieted (Carstensen, 1995). In the present study, these older women framed their positive life events with others' accomplishments, such as their children having children.

The positive experience of social, recreational, and travel activities shaped the lives of the older women in the current study. Written narratives of high points experienced across these women's young-old age period consistently mentioned enjoyment of activities with friends, such as travelling and involvement in recreational hobbies and clubs. Social participation and civic engagement have been shown to buffer age-related adversity, particularly in older women (Kleiber, Hutchinson, & Williams, 2010). In fact, engaging with one's community and broader society can have positive implications for satisfaction with life in older adults cross-culturally (Au et al., 2017). In addition to contributing to a worthwhile and satisfying life, social participation decreases social isolation in older adults (Han, Mogle, Davidov, Russo-Netzer, & Littman-Ovadia, 2019) which has become a public health issue in the United States (National Institute on Aging, 2019). These women perceived their social participation in terms of positive life events, including travel and social activities, which can prevent social isolation (Han et al., 2019) and even promote satisfaction with life (Au et al., 2017).

Research Question 2

How do changes in the frequency of negative life events and ego integrity contribute to satisfaction with life?

Satisfaction with later life was decreased by the experience of negative life events for those with a low level of ego integrity (see Figure 4 above). Specifically, an increase in negative life event frequency did not warrant a significant impact on satisfaction with life; rather, the influence of negative life events on satisfaction with life was dependent on ego integrity achievement. As the frequency of negative life events increase, the positive association between ego integrity and satisfaction with life also increases, suggesting that as expected, level of ego integrity helped offset the influence of negative life event frequency on life satisfaction. Women with low ego integrity who experienced frequent negative life events had lower life satisfaction, relative to women with high ego integrity whose life satisfaction was resilient against negative life events.

Negative life events do not seem to contribute unique variance to satisfaction with life on their own but can have a significant effect when accompanied by low levels of ego integrity. However, this finding was not consistent across measurement of ego integrity. The buffering effect of ego integrity existed only when using the closed-ended scale and did replicate with the Q-sort scale of ego integrity. Ego integrity and despair can be measured separately when using Q-sort scales, and a number of reasons for doing so are warranted (see Newton et al., 2019), such as the strong, negative correlation between Q-sort ego integrity and despair in the present study.

Measurement of ego integrity.

The Q-sort method is a novel tool for studying life paths, providing a broad picture of personality by being based on a large amount of an individual's narrative data. However, the individual Q-sort items are phrases and descriptions developed more than 50 years ago, and

could possibly use refinement to reflect contemporary findings within personality psychology. The Q-sort items that belong to the ego integrity scale are quite abstract, and were chosen for the scale as they reflect Erikson's writings on ego integrity vs. despair (Erikson, 1963). Items on the closed-ended scale of ego integrity (Ryff & Heincke, 1983) were developed specifically with ego integrity (and despair, conceptualized by Ryff and Heincke as the opposite end of a unidimensional measure of ego integrity) in mind, and reflect what having ego integrity actually looks like. It may be that the items in the Q-sort method, which were developed to more broadly measure personality, do not sufficiently capture psychosocial constructs but are capturing a construct related to (but not equal to) ego integrity such as psychosocial maturity.

Notably, a low score on the closed-ended scale of ego integrity indicates a low level of ego integrity as expressed in Ryff and Heincke's (1983) explanation of a low scorer: "fears death, has feelings of disgust and despair regarding past life, is concerned with shortness of remaining time" (p. 809). While this can imply a sense of despair, it also assumes that having low ego integrity is synonymous with a sense of despair. In reality, one may have moderate levels of both constructs and still be negotiating the psychosocial crisis (Newton et al., 2019). Further, the closed-ended measure of ego integrity (Ryff & Heincke, 1983) may adequately capture ego integrity and not despair.

For this thesis, isolating ego integrity from despair not only helped clarify the relationship between past life events, satisfaction with life, and ego integrity versus despair, but also the way in which different methods to measure the same personality constructs may yield different results. As the Q-sort scales (Newton et al., 2019) are based on pre-existing personality descriptors (Block, 1961), it is also possible that ego integrity and despair are not

completely captured within the Q-sort items. Rather, the essence of ego integrity and despair may be captured, and would be improved with refined descriptors developed to align with the constructs of ego integrity versus despair.

In sum, experiencing life events only influenced well-being in a cognitive, evaluative manner (i.e., satisfaction with life) when psychosocial development was lacking (e.g., low level of ego integrity achievement). It is likely that these women had developed effective coping skills or a sense of mastery from their life experiences (Mineka & Zinbarg, 2006).

Research Question 3

How does accumulated death-related loss and a sense of despair contribute to satisfaction with life?

Although the frequency of death-related loss experiences increased as these women aged, the degree of change did not warrant a decrease in life satisfaction, regardless of level of despair. Rather, only the change in level of despair was negatively related to life satisfaction, wherein an increase in despair led to a decrease in life satisfaction. I expected that experiencing death-related loss would function as a crisis that precedes the shift in time horizon associated with the life review process, in that the reminder of human mortality can act as a catalyst for individuals to review their own life and how they can best utilize the time they have left. For instance, spousal bereavement may lead older women to reflect on their life (e.g., past decisions, opportunities, regrets) and begin the developmental task of negotiating ego integrity versus despair. Perceiving one's life story as cohesive and meaningful is a key indicator of developing ego integrity (Veglia & Di Fini, 2017), and involves accepting the finitude of human life (Erikson, 1963), which may promote the acceptance of loss.

Older women who experienced an increase in loss as they aged also experienced decreased satisfaction with life; however, this did not contribute unique variance to satisfaction with life beyond the contribution by despair. As level of despair had the capacity to influence life satisfaction, perhaps frequency of loss influences other facets of well-being, such the quality of everyday experiences (i.e., emotions).

Further, as despair includes some level of dissatisfaction with the amount of lifetime left to address unresolved regrets or goals (Erikson, 1963), perhaps feeling despair contributes to a change in outlook on life (i.e., a poor evaluation of one's life to date), but in a manner other than a life review process (which precedes the developmental task of negotiating ego integrity versus despair). For instance, despair tends to be accompanied by a reminder of the value of time (Erikson, 1963), and can lead to the shift in time horizons that motivates older adults to maximize positive emotional experiences with close others (Carstensen, 1995). With a renewed appreciation for time, older women may review their life to determine how to spend their remaining lifetime. Indeed, as the women in this study aged, they consistently reported their positive life events as those spent with friends and family in leisure, recreation, and travel. This universal appreciation of time spent with close others was accompanied by a general increase in life satisfaction over time. The focus on spending time with friends and family serves to maximize positive emotional experiences derived from close relationships, as theorized by Carstensen (1995), and perhaps to also maximize life satisfaction.

Limitations and Future Directions

While these findings add to our understanding of older women's well-being, the study was limited by measurement issues, sample composition, and limited generalizability. Scholars

have suggested that researchers' efforts to understand the impact of negative life events should consider the time since the event occurred, the nature of the life event, and the fact that the experience of life events is markedly influenced by perceptions of time (Lang & Carstensen, 1994). Indeed, one meta-analysis revealed that distance between life events and the measurement of well-being influences the impact and subsequent adjustment to that life event (Luhmann et al., 2012). The women in the present study were asked to record the high and low points from the past handful of years, leading to varied length of time since each event – ranging from the year preceding the survey and up to twelve years prior. Thus, I am unable to pinpoint the exact time that had passed between the experience of each negative or positive event and the measurement of well-being.

The concepts of time perspective and time horizon are central to the constructs of ego integrity and despair, and life satisfaction is temporal in nature; thus, being able to pinpoint experiences and subsequent changes in well-being would be ideal for illustrating the relationships among these constructs. Life satisfaction functions as a global assessment of well-being (Diener et al., 1985), and this assessment may be shaped by the amount of time passed since a particular life event. For example, relatively recent life events have a greater influence on well-being than distal events (Luhmann et al., 2012).

Measuring the current sample's future time perspective would allow me to assess if their time horizons are shortened, and clarify the factors that precede the life review process. Ideally, I would measure future time perspective at the beginning and end (i.e., time 1 and time 2) of the young-old period to understand how age-related experiences influence change in time horizons, rather than chronological age itself. Perhaps sampling out those who have

experienced spousal bereavement would more clearly elucidate the relationship between a prototypical event of older women's aging experience (e.g., widowhood) and the final psychosocial crisis.

Another measurement issue arises with distinguishing between psychological concepts. Although a potential overlapping item was removed from the measure of life satisfaction in the current study, ego integrity and satisfaction with life have considerable conceptual overlap; both constructs measure cognitive perceptions of one's life, and are temporal in nature (i.e., prompting one to think about the past). While satisfaction with life is not a direct proxy for ego integrity (and vice versa), it may be advantageous to consider other indices of well-being than satisfaction with life. For example, psychological well-being (i.e., positive relationships with others, environmental mastery, autonomy, purpose and meaning, self-acceptance, and personal growth; Ryff, 1995) could be measured in addition to satisfaction with life, particularly because psychological well-being measures facets of eudaimonic well-being that life satisfaction does not. In fact, purpose in life would be an interesting (and likely fruitful) construct for contextualizing older women's well-being, as social participation and civic engagement was a major component of how these women actively engaged with life.

Finally, this dataset consists of highly-educated women who enjoyed affluency and opportunity relative to many women in this time period. While sociodemographic factors are not pure determinants of life satisfaction, certain circumstances and opportunities associated with affluency and education can hold implications for well-being. For instance, high socioeconomic status (e.g., income and education level) have been linked to greater life satisfaction in women (Fassbender & Leyendecker, 2018). It is likely that these women enjoyed

satisfying lives in part due to their ability to pursue opportunities made available due to their resources (e.g., being highly educated for their time). It would be interesting to ask these research questions of a representative sample of Canadian women. Firstly, women's movements contribuetd to social tension in Canada, albeit not to the same degree as in the United States. For instance, there was a striking proportion of female engagement in the Canadian workforce during World War II (Veterans Affairs Canada, 2014), which challenged conventional ideas about women's places in public life. In fact, around the time women of this generation were born, many Canadian women were recruited by the government to contribute to the war effort, especially women without children or spouses (Veterans Affairs Canada, 2014). A Canadian sample of this generation would likely have been brought up knowing a woman who contributed to the war effort, or even experienced their mother entering the workforce to support war-fuelled demand for products (e.g., textiles; Veterans Affairs Canada, 2014).

Additionally, greater diversity in the sample (race, gender identity, sexual orientation, socioeconomic status) woule also increase the representativeness. For example, recruiting a sample comprised of women with a range of education levels and financial health would help researchers better understand the experiences of women as they navigate aging. The women in this thesis may not be typical, in terms of educational attainment, career ambitions and achievements, and social affluency - even of their own generation. I would expect increased variabiltiy in levels of life satisfaction, ego integrity and despair, and differing contexts of life events, in a representative sample of women. While normative life events (e.g., retirement) are to be expected in each sample of women, the timing of and adaption to life events may differ,

especially because of the wide range of psychosocial and material resources that would accompany each woman in a representative sample.

Noteably, participating in this study at these two time points would be restricted to the older women who had the ability to do so – in terms of contactability, physical ability to write or use a computer effectively, and free time. For example, survey-based data collection is typically completed online, deeming those who do not have access to a computer ineligible to participate. However, collecting data through a pen-and-paper-based survey only includes those who are literate, physically able to complete the survey, and able to access letter mail services. In both cases, access to free time is necessary. Regardless of the medium used, survey-based research limits the potential participant pool, thereby decreasing the representativeness of the sample. Presently, those who experienced memory-related challenges in their late 60s (i.e., the second time point) or age-related diminished abilities (e.g., arthritis) would have unintentionally been excluded from participating. In addition to normal longitudinal sample attrition, the regression analyses excluded cases with any missing data in each of the independent variables: as the independent variables were change scores (i.e., requiring data to be present for both time points), only those with no missing data in any independent variable for both time points were included in the regression analysis. In the future, consideration for varied abilities in older respondants and a plan for imputing data for change-score variables would help maintain the original sample size.

These women lived through unique experiences that likely shaped their life paths, goals, and opportunities (Fortin, 2008; Mason, Czajka, & Arber, 1976; Zink, Regan, Jacobson, & Pabst, 2003). For instance, these women were young adults during the women's movement in the

1960s in the United States. Social norms concerning women's rights, responsibilities, and roles were drastically changing, with implications for women's educational and professional opportunities (Fortin, 2008), apparent in the proportion of these women who have advanced degrees. While the contextual richness that these experiences add to understanding older women's well-being seems to outweigh the degree of limitation, they nonetheless also define a certain generation of women. Applying comparable research questions to other cohorts would help elucidate the relationship between well-being, life events, and psychosocial development while presenting the opportunity to mitigate this particular cohort effect. Although these women have lived through a number of unique zeitgeists, especially in the 1960s and 1970s, the current pandemic circumstances are likely a novel experience and are pertinent to their age group. Experiences unique to the current pandemic may function as the confrontation with death and dying that typically precedes a shortened time horizon and life review process. Similar to past research on future time perspective during the SARS outbreak and the September 11 2001 attacks (Fung & Carstensen, 2006), the current pandemic is a socio-cultural experience specific to a time period that likely has repercussions for how individuals (and particularly, older individuals) perceive time.

Conclusion.

This secondary data analysis study expands on previous research concerning older women's lives; in particular, their psychosocial development and well-being. In the current study, life satisfaction increased, supporting the age-relevant section (i.e., young-old period) of the curvilinear trajectory of well-being; the frequency of life events (positive and negative) remained consistent across the young-old period, although death-related loss events increased;

and age-related life events did not hold a unique relationship with later life satisfaction above and beyond the final psychosocial developmental stage in Erikson's (1963) developmental theory: ego integrity versus despair. Achieving ego integrity buffered the impact of negative life events on life satisfaction, likely due to the integrity-defining characteristic of being able to accept the negative pieces of one's past. Death-related loss events did not contribute to decreased life satisfaction on their own, regardless of sense of despair. Ultimately, this study illuminated the way in which psychosocial developmental constructs (ego integrity and despair) can shape the influence of negative life events (general and death-related) on life satisfaction. For the women in this study, aging presented a number of changes related to life events, such as loss; charting their well-being across the young-old period illustrated the manner in which older women navigate aging and negotiate their final psychosocial task. Specifically, the ways in which older women think about their lives, and in particular during their 60s, are shaped by their engagement with close others. For these women, time spent with friends and family was perceived to be time well spent.

References

Afonso, R. M., Bueno, B., Loureiro, M. J., & Pereira, H. (2011). Reminiscence, psychological well-being, and ego integrity in Portuguese elderly people. *Educational Gerontology*, *37*(12), 1063–1080. https://doi.org/10.1080/03601277.2010.500585

Ailshire, J. A., & Crimmins, E. M. (2011). Psychosocial factors associated with longevity in the United States: Age differences between the old and oldest-old in the Health and Retirement Study. *Journal of Aging Research*, (Sp Iss: Behavioral factors of longevity), 1–10. https://doi.org/10.4061/2011/530534

Andrews, F. M. (1976). *Social indicators of well-being: Americans' perceptions of life quality* (S. B. Withey, ed.). New York: Plenum Press

Arnett, J. J., & Hughes, M. (2014). *Adolescence and emerging adulthood*. Boston, MA: Pearson.

Arpino, B., Balbo, N., & Bordone, V. (2016). Life satisfaction of older Europeans: The role of grandchildren. *Giornate Di Studio Sulla Popolazione*, 1–7

Arpino, B., Bordone, V., & Balbo, N. (2018). Grandparenting, education and subjective well-being of older Europeans. *European Journal of Ageing*, *15*(3), 251–263. https://doi.org/10.1007/s10433-018-0467-2

Au, A. M. L., Chan, S. C. Y., Yip, H. M., Kwok, J. Y. C., Lai, K. Y., Leung, K. M., … Lai, S. M. K. (2017). Age-friendliness and life satisfaction of young-old and old-old in Hong Kong. *Current Gerontology and Geriatrics Research*, 1–10. https://doi.org/10.1155/2017/6215917

Austad, S. N., & Fischer, K. E. (2016). Sex differences in lifespan. *Cell Metabolism*, *23*(6), 1022–1033. https://doi.org/10.1016/j.cmet.2016.05.019

Baltes, P. B. (1987). Theoretical propositions of life-span developmental psychology: On the

dynamics between growth and decline. *Developmental Psychology*, *23*(5), 611–626. https://doi.org/10.1037/0012-1649.23.5.611

Bisconti, T. L., Bergeman, C. S., & Boker, S. M. (2004). Emotional well-being in recently bereaved widows: Dynamical systems approach. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *59*(4), 158–167. https://doi.org/10.1093/geronb/59.4.P158

Blanchflower, D. G., & Oswald, A. J. (2008). *Is well-being U-shaped over the life cycle?* https://doi.org/10.1016/j.socscimed.2008.01.030

Block, J. (1961). *The Q-Sort Method in Personality Assessment and Psychiatric Research* (M. Harrower, ed.). Berkeley, California: Charles C Thomas.

Block, J. (2008). Q-sort methodology. In *The Q-sort in character appraisal: Encoding subjective impressions of persons quantitatively.* https://doi.org/10.1037/11748-005

Bohlmeijer, E., Roemer, M., Cuijpers, P., & Smit, F. (2007). The effects of reminiscence on psychological well-being in older adults: A meta-analysis. *Aging and Mental Health*, *11*(3), 291–300. https://doi.org/10.1080/13607860600963547

Breslow, L. (1972). A quantiative approach to the World Health Organization definition of health: Physical, mental and social well-being. *International Journal of Epidemiology*, *1*(4), 347–355. https://doi.org/10.1093/ije/1.4.347

Buccheri, T., Musaad, S., Bost, K. K., & Fiese, B. H. (2018). Development and assessment of stressful life events subscales – A preliminary analysis. *Journal of Affective Disorders*, *226*, 178–187. https://doi.org/10.1016/j.jad.2017.09.046

Busch, H., Hofer, J., Poláčková Šolcová, I., & Tavel, P. (2018). Generativity affects fear of death through ego integrity in German, Czech, and Cameroonian older adults. *Archives of*

Gerontology and Geriatrics, *77*, 89–95. https://doi.org/10.1016/j.archger.2018.04.001

Butler, R. N. (1963). The life review: An interpretation of reminiscence in the agred. *Psychiatry*, *26*(1), 65–76

Butler, R. N. (2002). Age, death, and life review. In *Living with grief: Loss in later life* (pp. 3–11). Washington, DC: Hospice Foundation of America

Carstensen, L. L. (1995). Evidence for a life-span theory of socioemotional selectivity. *Current Directions in Psychological Science*, *4*(5), 151–156. https://doi.org/10.1111/1467-8721.ep11512261

Carstensen, L. L., Mayr, U., Pasupathi, M., & Nesselroade, J. R. (2000). Emotional experience in everyday life across the adult life span. *Journal of Personality and Social Psychology*, *79*(4), 644–655. https://doi.org/10.1037/0022-3514.79.4.644

Chan, T. W. (2018). Social mobility and the well-being of individuals. *The British Journal of Sociology*, *69*(1), 183-206

Clark, A. E., Diener, E., Georgellis, Y., & Lucas, R. E. (2008). Lags and leads in life satisfaction: A test of the baseline hypothesis. *The Economic Journal*, *118*(529), F222–F243. https://doi.org/10.1111/j.1468-0297.2008.02150.x

Derdaele, E., Toussaint, L., Thauvoye, E., & Dezutter, J. (2019). Forgiveness and late life functioning: The mediating role of finding ego-integrity. *Aging and Mental Health*, *23*(2), 238–245. https://doi.org/10.1080/13607863.2017.1399346

Dezutter, J., Wiesmann, U., Apers, S., & Luyckx, K. (2013). Sense of coherence, depressive feelings and life satisfaction in older persons: A closer look at the role of integrity and despair. *Aging and Mental Health*, *17*(7), 839–843

https://doi.org/10.1080/13607863.2013.792780

Diehl, M., & Hay, E. (2011). Self-concept differentiation and self-concept clarity across adulthood: Associations with age and psychological well-being. *International Journal of Aging and Human Development*, *73*(2), 125–152. https://doi.org/10.2190/AG.73.2.b

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*(3), 542–575 https://doi.org/10.1037/0033-2909.95.3.542

Diener, E., Emmons, R. A., Larsem, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(1), 71–75 https://doi.org/10.1207/s15327752jpa4901_13

Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist*, *61*(4), 305–314 https://doi.org/10.1037/0003-066X.61.4.305

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. won, Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, *97*(2), 143–156. https://doi.org/10.1007/s11205-009-9493-y

Dohrenwend, B. P. (2006). Inventorying stressful life events as risk factors for psychopathology: Toward resolution of the problem of intracategory variability. *Psychological Bulletin*, *132*(3), 477–495. https://doi.org/10.1037/0033-2909.132.3.477

Erikson, E. H. (1963). *Childhood and society*. New York: WW Norton & Company.

Fave, A. D., Bassi, M., Boccaletti, E. S., Roncaglione, C., Bernardelli, G., & Mari, D. (2018). Promoting well-being in old age: The psychological benefits of two training programs of

adapted physical activity. *Frontiers in Psychology*, *9*, 828

Fassbender, I., & Leyendecker, B. (2018). Socio-economic status and psychological well-being in a sample of Turkish immigrant mothers in Germany. *Frontiers in Psychology*, *9*, 1586. https://doi.org/10.3389/fpsyg.2018.00828.

Fernandes, M., Ross, M., Wiegand, M., & Schryer, E. (2008). Are the memories of older adults positively biased? *Psychology and Aging*, *23*(2), 297

Fortin, N. M. (2008). *Gender role attitudes and women's labor market participation: The persistent appeal of housewifery*. Vancouver.

Fredrickson, B. L., & Losada, M. F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist*, *60*(7), 678–686. https://doi.org/10.1037/0003-066X.60.7.678

Fung, H. H., & Carstensen, L. L. (2006). Goals change when life's fragility is primed: Lessons learned from older adults, the September 11 attacks and SARS. *Social Cognition*, *24*(3), 248–278. https://doi.org/10.1521/soco.2006.24.3.248

George, L. K. (2010). Still happy after all these years: Research frontiers on subjective well-being in later life. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *65 B*(3), 331–339. https://doi.org/10.1093/geronb/gbq006

Gerst-Emerson, K., & Jayawardhana, J. (2015). Loneliness as a public health issue: The impact of loneliness on health care utilization among older adults. *American Journal of Public Health*, *105*(5), 1013–1019. https://doi.org/10.2105/AJPH.2014.302427

Gerstorf, D., Ram, N., Estabrook, R., Schupp, J., Wagner, G. G., & Lindenberger, U. (2008). Life satisfaction shows terminal decline in old age: Longitudinal evidence from the German

Socio-Economic Panel Study (SOEP). *Developmental Psychology*, *44*(4), 1148–1159. https://doi.org/10.1037/0012-1649.44.4.1148

Gerstorf, D., Ram, N., Röcke, C., Lindenberger, U., & Smith, J. (2008). Decline in life satisfaction in old age: Longitudinal evidence for links to distance-to-death. *Psychology and Aging*, *23*(1), 154–168. https://doi.org/10.1037/0882-7974.23.1.154

Ginter, E., & Simko, V. (2013). Women live longer than men. *Bratislava Medical Journal*, *114*(02), 45–49. https://doi.org/10.4149/bll_2013_011

Goldman, N., & Lord, G. (1983). Sex differences in life cycle measures of widowhood. *Demography, 20*(2), 177-195

Gomez, V., Krings, F., Bangerter, A., & Grob, A. (2009). The influence of personality and life events on subjective well-being from a life span perspective. *Journal of Research in Personality*, *43*(3), 345–354. https://doi.org/10.1016/j.jrp.2008.12.014

Government of Canada. (2014). *Action for Seniors report*. Retrieved from https://www.canada.ca/en/employment-social-development/programs/seniors-action-report.html#tc2a

Green, J. G., McLaughlin, K. A., Berglund, P. A., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2010). Childhood adversities and adult psychiatric disorders in the national comorbidity survey replication I: Associations with first onset of DSM-IV disorders. *Archives of General Psychiatry*, *67*(2), 113–123 https://doi.org/10.1001/archgenpsychiatry.2009.186

Grob, A., Krings, F., & Bangerter, A. (2001). Life markers in biographical narratives of people from three cohorts: A life span perspective in its historical context. *Human Development*,

44(4), 171–190. https://doi.org/10.1159/000057057

Hadjar, A., & Samuel, R. (2015). Does upward social mobility increase life satisfaction? A longitudinal analysis using British and Swiss panel data. *Research in Social Stratification and Mobility*, *39*, 48-58

Han, H., Mogle, J. A., Davidov, J., Russo-Netzer, P., & Littman-Ovadia, H. (2019). "Something to live for": Experiences, resources, and personal strengths in late adulthood. *Frontiers in Psychology, 10*, 2452. https://doi.org/10.3389/fpsyg.2019.02452

Harwood, J., & Lin, M.-C. (2000). Affiliation, pride, exchange, and distance in grandparents' accounts of relationships with their college-aged grandchildren. *Journal of Communication*, *50*(3), 31–47. https://doi.org/10.1111/j.1460-2466.2000.tb02851.x

Helson, R. (1992). Women's difficult times and the rewriting of the life story. *Psychology of Women Quarterly*, *16*(3), 331–347. https://doi.org/10.1111/j.1471-6402.1992.tb00258.x

Helson, R., & Srivastava, S. (2001). Three paths of adult development: Conservers, seekers, and achievers. *Journal of Personality and Social psychology*, *80*(6), 995.

Hobson, C. J., & Delunas, L. (2001). National norms and life-event frequencies for the revised Social Readjustment Rating Scale. *International Journal of Stress Management*, *8*(4), 299–314. https://doi.org/10.1023/A:1017565632657

Holmes, T. H., & Rahe, R. H. (1967). The Social Readjustment Rating Scale. *Journal of Psychosomatic Research*, *11*(2), 213–218. https://doi.org/10.1016/0022-3999(67)90010-4

James, J. B., & Zarrett, N. (2005). Ego integrity in the lives of older women: A follow-up of mothers from the Sears, Maccoby, and Levin (1951) patterns of child rearing study. *Journal of Adult Development*, *12*(4), 155–167. https://doi.org/10.1007/s10804-005-7084-y

Jivraj, S., Nazroo, J., Vanhoutte, B., & Chandola, T. (2014). Aging and subjective well-being in later life. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *69*(6), 930–941. https://doi.org/10.1093/geronb/gbu006

Johnson, R. W. (2009). *Rising senior unemployment and the need to work at older ages*. Washington, DC

Joseph, S. M., & Wu, J. (2009). The pleasant life, the engaged life, and the meaningful life: What about the balanced life? *Journal of Happiness Studies*, *10*(2), 183–196. https://doi.org/10.1007/s10902-007-9074-1

Kammann, R. (1983). Objective circumstances, life satisfactions, and sense of well-being: Consistencies across time and place. *New Zealand Journal of Psychology*, *12*(1), 14–22

Keinan, G., Shrira, A., & Shmotkin, D. (2012). The association between cumulative adversity and mental health: Considering dose and primary focus of adversity. *Quality of Life Research*, *21*(7), 1149–1158. https://doi.org/10.1007/s11136-011-0035-0

Kickbusch, I. (1995). Health promotion: A global perspective. *Canadian Journal of Public Health*, *77*(5), 321–326

Kleiber, D. A., Hutchinson, S. L., & Williams, R. (2010). Leisure as a resource in transcending negative life events: Self-protection, self-restoration, and personal transformation. *Leisure Sciences*, *24*(2), 219–235. https://doi.org/10.1080/01490400252900167

Kruse, A., & Schmitt, E. (2012). Generativity as a route to active ageing. *Current Gerontology and Geriatrics Research*. https://doi.org/10.1155/2012/647650

Lang, F., & Carstensen, L. L. (1994). Close emotional relationship in late life: Further support for proactive aging in the social domain. *Psychology and Aging*, *9*(2), 315–324

https://doi.org/10.1037/0882-7974.9.2.315

Lang, F. R., & Carstensen, L. L. (2002). Time counts: Future time perspective, goals, and social relationships. *Psychology and Aging*, *17*(1), 125–139. https://doi.org/10.1037/0882-7974.17.1.125

Leopold, T., & Lechner, C. M. (2015). Parents' death and adult well-being: Gender, age, and adaptation to filial bereavement. *Journal of Marriage and Family*, *77*(3), 747–760. https://doi.org/10.1111/jomf.12186

Lopata, H. Z., & Norr, K. F. (1980). Changing commitments of American women to work and family roles. *Social Security Bullientin.*, *43*, 3

Lou, V. W. Q. (2010). Life satisfaction of older adults in Hong Kong: The role of social support from grandchildren. *Social Indicators Research*, *95*(3), 377–391 https://doi.org/10.1007/s11205-009-9526-6

Luhmann, M., Hofmann, W., Eid, M., & Lucas, R. E. (2012). Subjective well-being and adaptation to life events: A meta-analysis. *Journal of Personality and Social Psychology*, *102*(3), 592–615. https://doi.org/10.1037/a0025948

Mahdi, M. V., Abolfathi, Y. M., Foroughan, M., Azimi, M. S., Moravveji, S. A., Mohandes, L. M., … Sahaf, R. (2017). Grandparent-grandchild relationship and older adults' life satisfaction. *Modern Care Journal*, *14*(3), 1–5. https://doi.org/10.5812/modernc.65214

Martel, L. (2015). *Insights on Canadian Society: Recent changes in demographic trends in Canada*. Retrieved from www.statcan.gc.ca

Mason, K. O., Czajka, J. L., & Arber, S. (1976). Change in U.S. women's sex-role attitudes, 1964-1974. *American Sociological Review*, *41*(4), 573–596. https://doi.org/10.2307/2094837

McCoy, S. K., Pyszczynski, T., Solomon, S., & Greenberg, J. (2000). Transcending the self: A terror management perspective on successful aging. In A. Tomer (Ed.), *Death attitudes and the older adult: Theories, concepts, and applications.* (pp. 37–63). New York, NY: Brunner-Routledge

McGinnis, D. (2018). Resilience, life events, and well-being during midlife: Examining resilience subgroups. *Journal of Adult Development*, *25*(3), 198–221. https://doi.org/10.1007/s10804-018-9288-y

McMahon, S. D., Grant, K. E., Compas, B. E., Thurm, A. E., & Ey, S. (2003). Stress and psychopathology in children and adolescents: Is there evidence of specificity? *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *44*(1), 107–133. https://doi.org/10.1111/1469-7610.00105

Merz, J. (2018). Are retirees more satisfied? – Anticipation and adaptation effects of retirement on subjective well-being: A panel analysis for Germany. *SSRN Electronic Journal*, (11832). https://doi.org/10.2139/ssrn.3269222

Mineka, S., & Zinbarg, R. (2006). A contemporary learning theory perspective on the etiology of anxiety disorders: It's not what you thought it was. *American Psychologist*, *61*(1), 10–26. https://doi.org/10.1037/0003-066X.61.1.10

Moen, P. (2001). The gendered life course. In R. H. Binstock & L. K. George (Eds.), *Handbook of aging and the social sciences, 5th ed.* (pp. 179–196). Ithaca, NY: Academic Press.

Moen, P., Robison, J., & Dempster-McClain, D. (1995). Caregiving and women's well-being: A life course approach. *Journal of Health and Social Behavior*, 259-273

Moieni, M., Irwin, M. R., Seeman, T. E., Robles, T. F., Lieberman, M. D., Breen, E. C., …

Eisenberger, N. I. (2019). Feeling needed: Effects of a randomized generativity intervention on well-being and inflammation in older women. *Brain, Behavior, and Immunity*, *19*. https://doi.org/10.1016/j.bbi.2019.11.014

Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology*, *75*(5), 1333–1349. https://doi.org/10.1037/0022-3514.75.5.1333

Mroczek, D. K., & Spiro, A. (2005). Change in life satisfaction during adulthood: Findings from the veterans affairs normative aging study. *Journal of Personality and Social Psychology*, *88*(1), 189–202. https://doi.org/10.1037/0022-3514.88.1.189

National Institute on Aging. (2019). Social isolation, loneliness in older people pose health risks. Retrieved April 17, 2020, from United States Department of Health & Human Services website: https://www.nia.nih.gov/news/social-isolation-loneliness-older-people-pose-health-risks

Neugarten, B. L. (1974). Age groups in American society and the rise of the young-old. *The Annals of the American Academy*, 187–199

Newton, N. J., Ottley, K. M., Williams, S. K., & Hill, T. (revised and resubmitted). *Women coming to terms with aging: The importance of psychosocial factors*. Waterloo, ON

Newton, N. J., & Stewart, A. J. (2010). The middle ages: Change in women's personalities and social roles. *Psychology of Women Quarterly*, *34*(1), 75-84

Newton, N. J., Stewart, A. J., & Vandewater, E. A. (2019). “Age is opportunity”: Women’s personality trajectories from mid- to later-life. *Journal of Research in Personality*, *80*, 43–54. https://doi.org/10.1016/j.jrp.2019.04.005

Norman, S. M., Mccluskey-Fawcett, K., & Ashcraft, L. (2002). Older women's development: A comparison of women in their 60s and 80s on a measure of Erikson's developmental tasks. *Journal of Aging and Human Development*, *54*(1), 31–41

O'Rourke, N., Cappeliez, P., & Claxton, A. (2011). Functions of reminiscence and the psychological well-being of young-old and older adults over time. *Aging & Mental Health*, *15*(2), 272–281. https://doi.org/10.1080/13607861003713281

Onrust, S., Cuijpers, P., Smit, F., & Bohlmeijer, E. (2007). Predictors of psychological adjustment after bereavement. *International Psychogeriatrics*, *19*(5), 921–934. https://doi.org/10.1017/S1041610206004248

Perrig-Chiello, P., & Höpflinger, F. (2005). Aging parents and their middle-aged children: Demographic and psychosocial challenges. *European Journal of Ageing*, *2*(3), 183-191.

Rooth, M. A. (2017). The prevalence and impact of vision and hearing loss in the elderly. *North Carolina Medical Journal*, *78*(2), 118–120. https://doi.org/10.18043/ncm.78.2.118

Rowe, J. W., & Kahn, R. L. (1997). Successful aging. *The Gerontologist*, *37*(4), 433–440. https://doi.org/10.1093/geront/37.4.433

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, *52*(1), 141–166. https://doi.org/10.1146/annurev.psych.52.1.141

Ryff, C. D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science*, *4*(4), 99–104

Ryff, C. D., & Heincke, S. G. (1983). Subjective organization of personality in adulthood and aging. *Journal of Personality and Social Psychology*, *44*(4), 807–816

https://doi.org/10.1037//0022-3514.44.4.807

Scully, J. A., Tosi, H., & Banning, K. (2000). Life event checklists: Revisiting the Social Readjustment Rating scale after 30 years. *Educational and Psychological Measurement*, *60*(6), 864–876. https://doi.org/10.1177/00131640021970952

Seematter-Bagnoud, L., Karmaniola, A., & Santos-Eggimann, B. (2010). Adverse life events among community-dwelling persons aged 65-70 years: Gender differences in occurrence and perceived psychological consequences. *Social Psychiatry and Psychiatric Epidemiology*, *45*(1), 9–16. https://doi.org/10.1007/s00127-009-0035-3

Seery, M. D., Holman, E. A., & Silver, R. C. (2010). Whatever does not kill us: Cumulative lifetime adversity, vulnerability, and resilience. *Journal of Personality and Social Psychology*, *99*(6), 1025–1041. https://doi.org/10.1037/a0021344

Seidlitz, L., & Diener, E. (1993). Memory for positive versus negative life events: Theories for the differences between happy and unhappy persons. *Journal of Personality and Social Psychology*, *64*(4), 654

Shah, S. N. (2013). *Resilience in late-life bereavement: Disentangling the relationship between resilience and cumulative lifetime loss* (University of Louisville). Retrieved from http://ir.library.louisville.edu/etd

Sharma, N., Chakrabarti, S., & Grover, S. (2016). Gender differences in caregiving among family - Caregivers of people with mental illnesses. *World Journal of Psychiatry*, *6*(1), 7. https://doi.org/10.5498/wjp.v6.i1.7

Sheehan, N. W., & Petrovic, K. (2008). Grandparents and their adult grandchildren: Recurring themes from the literature. *Marriage and Family Review*, *44*(1), 99–124.

https://doi.org/10.1080/01494920802185520

Shrira, A., Shmotkin, D., & Litwin, H. (2012). Potentially traumatic events at different points in the life span and mental health: Findings from SHARE-Israel. *American Journal of Orthopsychiatry*, *82*(2), 251–259. https://doi.org/10.1111/j.1939-0025.2012.01149.x

Silverstein, M., Cong, Z., & Li, S. (2006). Intergenerational transfers and living arrangements of older people in rural China: Consequences for psychological well-being. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *61*(5), 8256–8266. https://doi.org/10.1093/geronb/61.5.S256

Son, J., Yarnal, C., & Kerstetter, D. (2010). Engendering social capital through a leisure club for middle-aged and older women: Implications for individual and community health and well-being. *Leisure Studies*, *29*(1), 67-83

Steptoe, A., & Fancourt, D. (2019). Leading a meaningful life at older ages and its relationship with social engagement, prosperity, health, biology, and time use. *Proceedings of the National Academy of Sciences*, *116*(4) 1207-1212. https://doi.org/10.1073/pnas.1814723116

Stewart, A. J. (1978). A longitudinal study of coping styles in self-defining and socially defined women. *Journal of Consulting and Clinical Psychology*, *46*(5), 1079–1084. https://doi.org/10.1037/0022-006X.46.5.1079

Stewart, A. J. (1980). Personality and situation in the prediction of women's life patterns. *Psychology of Women Quarterly*, *5*(2), 195–206

Stewart, A. J., & Vandewater, E. A. (1993). The Radcliffe class of 1964: Career and family social clock projects in a transitional cohort. In K. D. Hulbert & D. T. Schuster (Eds.), *Women's*

lives through time: Educated American women of the twentieth century. (pp. 235–258). San Francisco, CA: Jossey-Bass

Stinson, C. K. & Kirk, E. (2006). Structured reminiscence: an intervention to decrease depression in older women. *Journal of Clinical Nursing*, *15*, 208–218.

Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proceedings of the National Academy of Sciences*, *107*(22), 9985–9990. https://doi.org/10.1073/pnas.1003744107

Szinovacz, M. E. (1998). Grandparents today: A demographic profile. *The Gerontologist*, *38*(1), 37–52. Retrieved from https://academic.oup.com/gerontologist/article-abstract/38/1/37/620477

Tackett, R. A. (2001). *Correlates of life satisfaction after retirement* (Vol. 1390). Western Michigan University

Tangri, S. S., & Jenkins, S. R. (1986). Stability and change in role innovation and life plans. *Sex Roles*, *14*(11–12), 647–662. https://doi.org/10.1007/BF00287695

Torges, C. M., Stewart, A. J., & Duncan, L. E. (2008). Achieving ego integrity: Personality development in late midlife. *Journal of Research in Personality*, *42*(4), 1004–1019. https://doi.org/10.1016/j.jrp.2008.02.006

Torges, C. M., Stewart, A. J., & Duncan, L. E. (2009). Appreciating life's complexities: Assessing narrative ego integrity in late midlife. *Journal of Research in Personality*, *43*(1), 66–74. https://doi.org/10.1016/j.jrp.2008.12.003

U.S. Beureau of the Census. (2018). *Center for Retirement Research: Frequently requested data*. Boston

United Nations Department of Economic and Social Affairs. (2017). *World Population Ageing [highlights]*. New York

Veglia, F., & Di Fini, G. (2017). Life themes and interpersonal motivational systems in the narrative self-construction. *Frontiers in Psychology*, *8*, 1897. https://doi.org/10.3389/fpsyg.2017.01897

Veterans Affairs Canada. (2014). *Canada remembers: Women at War.* https://www.veterans.gc.ca/pdf/cr/pi-sheets/women.pdf

Westerhof, G. J., Bohlmeijer, E. T., & McAdams, D. P. (2017). The relation of ego integrity and despair to personality traits and mental health. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, *72*(3), 400–407. https://doi.org/10.1093/geronb/gbv062

Wood, D., Crapnell, T., Lau, L., Bennett, A., Lotstein, D., Ferris, M., & Kuo, A. (2018). Emerging adulthood as a critical stage in the life course. In *Handbook of life course health development* (pp. 123-143). Springer, Cham.

Worden, J. W., Weisman, A. D., Meijer, A., Roseman, M., Delisle, V. C., Milette, K., … Haun, M. W. (2017). Resilience in the year after cancer diagnosis: A cross-lagged panel analysis of the reciprocity between psychological distress and well-being. *Psycho-Oncology*, *13*(1), 383–391. https://doi.org/10.1300/J077v15n02

Zink, T., Regan, S., Jacobson, C. J., & Pabst, S. (2003). Cohort, period, and aging effects. *Violence Against Women*, *9*(12), 1429–1441. https://doi.org/10.1177/1077801203259231

Table 1

Participant Demographics at Time 2

Variable	%	Mean	Median
Age		69.30	
Caucasian	65.05		
African American	33.40		
Completed graduate school	67.09		
Been married	93.03		
Been divorced	39.34		
Been widowed	11.98		
Had children	77.40		
Retired	65.30		
Annual personal income			$50,001 – 100,000
Annual household income			$100,001 – 150,000

*Note. N*s range from 233 - 243.

Table 2

Correlations Among Key Variables

Variables	1	2	3	4	5	6	7
1. Satisfaction with life	-	0.73**	0.27**	-0.23**	0.12*	-0.03	0.03
2. Ego Integrity (Closed-ended)	0.61**	-	0.23**	-0.22**	0.13*	0.11	0.04
3. Q-sort Ego Integrity	0.37**	0.49**	-	-0.75**	0.09	0.02	0.08
4. Q-sort Despair	-0.37**	-0.47**	-0.68**	-	-0.04	-0.02	-0.09
5. Positive life event frequency	0.10	0.02	0.12	-0.07	-	0.13*	0.09
6. Negative life event frequency	0.02	-0.02	-0.10	0.05	-0.01	-	-0.01
7. Death-related loss frequency	-0.03	-0.01	-0.03	-0.01	0.06	0.04	-

Note. *$p < .05$. **$p < .001$. Within time 1 correlations above the diagonal, within time 2 below. *N*s range from 243 – 326.

Table 3

Key Variable Descriptive Statistics Across Time

	Time 1		Time 2		
Variable	Range	*M*	Range	*M*	*t*
Age	54.00 – 77.00	62.03	60.00 - 83.00	69.30	
Satisfaction with life	1.20 – 7.00	5.40	1.80 – 7.60	5.74	4.99**
Ego Integrity (Closed-ended)	1.75 – 6.00	4.81	3.07-6.00	5.04	5.64**
Q-sort Ego Integrity	3.14 – 7.29	6.13	3.48 – 7.43	6.38	3.75**
Q-sort Despair	1.50 – 7.50	2.80	1.78 – 5.94	2.73	49.17**
Death-related loss frequency	0 – 6.00	0.70	0 – 8.00	0.97	1.99*
Positive life event frequency	0 – 13.00	3.19	0 – 15.00	3.32	0.03
Negative life event frequency	0 – 10.00	2.75	0 – 9.00	2.56	1.75

Note. *$p < .05$; **$p < .001$. *N*s range from 233– 326.

.

Table 4

Multiple Regression Analysis Predicting Life Satisfaction from Changes in Ego Integrity and Negative Life Event Frequency

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Previous life satisfaction level	0.59**	0.05	0.68**	0.67**	0.05	0.73	0.67**	0.05	0.73**
Health status	0.08*	0.03	0.13*	0.06	0.04	0.10	0.06	0.04	0.10
Age	0.01	0.03	0.03	0.01	0.02	0.01	0.01	0.02	0.02
Ego integrity change (closed-ended scale)				0.36**	0.13	0.16**	0.42**	0.13	0.21**
Negative life event frequency change				0.03	0.03	0.07	0.03	0.03	0.07
Negative life event frequency change x ego integrity change							0.18**	0.07	0.20**
R^2	0.55**			0.57**			0.58**		
ΔR^2				0.04*			.02*		

Note. * $p < .05$; ** $p < .001$; individual independent variables are difference scores and mean centred; $N = 154$; cases with any missing data in each of the independent variables (change scores requiring data to be present for both time points) excluded.

Table 5

Multiple Regression Analysis Predicting Life Satisfaction from Change in Q-sort Ego Integrity and Negative Life Event Frequency

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Previous life satisfaction level	0.59**	0.05	0.68**	0.64**	0.05	0.70**	0.63**	0.05	0.69**
Health status	0.08*	0.03	0.13*	0.07	0.04	0.10	0.07	0.04	0.11
Age	0.01	0.02	0.03	0.01	0.02	0.01	0.01	0.03	0.01
Q-sort ego integrity change				0.14	0.08	0.10	0.16*	0.08	0.11*
Negative life event frequency change				0.03	0.27	0.06	0.02	0.03	0.04
Negative life event frequency change x Q-sort ego integrity change							-0.05	0.04	-0.07
R^2	0.55**			0.56**			0.57**		
Δ R^2				0.01			0.01		

Note. * $p < .05$ ** $p < .001$; individual independent variables are difference scores and mean centred; $N = 155$; cases with any missing data in each of the independent variables (change scores requiring data to be present for both time points) excluded.

Table 6

Multiple Regression Analysis Predicting Life Satisfaction from Changes in Q-sort Despair and Frequency of Loss Experiences

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Previous life satisfaction level	0.59	1.44	0.68	0.62**	0.05	0.68**	0.62**	0.05	0.68**
Health status	0.08	0.03	0.13	0.06	0.04	0.10	0.06	0.04	0.10
Age	0.01	0.02	0.03	-0.01	0.01	-0.01	0.03	0.02	0.01
Q-sort despair				-0.16*	0.07	-0.13*	-0.15*	0.07	-0.06*
Loss experience frequency change				-0.05	0.04	-0.07	-0.04	0.04	-0.13
Loss experience frequency change x Q-sort despair change							-0.08	0.05	-0.09
R^2	0.54**			0.56**			0.57**		
ΔR^2				0.02*			0.01		

Note. * $p < .05$ ** $p < .001$; individual independent variables are difference scores and mean centred; $N = 155$; cases with any missing data in each of the independent variables (change scores requiring data to be present for both time points) excluded.

Appendix A: Analysis plan

RQ1: How are the frequency of positive and negative life events, death-related loss events, and life satisfaction associated with age?
RQ2: How do changes in the frequency of negative life events and ego integrity contribute to satisfaction with life?
RQ3: How does accumulated death-related loss and a sense of despair contribute to satisfaction with life?

HYPOTHESIS	VARIABLES	ANALYSIS
1a: With age, the frequency of positive and negative life events will decrease.	**IV:** time point (age) **DV:** life event frequency counts	Paired t-test
1b: With age, the frequency of death-related loss will accumulate.	**IV:** time point (age) **DV:** frequency of death-related loss	Paired t-test
1c: Satisfaction with life will increase with age.	**IV:** time point (age) **DV:** satisfaction with life	Paired t-test
2: Change in frequent and intense negative life events will contribute to decreased life satisfaction and will be buffered by the developmental task of finding ego integrity.	**IV1:** frequency change of negative events **IV2:** ego integrity change (both measures) **DV:** life satisfaction	Multiple regression Moderation
3: Accumulated death-related loss will decrease life satisfaction and this relationship will be exacerbated by despair.	**IV1:** frequency change of loss-specific events **IV2:** despair change (Q-sort) **DV:** life satisfaction	Multiple regression Moderation

Appendix B: Coding example of a low point narrative

My **husband's gradual decline** was difficult to watch. Fortunately, he remained intelligent, articulate, & loving right up to **the end** - so we were blessed in that. But 24/7 caregiving requires a lot of energy & physical labor - & mess - so 2011-2013 were difficult years. Recovery was made more difficult by his children (in their 50s), who, after 18 years of being friendly enough, **dropped me like a rock**. One of them became abusive about the will - very painful episode, now over, but the sting lingers, partially, I suppose, because it was so completely unexpected. I was fond of his 13 grandchildren & was sorry they also were expected to drop me. In 2009, my foster sister - a wonderfully kind & effective person - **died** of Alzheimers & cancer combined. My husband & I were close to her & her husband (**who died** in 2013), so that was a wrench. Other old friends (old in every sense of the word) are fading in their 80s.

Frequency of loss experiences: 3 (husband, foster sister, foster sister's husband)

SRRS events (*n* = 7)

3x Change in health of family member

1x Death of spouse

2x Death of family member

1x Change in social activities

Appendix C: Coding example of a high point narrative

Getting involved in the art community through work organizing exhibits at the local non-profit art center. This was a way to connect with people in my new location and to **establish friendships** with other artists. And, finally, **retiring** from that job to spend more time in my studio has been very satisfying. **Reconnecting with Zen Buddhist practice**. After many years of individual practice, I have joined a local zendo and have become quite involved in a variety of ways/roles/activities.

SRRS events (*n* = 4)

1x Change in recreational activities

1x Change in social activities

1x Retirement

1x Change in church