

2019

Psychosocial Development and Well-being in Retirement: The Relationship Between Generativity, Ego Integrity, and Regret Among Canadian Retirees

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Running head: PSYCHOSOCIAL DEVELOPMENT, REGRET, AND WELL-BEING IN
RETIREMENT

PSYCHOSOCIAL DEVELOPMENT AND WELL-BEING IN RETIREMENT:
THE RELATIONSHIP BETWEEN GENERATIVITY, EGO INTEGRITY, AND REGRET
AMONG CANADIAN RETIREES

by

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THESIS

Submitted to the Department of Psychology

in partial fulfillment of the requirements for

Master of Arts In Psychology

Wilfrid Laurier University

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Abstract

Transitions such as retirement may facilitate change in social and psychological dynamics, perhaps encouraging what Butler (2002) refers to as a life review: an introspective process encouraging reflection on the life course, potentially eliciting regret(s). Older adults may especially be tasked with coming to terms with the life they have lived given time constraints and perceivably less opportunity to rectify paths not taken. Drawing upon Erikson's (1950) stages of generativity and ego integrity, the purpose of the present study is to understand the role of psychosocial development in the presence or absence of regret as well as to further understand which specific factors may contribute to well-being in retirement. Overall, results indicate relationships between generativity, ego integrity, and two types of well-being (satisfaction with life [SWL] and meaning in life [MIL]). Scores on generativity and MIL were not significantly different between those who expressed having regrets compared with those who did not have any regrets, whereas scores on ego integrity and SWL were significantly different. However, frequency analyses revealed that most retirees did not indicate having regrets and for those that did, career- and family-related regrets were expressed most frequently. Finally, generativity and ego integrity, but not regret, were predictors of both types of well-being. These findings highlight the impact of psychosocial factors on coming to terms with regret and well-being outcomes among retirees.

Acknowledgments

I would first like to thank my supervisor, Dr. Nicky J. Newton, for her feedback and guidance throughout the process of this research. I would also like to thank my committee members, Dr. Tobias Krettenauer and Dr. Eileen Wood, as well as my external examiner, Dr. Heather Lawford, for all of their thought-provoking input toward this document.

I would also like to thank all of the retirees who took the time to participate in the retirement study, which made this thesis possible.

A special thanks to my mother, Lorraine, aunt Pat, fiancée, Aaron, future mother-in-law, Michele, Ami, and all of my friends for their unwavering support and encouragement as well as for always believing in me.

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Introduction

For many adults, retirement represents a new milestone within the life course-- a passage out of the workforce into older adulthood, marking a new chapter that includes both social and psychological change. Within the Western world especially, retirement is often perceived as an inherent part of older adulthood. According to Atchley (1982), retirement can be defined as the “withdrawal of an individual from employment along with entitlement to income that is based on having been employed over a period of years” (p. 121). With consideration that baby boomers-- those born between 1946 and 1964, the largest cohort of aging individuals to date-- are nearing or have reached retirement age, understanding what contributes to well-being in retirement is imperative to the field of adult aging. This is especially true with regards to the increasing expansion of the older adult population. Statistics Canada (2018) reports that from 1971 to 2010, the older adult population grew from 8% to 14%, and as of 2015, made up 16.1% of all Canadians. Due to medical and technological advancements, the number of older adults is expected to rise significantly over the next 20 years (Statistics Canada, 2018). More and more adults will, therefore, be considering or entering retirement; and with rates of life expectancy also increasing, there will be a considerable expansion of time spent in retirement.

As Atchley (1982) suggests, retirement is not simply a transition out of the workforce into older adulthood. Rather, it is a process that embodies complexities and a myriad of factors, which have potential to impact well-being and quality of life. There is a large amount of literature concerning financial stability and well-being in retirement. Government agencies and researchers are continually encouraging Canadians to think about long-term security within the realm of financial savings, pensions, and even retirement location. Researchers have also highlighted the importance of engaging in decision-making processes; for example, the decision

to retire itself (Atchley, 1982; Newton, Chauhan, Spirling, & Stewart, 2018), planned versus unplanned retirement (Newton et al., 2018), as well as the psychological impact of retirement with respect to sense of community, identity and role adjustment (Atchley 1976; Wong & Earl 2009), and even attitudes toward retirement as they relate to stress (Bossé, Spiro, & Kressin 1996; Wong & Earl 2009). Despite the large volume of literature on retirement concerning topics such as finances and engagement in decision-making processes, there are still inconsistencies surrounding the overall impact of retirement on well-being (Kim & Moen, 2001). This is especially true with regards to the experience of Canadian retirees, as the literature on this specific demographic in Canada is lacking. In considering that retirement is a predominantly older adult experience, it may be important to draw parallels and make connections between retirement and other factors that relate to the aging process.

Most adult Canadians spend a considerable amount of time working throughout their lives. Leaving the workforce may, therefore, be a significant life-changing transition that further instigates a reevaluation of the self (Kim & Moen, 2001) and what Butler (1974, 2002) refers to as a “life review”—an introspective process that results in reflections toward the life one has lived. Accordingly, retirees may be prompted to reflect on paths not taken, resulting in positive or negative appraisals of one’s life; further contributing to the experience of regret and the subsequent impact on well-being.

Studies on both aging and regret often draw upon theories such as successful aging and psychosocial development in order to understand its relative effects on well-being outcomes. Research connecting these theories with retirement specifically is lacking. As such, the purpose of the current study is to highlight the retirement experience within a successful aging and psychosocial framework with regards to regret and well-being outcomes.

Successful Aging

Aging is a dynamic process that can be contextualized by psychological changes across the lifespan. There are many widespread misconceptions regarding older adulthood, with the main one depicting a downward shift in cognitive and physical capabilities. For example, Sigmund Freud interestingly once suggested that older adults were not capable of change and would have difficulty confronting life challenges (Montero, de Montero, & de Vogelfanger, 2013; Tacket, 2001). Recent research, however, does not support the idea of aging as solely a period of physical and mental decline, and further contends that adults at any age are capable of change within and across various contexts of life. For example, the theory of successful aging, as described by Rowe and Kahn (1987), encourages a more optimistic viewpoint on older adulthood. It promotes the concept of aging as an active rather than passive process, suggesting that older adults can continually grow and achieve well-being and life satisfaction (Villar, 2012). Furthermore, according to Rowe and Kahn (1987), successful aging comprises three main components: “low probability of disease and disease related disability, high cognitive and physical functioning capacity, and active engagement with life” (Rowe & Kahn, 1997, p. 433). Essentially, by maintaining a healthy lifestyle through internal (cognitive) and external (environmental) mechanisms, quality of life is enhanced. This concept has been highly influential within the field of adult aging and development (Villar, 2012). The notion that aging and illness are not necessarily parallel has been instrumental in promoting healthy lifestyles among older adults.

Successful aging can be measured across many contexts including health and morale, for example, and may be helpful as an overarching framework for research on older adulthood (Ryff, 1982). However, as Ryff (1982) suggests, a developmental model may provide contextual

guidance toward the aging process. Erikson's (1950/63) theory of psychosocial development provides a conceptual framework for understanding developmental achievements across the lifespan. Consistent with successful aging, Erikson's eight-stage theory promotes the idea of change and positive adaptation across the lifespan through what Torges (2006) describes as cognitive and affective outcomes. It has been suggested that the psychosocial elements within each stage act as resources for promoting positive growth and buffer against age-related challenges (Tacket, 2001); perhaps such as those accompanied by retirement and life review outcomes.

Psychosocial Development

From infancy into older adulthood, Erikson theorized that people navigate through eight stages, each with its own unique developmental task or psychological crisis (see Appendix A). Each stage embodies a specific function that serves to facilitate good psychological health. Accordingly, each stage represents an interaction between internal forces (i.e., the psyche) and external forces (i.e., the social context), which work to achieve equilibrium between stage-related tensions and conflicts (Erikson, 1950). Kivnik (1988) explains this as a polarized balance between syntonic and dystonic elements regarding the struggle associated with each stage. Syntonic represents the successful balancing of tensions and the subsequent acquisition of its overarching virtue or ego strength, whereas dystonic represents negative elements and the unsuccessful resolution of the particular stage in context (Kivnik, 1988). For example, during midlife, Erikson theorized that adults undergo the conflict between generativity (syntonic) versus stagnation (dystonic). During this stage, people are concerned with nurturing and creating meaningful interactions with the world around them; contributing toward feeling as though one has developed a personal legacy, having left their mark in positive ways (McAdams & de St.

Aubin, 1992). Erikson (1950) theorized that achieving generativity would result in the virtue of care and perhaps, a progression to the next and final stage: ego integrity versus despair.

Though the term stage may imply a linear progression, Erikson did not concretely define his adult stages within specific age contexts. Furthermore, whether we are successful or not in completing a developmental stage, we are still able to progress onwards, where we are able to process new tasks and perhaps re-process and make sense of past conflicts (Torges, 2006). Life circumstances resulting from both internal and environmental factors may contribute to the particular stage we are currently in. This draws on the differences between some developmental theories, such as Piaget's, which considers specific stages of cognitive development to be discontinuous. Within this type of framework, stage-related tasks must be overcome in order to progress forward and grow. Moreover, these stages are not repeated or returned to once complete. In contrast, Erikson's stages are not so distinctly defined. People are able to navigate through a particular stage at any given point throughout their lives.

Erikson initially suggested that the 7th stage, generativity versus stagnation, may be most important for adults in midlife, whereas the 8th and final stage, ego integrity versus despair, he traditionally assigned to those in late adulthood; adults entering the final chapter of their lives (Erikson, 1963). Both stages have been researched extensively within contexts related to well-being, with both providing unique frameworks for understanding the developmental process of adulthood. Though generativity is traditionally associated with midlife, emerging research and shifts in societal conventions (e.g., delayed onset of parenting) might elicit the presence of both generativity and ego integrity in older adulthood.

Ego integrity vs. Despair

Ego integrity versus despair represents the final construct in Erikson's (1950/63) eight-stage model. Typically associated with older adulthood, the purpose of this stage is to gain acceptance toward the life one has lived (Erikson, 1950). Its underpinning relies on an integrative and reflective process, which work to balance the tensions between integrity versus despair, generating the final virtue of wisdom (Erikson, 1950; Torges 2006).

According to Erikson, the main psychological element of ego integrity involves reflecting on and accepting the past. It is within this stage where a lifelong process of accumulating psychosocial strengths within preceding stages becomes an integral part of achieving integrity of the self in old age. Aging unequivocally presents each of us with fears regarding time and perhaps death, which might further challenge our sense of self. By reflecting on life paths, we can confront the idea that death is imminent through integrating our experiences into a "dynamic balance of human wholeness" (Erikson, Erikson, & Kivnik, 1986, p. 13). This type of acknowledgement provides us with a sense of maturity and cohesiveness, perhaps preventing feelings of wishing the life course had gone differently. According to Santor and Zuroff (1994), integrity is achieved by:

"...Adapting to triumphs and disappointments, spirituality, acceptance of the course of one's life as necessary, tolerance and acceptance of others, acceptance of one's place in history, absence of death anxiety, freedom from the feeling that time is running out, emotional integration, and satisfaction with life" (p. 295).

The inability to come to terms with the life one has lived may result in what Erikson described as despair. Embedded within despair are feelings of hopelessness and a deep sense of regret (Melici, 2016). Many studies have indicated the importance of self-acceptance with regards to past choices and coming to terms with life outcomes. The inability to do so has been

associated with lower levels of well-being and satisfaction with life among older adults (e.g., Torges, Stewart, & Duncan, 2008; Dezutter, Wiesmann, Apers, & Luycx, 2013). Erikson et al. (1986) also suggested that feelings of despair might have generational rather than personal implications. For example, older adults may feel hopeless toward younger generations and the conventions of modern society, or despair toward the thought of ongoing war. The overall purpose of ego integrity, however, is to not avoid acknowledgment of despair-provoking contexts, but to attempt the use of a compassionate lens while reflecting on life circumstances as a means of coming to terms (Erikson et al., 1986).

The stage theorized to precede ego integrity, generativity versus stagnation, is often studied within contexts relating to midlife and its predictive value of ego integrity in later life. For example, one study looking at the experience of regret among women found generativity and regret resolution in midlife to correspond with ego integrity and regret resolution in later life (Torges, et al., 2008). Though researchers have studied the sequence of Erikson's theory in a linear sense (i.e., generativity predicting ego integrity), generativity has also gained increasing popularity within the field of later adulthood. For instance, researchers have suggested that the psychological elements embedded within generativity regarding social aspects and maintaining connections with the community are an important part of the active aging process (Kruse & Schmitt 2012). Furthermore, research has shown that generative goals are most prominent in older adulthood (McAdams, Hart, & Maruna, 1998; Lang & Carstensen, 2002).

Generativity vs. Stagnation

People at the generative stage are said to have a concern with establishing and guiding the next generation (Erikson, 1950), developed through an internal conflict resulting from tensions between generativity and stagnation. This stage typically involves developing a sense of personal

legacy, meaningful interactions, nurturing loved ones, communal relationships, and inspiring future generations (McAdams & de St. Aubin, 1992; Maxfield et al., 2014; Major, Whelton, Schimel, & Sharpe, 2016). The overarching virtue of this stage is care, with the inability to achieve generativity resulting in stagnation—which may result in feeling unproductive and as though one is not a contributing member of society.

Despite its presence in midlife, researchers are noticing its applicability toward experiences in older adulthood as well. Erikson himself suggested that, “much of their [older people’s] despair is in fact a continuing sense of stagnation” (Erikson, 1997, p. 63; Cheng, 2009). Other researchers have also suggested that older adults tend to display generative concerns, but within different contexts than expressed in midlife (e.g., being a mother and then becoming a grandmother) (Urrutia, Cornachione, de Espanes, Ferragut, & Guzman, 2009). As Cheng (2009), suggests, this may be a result of recent shifts in societal conventions, as people are getting married and having children later, and are generally spending more time in older adulthood. Kotre (1984) describes the upward trend in generativity as a phenomenon resulting from a demographic revolution. Changes in life structure, including medical and technological advancements, are facilitating higher rates of life expectancy and healthier life styles. For example, adults who are retiring are not passively living longer but are gaining opportunities to actively engage with and experience new meaning in life.

The term “vital involvement”, the contextual premise for Erikson and colleague’s (1986) expansion on development within old age, addresses longevity and healthier lifestyles associated with modern living. Consistent with the concept of successful aging, vital involvement highlights a diversity of experiences through active engagement with the outside world (Kivnik, 1988). This means that, alongside ego integrity, generativity may also be important for psychosocial

development in older adulthood. For example, people have more time to spend with friends, to be grandparents, and may be presented with more opportunities for mentorship (Erikson, et al., 1986). These types of opportunities might contribute towards one's sense of personal legacy through meaningful engagement within familial and societal contexts. By maintaining vital involvement within the world around them, older adults are presented with opportunities to nurture and create relationships, which might leave less room for feelings of stagnation or despair, and perhaps facilitate self-acceptance, as gained through ego integrity.

The continuity of generativity into older adulthood may also be an important component of experiencing regret toward paths not taken. Within the process of coming to terms with life outcomes, older adults may engage in reflections through the lens of their interactions and productivity: "older adults must come to terms with the earlier life choices they made about how to express generativity" (Erikson et al., 1986, p. 27). It is further suggested that generativity in old age helps to transcend despair (Erikson et al., 1986). Consistent with ego integrity within contexts relating to regret, studies have found that those low in generativity have higher levels of feelings of regret. For example, in a qualitative study assessing generativity in late life, Hauser (2013) found regret to be one key theme among those participants scoring low on generativity. The presence of generativity with regards to reflections on the past may take place within contexts relating to child-rearing success and mentorship roles (e.g., perhaps how fulfilling one's career was) (Erikson et al., 1986). Ultimately, as Urrutia et al., (2009) suggest, generativity may help to provide a framework for reorganizing the narrative into a sense of integrity and coherence. Both stages may, therefore, have implications in understanding the life review process as relates to the experience of regret.

Life Review

The premise of Erikson's (1950/63) theory lies within the integration of strengths accumulated at each stage and the reintegration of these strengths across the lifespan. As we reach the final stage, we are to reflect and integrate all of these experiences into a present sense of self. Consistent with this notion, Butler (1963, 2002) conceptualized this process within what he theorized to be a life review. Throughout the life review process, some people are able to reorganize their experiences into a new, positive, mental framework of the self (Torges, Stewart, & Miner-Rubino 2005); whereas others may not be so accepting of life path outcomes. Conducting a life review involves critical cognitive processes (Butler, 2002) that allow us to reminisce on a lifetime of action (or inaction).

Life reviews are not confined to old age but may follow the presence of noticeable shifts in the life course (Stewart & Ostrove, 1998). Confronting these shifts and a lifetime of action is a critical developmental task (Butler, 1963, 1974; Erikson et al., 1986; Newton, Torges, & Stewart, 2012). With consideration of changes in daily routine and social roles, a major life event like retirement may, therefore, prompt a person to reminisce on a lifetime of experiences. This also involves making assessments toward paths chosen or not chosen, which may be positive or negative in scope. Not being able to accept the past may lead to rumination and regret toward missed opportunities, which may have an impact on well-being outcomes (Cappeliez & O'Rourke, 2006; Torges, Stewart, & Nolen-Hoeksema, 2008). This is also consistent with the process of achieving ego integrity and perhaps the importance of generativity when reflecting back on one's life. For example, one study looking at the effects of hardships and stressful life events on life review outcomes found that stressful memories were reduced when there was an apparent desire to be more generative (i.e., engage with others and for others; Kruse & Schmitt, 1999/ 2012). Other researchers looking at psychosocial development within a life review context

have found ego integrity to be positively correlated with positive life review outcomes (Taft & Nehrke, 1990). This may highlight the importance of psychosocial resources in being prompted to think about one's life path choices and the subsequent process of coming to terms with regret.

Regret

At one point or another, each of us will have likely reflected upon something that we wish we could change or had done differently, perhaps resulting in regret. Landman (1987) discusses regret as dwelling on "possible selves" which includes "cognitive/affective representations of the self in some currently unactualized state" (p. 142). The cognitive component regards the process of actually thinking about, or remembering, an event that is regretful, whereas the affective component is the emotional outcome (e.g., distress). A person's perception of time may play an important role in experiencing regret. According to Vastfjall and Bjälkebring (2011), older adults may feel more constricted by time as they age, whereas younger adults may feel they have more time to adjust the trajectory of where their current life is heading. Interestingly, however, studies have indicated that older adults have fewer regrets than younger adults (Riediger & Freund, 2008), even within contexts such as bereavement (Torges, Stewart, & Nolen-Hoeksema, 2008). This may be attributed to what Carstensen (1995) coined Socioemotional Selectivity Theory (1993/95), which states that as people age they develop coping mechanisms that allow them to be positive and present-oriented. As older adults think about the past, they may be more likely to make positive appraisals than their younger counterparts.

This is also consistent within psychosocial contexts. For example, one study showed that older adults who perceived time as being limited were more inclined to make generative-related (i.e., meaningful) goals (Lang & Carstensen, 2002). Other studies have shown regret resolution in midlife to be positively correlated with ego integrity (e.g., Torges, 2006). This may connect

with the vital involvement aspect of aging that Erikson and colleagues (1986) described as being important for overall well-being. The resources gained through ego integrity facilitate positive adaptation to old age, and allow one to find peace and to come to terms with their life. This may include striving for meaning and active engagement within generative contexts, as Erikson et al. (1986) also suggest.

Researchers further studying regret, such as Newton et al., (2012), have highlighted the negative impact that experiencing regret has on well-being and satisfaction with life. Roese and Summerville (2005) also discuss the impact of regret on the aging process. Accordingly, regrets are more likely to linger within constraints or inability to rectify the regret, unless active cognitive processes work to rationalize or reduce the sense of regret. Furthermore, Roese and Summerville's (2005) cross-sectional analysis looking at different contexts of regret suggests that as people age they are more inclined to have regrets about education and career. These contexts of regret have been previously demonstrated in other studies as well (e.g., Landman, Vandewater, Stewart, & Malley, 1995). As Stewart and Vandewater (1999) point out, however, it is not having regret that is important, but how the regret is processed that matters. This draws on the importance of understanding the retirement experience, as changes associated with this stage may prompt a life review and evaluations of the life course. Additionally, given that research suggests an overlap between ego integrity and generativity in older adulthood, both of these stages may be instrumental in understanding the experience of regret and subsequent well-being outcomes among retirees.

Research Questions & Hypotheses

The purpose of the present study is to understand the experience of retirement among older Canadian adults, and to examine the psychosocial factors that contribute to successful aging

among retirees. That is, within the context of retirement, how do Erikson's final two developmental stages (generativity and ego integrity) and potential experiences of regret relate to both overall global life satisfaction and eudaimonic meaning in life in older adulthood?

Specifically:

Question 1. How is psychosocial development later in life related to levels of both types of well-being—i.e., what is the relationship of Erikson's psychosocial stages of generativity and ego integrity to well-being?

Hypothesis 1: With consideration of previous studies that indicate positive associations between generativity, ego integrity and well-being, it is expected that in the current study, levels of generativity, ego integrity, and well-being will be positively correlated with one another.

Question 2a. Do retirees have regrets—i.e., will more retirees indicate having regrets versus not having regrets?

Hypothesis 2a: It is expected that more retirees will indicate not having regrets versus having regrets. The literature surrounding older adulthood shows a progressively optimistic trend among retirees, especially within the realm of successful aging and psychosocial development as conceptual frameworks. These theories suggest that older adults have the capacity to adapt positively to life transitions and challenges.

Question 2b. When asked to answer openly to both measures of regret (i.e., Why or why not? In regards to: "If you had it to do over again, would you choose the same lifestyle pattern -- with respect to your home versus career decision(s)?" and "Any regrets?"), which types of themes emerge most frequently?

Hypothesis 2b: Consistent with the literature surrounding what people may regret the most (i.e., education and career (e.g., Roese & Summerville, 2005)), and with consideration that everyone

in this study has previously worked, it is expected that answers to open-ended regret questions will most frequently contain themes of education and career contexts. A thematic codebook will be used to code each participant's answer in order to assess which themes of regret are most common among this sample of retirees.

Question 3. What psychosocial processes are involved in the presence or absence of regret? That is, are there differences in levels of generativity, ego integrity and well-being between regret and no regret groups?

Hypothesis 3: With consideration of past research on ego integrity, well-being, and more recently, generativity (e.g., see Erikson et al., 1986) as they relate to the experience of regret, it is expected that there will be significant differences in levels of each of these constructs between the presence versus the absence of regret.

Question 4. What are some predictors of well-being among retirees? More specifically, how do psychosocial factors such as generativity, ego integrity, and regret predict well-being for this particular sample?

Hypothesis 4: It is expected that the presence or absence of regret, generativity, and ego integrity will be significant predictors of well-being (operationalized as satisfaction with life; Diener et al., 1985, and meaning in life; Krause, 2004) among retirees in this sample. Furthermore, it is anticipated that generativity will predict well-being over and above regret, and that ego integrity will predict well-being over and above both generativity and regret.

Method

Design

This study was developed using a mixed-methods design. Quantitative data were collected to measure psychosocial development and well-being, and qualitative data were collected to assess the experience of regret—both types of data were collected via survey.

Participants

Participants ($N = 152$) were recruited from the Southwestern region of Ontario, Canada, with the majority of people residing in either Kitchener-Waterloo or the Greater Toronto Area (GTA). The recruitment process lasted approximately nine months-- from September 2016 to May 2017. Recruitment was conducted in a variety of ways. Flyers were posted in local businesses, libraries, and the Waterloo Adult Recreation Centre. Advertisements were placed in The United Senior Citizens of Ontario (The Voice), as well as two local newspapers (the Mississauga News and Brampton Guardian). Researchers also distributed information to Third Age Learning Kitchener-Waterloo, a member-based organization that provides networking and learning opportunities for older adults (e.g., members sign up to attend lectures on various topics throughout the year), and India-Rainbow, an organization geared toward Indian-Canadian residents of the Greater Toronto Area that provides social and health related services. Information concerning the project was also distributed to community partners participating in the Community Service Learning component of an undergraduate Adult Aging and Development course at Wilfrid Laurier University. Some participants were also part of a small snowball sample, having contacted the primary investigator after hearing about the study through word of mouth (e.g., friends, colleagues) to express interest and were subsequently recruited.

Upon contacting the principal investigator in response to flyers, advertisements, or word of mouth, each participant was asked to indicate their preference of receiving either a hardcopy or electronic version of the survey, which also included a form indicating participant consent.

Participants were thanked, debriefed, and given a \$20 gift card incentive for completion of the survey.

The data used for this study were part of a larger survey. Of the original 152 participants contacted for the study, eight withdrew and eight were unresponsive; thus, total participant response was 136 or 89.5%. Furthermore, because the purpose of the current study is to explore psychosocial factors within the context of retirement, participants indicating that they are not retired ($n = 9$) or had missing data ($n = 5$) were excluded from the sample leaving the final total at $N = 122$.

Participant ages ranged from 55-86, with a mean age of 68.5; 68% identified as female, and 32% identified as male. While efforts were made to recruit a racially- and culturally-diverse sample of participants, the sample was predominantly White (87.9%), with 10.5% identifying as Asian or South Asian, 0.8% identifying as Black, and 0.8% unspecified. Approximately half of the participants (52.5%) indicated having some form of graduate school degree, 32% indicated having attended college or university, and 13.9% had no post-secondary education. 61.5% of participants indicated being married, 13.1% were divorced, 13.9% were widowed, and the remaining 11.5% were either single or living with a partner or had indicated “other”. Median household income ranged between \$40,001 and \$100,000. See table 1 for a full summary of participant demographics.

Measures

Regret. Responses to three questions about regret were used. The first question asked, “If you had it to do over again, would you choose the same lifestyle pattern -- with respect to your home versus career decision(s)?” Participants were asked to answer with either “yes” or “no”. This

question was followed by two more open-ended questions: “Why or why not? What would you change?” and “Any regrets?”

The open-ended follow-up questions were coded in two ways. First, the primary researcher and an undergraduate research assistant coded each answer for presence or absence of regret. Answers were coded this way regardless of previous answers indicating “yes” or “no” to the initial question. This was done with consideration that despite some answers of, “yes” to choosing the same lifestyle pattern over again, some follow-up answers were contradictory to their initial response. For example, one participant answered, “yes” to choosing the same lifestyle over again, but wrote “Maybe I should have left my job sooner. My daughters and I aren’t getting along.” A total of 64 participant answers were coded for regret-related themes. Inter-rater agreement calculated using Cohen’s kappa and was high at $\kappa = .90$.

Answers were coded for thematic content in order to inform this study on commonalities across what people regret most in retirement. To adequately assess themes within the qualitative responses to all open-ended regret measures, content coding was used. This type of methodology uses an inductive (as opposed to deductive) approach to qualitative data analysis, where answers are assessed for common thematic content and then coded (Bowen, 2006). A codebook was adapted from previous research examining regret (Stewart, Vandewater, Hartman, & Settles, 1992/96; Torges et al., 2005) but was modified, to better index applicable themes for this particular sample using the aforementioned coding methodology. Modifications were initially made by the author and subsequently checked by her research assistant for consistency.

An agreed total of seven themes emerged: Personal Constraint (coded within contexts relating to factors such as personal attributes that may have limited past opportunities); Social Restriction (coded within contexts relating to groups or institutions that may have restricted past

opportunities—e.g., any mention of something political such as limited opportunities for women); Career (coded within contexts relating to career type, career timing, or having pursued career too aggressively/not aggressive enough); Education (coded within educational contexts such as wishing one had furthered their academic pursuits, changed academic course and received a different degree, etc.); Health (coded when any mention of wishing for better mental or physical health was presented); Family (coded within contexts relating to any mention of family, partnership, and/or children); and Financial (coded when any mention of desire for more income or wishing one had a better pension, for example, was present). See Table 2 for complete list of themes and examples.

Once the codebook was finalized, the author and research assistant coded 30% of answers for comparative purposes and to ensure adequate inter-rater reliability. Because responses had the potential to be coded for more than one theme, Cohen's Kappa was not used in this part of the study. Coder agreement was calculated at $2 \times \text{agreements} / (\text{coder A} + \text{coder B}) \times 100$ (Smith, Feld, & Franz, 1992). After reaching adequate agreement on the first 30% of responses, with the range calculated as being between 82% and 100%, the remaining 70% of responses were split in half and each coder worked independently to code participant answers for regret themes. The purpose of the second coding round was to conduct a frequency analysis in order to highlight which regret-related content was expressed among this sample. Accordingly, only those participants whose open-ended answers were coded for presence of regret were used.

Ego Integrity. Ego Integrity was measured using Ryff and Heincke's (1983) Ego Integrity Scale. Internal consistency for this scale was relatively high in this study (Cronbach's alpha, $\alpha = .86$). This is consistent with previous studies using the same scale, e.g., $\alpha = .85$ (Torges, Stewart & Duncan, 2009) and $\alpha = .83$ (James & Zarrett, 2006). Included in the scale are 16 items such as

“I still feel angry about certain of my childhood experiences” (reverse coded) and “My life has been fulfilling, and I am not frightened by the thought of death” that participants rated from 1 (strongly disagree) to 6 (strongly agree). The purpose of this scale is to assess integration of both successes and failures into a comprehensive sense of self-acceptance and satisfaction toward one’s life (Plante & Sherman, 2001). Refer to Table 3 for means and standard deviations of each variable used in this study.

Generativity. Generativity was measured using the Loyola Generativity Scale (LGS; McAdams & de St. Aubin, 1992), which assesses generative concerns. Cronbach’s alpha was $\alpha = .88$, consistent with McAdams & de St. Aubin’s (1992) original calculation upon development of the scale, $\alpha = .83$. A total of 19 items from the original 20 were used, with the statement “if I were unable to have children of my own, I would like to adopt children” removed, given its likely irrelevance to the current sample’s age range and life stage. Statements such as “I have made and created things that have had an impact on other people,” and “I feel I have done nothing that will survive after I die” (reverse coded) were rated from 1 (strongly disagree) to 6 (strongly agree).

Well-being. Well-being was operationalized in two ways: as life satisfaction, and meaning in life. Life satisfaction is a global assessment of life-related well-being, whereas meaning in life is viewed as eudaimonic, which speaks to one’s sense of purpose and self-realization (Ryan & Deci, 2001). Given the distinctly different nature of these constructs, it was important to examine well-being using both measures.

Life Satisfaction was assessed using four items from the Satisfaction with Life Scale (Diener, Emmons, Larson, & Griffin, 1985), including statements such as “the conditions of my life are excellent,” rated from 1 (strongly disagree) to 7 (strongly agree). This scale originally consisted

of five items but the item “If I could live my life over, I would change almost nothing” was dropped given that it indexes regret; reliability for the resultant four-item scale was $\alpha = .93$, which is consistently good as with previous research using the Satisfaction with Life Scale, $\alpha = .84$ (Steger, Frazier, & Oishi, 2006)

Meaning in life (or eudaimonic well-being) was measured using the Meaning in Life Scale (Krause, 2004), which assesses values, purpose, goals and reflections. This 14-item measure ($\alpha = .92$) includes statements such as “I have discovered a satisfying life purpose” that are rated from 1 (strongly disagree) to 4 (strongly agree). This is consistent with Krause’s (2004) initial reliability statistic upon developing the scale ($\alpha = .93$).

Analysis Plan

To investigate question 1, the relationship between generativity, ego integrity and well-being, a Pearson correlation analysis will be run. Next, to answer question 2a on whether or not more participants indicate having regrets versus not having regrets; frequencies of either “yes” or no” to: “If you had it to do over again, would you choose the same lifestyle pattern -- with respect to your home versus career decision(s)?” will be calculated. In order to answer question 2b on which types of themes emerge most frequently, answers to open ended questions will be coded and frequencies of each theme will be calculated. Question 3, asking about the psychosocial processes involved in the presence or absence of regret, will be answered through a series of independent sample t-tests comparing levels of generativity, ego integrity, and well-being between regret and no regret groups. And finally, in order to assess predictors of well-being, as asked in question 4, two separate hierarchical regression analyses will be conducted, using SWL as the dependent measure in the first analysis and MIL as the dependent measure in the second analysis. In both models, age will be controlled for in step one, regret will be entered in step two,

generativity will be entered in step three, and ego integrity will be entered in step four. This particular sequence was chosen in consideration of the functionality of Erikson's stages.

Results

All quantitative analyses were run using the Statistical Package for Social Sciences (SPSS). The first hypothesis predicted that there would be a significant and positive relationship between generativity, ego integrity, and well-being. Pearson correlation analyses revealed that, as expected, all three variables were significantly and positively correlated (see Table 4). Control variables, age and income, were also added to this analysis. The results showed that age had a significantly negative relationship with income, but no other variable. Income had a significant and positive relationship with SWL, but not MIL, generativity, or ego integrity. The first hypothesis was fully supported.

Hypothesis 2a predicted that more participants would answer "yes" in comparison to "no" with regards to, "If you had it to do over again, would you choose the same lifestyle pattern -- with respect to your home versus career decision(s)?" Answers were coded dichotomously (i.e., yes (1), no (2)), which put each participant into either the "regret" or "no regret" category. Calculations indicated that 63.1% of participants answered, "yes" whereas 33.6% answered "no" and 3.3% had not answered the question. Hypothesis 2a was fully supported; that is, in answer to the question regarding lifestyle patterns, more participants indicated wanting to choose the same lifestyle pattern than those who did not.

Following up from Hypothesis 2a, Hypothesis 2b predicted that frequencies of regret themes would be highest for career and education contexts. Codes were applied a total of 126 times for those indicating regret (each participant could be coded more than once, depending on their answer). Results for this sample indicated that frequencies for career (38.6%) and family (24.6

%) were highest, followed by education (11.4%), personal constraint (8.8%), financial (7%), social restriction (5.2%), and health (4.4%). This hypothesis was only partially supported.

Hypothesis 3 predicted that scores on generativity, ego integrity, and well-being would significantly differ between regret and no regret groups. Independent-sample t-tests revealed no significant difference in mean scores on generativity between regret ($M = 4.38$, $SD = .71$) and no regret groups ($M = 4.54$, $SD = .70$), $t = -1.20$, $p = .26$. However, mean scores were significantly lower on ego integrity for those in the regret group ($M = 5.19$, $SD = 0.82$) compared to those in the no regret group ($M = 5.68$, $SD = 0.75$), $t = -3.26$, $p < .001$. The analysis for SWL showed a significant difference in mean scores between regret ($M = 5.38$, $SD = 1.13$) and no regret groups ($M = 5.80$, $SD = 1.11$), $t = -2.02$, $p < 0.05$. The final comparison looking at MIL showed no significant difference in mean scores between groups, regret ($M = 3.19$, $SD = 0.46$), and no regret ($M = 3.33$, $SD = 0.44$), $t = -1.77$, $p = .08$. Hypothesis 3 was only partially supported.

Finally, Hypothesis 4 predicted that regret, generativity, and ego integrity would significantly predict well-being. Two hierarchical multiple regression analyses were conducted using a 4-step model, controlling for age in the first step. In order to meet the requirements for this type of statistical analysis, preliminary analyses of assumptions were run. Assumption of singularity was met as no independent variables were highly correlated with one another. Furthermore, results indicated that both the tolerance and variance inflation factor were within acceptable limits (Hair, Black, Babin, & Anderson, 2014) and thus, no problem of multi-collinearity was encountered.

The first hierarchical regression analysis was conducted using SWL as the dependent measure. Age was entered as a control variable in the first step and was not significant $F(1,96) = .65$, $p = .42$. Regret was entered in step two and did not contribute significantly, $F(2,95) = 1.46$, $p = .24$, and thus, could not predict SWL. Adding generativity in step three made the model significant,

$F(3,94) = 2.77, p < .05$, and was able to explain 5% of the variance. In step four, the addition of ego integrity to the model was significant, $F(4,93) = 12.81, p < .001$, and was able to explain an additional 27% of the variance; indicating that ego integrity was the best predictor of SWL. See Table 5 for summary of results.

The second hierarchical multiple regression was performed with MIL as the dependent variable. This model followed the same sequence as the one outline above. Age was controlled for in step one and was not significant $F(1,93) = .29, p = .59$. Similarly, adding regret in step two also did not produce significant results, $F(2,92) = .69, p = .50$. Adding Generativity to step three made the model significant, $F(3,91) = 8.71, p < .001$, and was able to account for 21% of the variance. In the final step, ego integrity contributed significantly and accounted for an additional 4% of the variance, $F(4,90) = 7.88, p < .001$. Similar to SWL, ego integrity was also the best predictor of MIL. See table 6 for summary of results. Hypothesis 4 was only partially supported.

Discussion

The overall goal of the present study was to understand which developmental processes aid in the promotion of successful aging among Canadian retirees. More specifically, the aim was to shed light on life review outcomes by highlighting the psychosocial mechanisms involved in the experience of regret and achieving well-being in retirement. Two types of well-being were measured in this study: Satisfaction with life (SWL) and meaning in life (MIL). Well-being may be an overarching term for a variety of positive outcomes throughout the life course, such as good health. Well-being may, therefore, manifest in different ways and thus, two measures analyzing well-being were used. Satisfaction with life measures hedonic or subjective well-being, through a global assessment of the self, including cognitive and judgmental outcomes of one's life (Diener et al., 1985). Meaning in life is a psychological measure of eudaimonic well-

being, which, as the name suggests, describes a person's appraisal of how meaningful they feel their life is; it is often evaluated through behavioural outcomes, and finding a sense of purpose and one's place in the world (Krause, 2004).

Overall, the results presented in this study indicate a positive relationship between Erikson's final two stages, generativity and ego integrity, and both types of well-being. Frequency analyses revealed that more Canadian retirees do not have regrets in comparison to those that do indicate having regrets. The types of regrets most prominent among this sample were related to career and family. Comparisons between levels of generativity, ego integrity, SWL, and MIL highlighted contributing psychosocial factors toward the presence or absence of regret. Results of this analysis showed that for participants with no regrets, levels of ego integrity and SWL were significantly higher than those who had regrets. Levels of generativity and MIL, however, were not significantly different between regret groups. Finally, in assessing predictors of both types of well-being outcomes in this sample, generativity and ego integrity were significant predictors of SWL and MIL, whereas the presence or absence of regret was not. Results are further discussed in detail below.

Generativity, Ego Integrity, and Well-being

As expected, and in line with previous studies, generativity, ego integrity, SWL, and MIL were significantly and positively related within the current sample. Erikson (1950) theorized that in order to maintain good psychological health, the tensions associated with each stage must be balanced with subsequent achievement of the stage's relative overarching virtue. Generative people are likely to seek out and maintain meaningful interactions, with successfully resolving the tensions between generativity and stagnation resulting in the virtue of care; whereas successfully balancing the tensions between ego integrity and despair is likely to result in being

self-accepting, and achieving the virtue of wisdom. Ultimately, both stages embody positive elements that work to promote well-being. Moreover, while not specifically measuring meaning in life or satisfaction with life, previous studies have also found positive correlations between hedonic and eudaimonic well-being (Extremera, Ruiz-Aranda, & Pineda-Galan, 2011) as also indicated in this study. Relationships between these constructs may exist in the present sample due to retirees' stage in life. With consideration of enhancements in health and longevity among older adults, exiting the workforce may present opportunities to find fulfillment in new and meaningful ways; for example, through volunteering or becoming a grandparent. Older adults may, therefore, draw on the psychosocial resources associated with each stage to help positively adapt to older adulthood, which may further relate to how one assesses and comes to terms with their life, also relating to well-being.

Age and income as control variables were also analyzed. Age was negatively related to income, which may be an indication of length of retirement—i.e., the depletion of financial resources as a person gains more time spent in retirement. Income had a positive relationship with SWL, but no other variable. This might highlight the importance of savings and pension in achieving subjective well-being within retirement, and may further indicate that eudaimonic well-being (i.e., personal meaning, sense of purpose) and psychosocial development are not necessarily important factors with regards to finances. It is also possible that there are other factors contributing to the relationship between these variables. For example, examining current health status, socioeconomic status, or even volunteer work, may help shed light on factors that contribute to facilitating relationships between generativity, ego integrity, and well-being in older adulthood.

The Presence of Regret

Regret is arguably a universal experience, felt by anyone who has wished an outcome had been different. Regret can be attributed to a variety of factors, such as a sense of unfilled or unattainable goals or lost opportunities (Lecci, Okun, Karoly, 1994). Butler (1974) discusses the possibility of experiencing regret in relation to life review outcomes that may be prompted by transitional periods throughout the life course, such as retirement. Misconceptions surrounding older adulthood suggest that this part of life is associated with regret in consideration of time constraints, and the perceived inability to make major life adjustments. For example, previous research on older adults' experiences of regret discussed that in some cases, attempting to make adjustments would be fruitless, resulting in failure, given lack of opportunities (e.g., less time than younger adults) (Bauer, Wrosch, & Jobin, 2008; Farquhar, Wrosch, Pushkar & Li, 2013; Wrosch, Dunne, Scheier, & Schulz, 2006). However, in contrast, a study conducted by Farquhar et al., (2013) reported that older adults were, in fact, capable of overcoming unfavourable life outcomes upon being prompted to think about regrets (i.e., through any changes that may promote a life review) by becoming actively engaged with the self and the world around them; for example, through socializing. Thus, entering old age may encourage one to make evaluations on the life course through a positive lens, resulting in self-acceptance and positive well-being.

The results from the analyses on regret presented in the current study contribute to the growing body of literature on older adulthood, which outlines aging as a potentially positive experience. Most participants in the present sample indicated that they would choose the same lifestyle pattern over again, if given the chance to do it over—indicating that they were not regretful of paths chosen. These results imply that while retirees may have regrets, as most people do, they are likely to positively assess the lives they have lived and to come to terms with anything they may have wished had gone differently. Positive assessments may be a reflection of

utilizing cognitive and environmental resources as associated with developmental processes theorized by Erikson (1950).

Frequent Themes of Regret

Based on previous research, I expected that the content of regret would be most frequently related to career and education. In the present study, however, this was only partially the case. Career was the most frequently mentioned regret (38.6%), as expected, but the second-most frequently-mentioned regret was related to family. These results may at first glance be obvious given that the first regret question asks specifically about life path choices regarding career and home; however, the follow up question of “why?” or “why not?” provided an opportunity to discuss other elements of life that may be related to career (e.g., education) or family (e.g., personal constraints) similar to the second, separate, regret question which asked point blank “Any regrets?” and provided an opportunity to discuss anything that came to mind.

Some career-related regrets were attributed to the participant feeling as though they had pursued their career too aggressively, taking away from self-care or family time; or in some cases, wishing they had chosen a different career altogether. Some examples include: “I always said that my career and my kids were on par but perhaps I was too much of trying to be “superwoman”---should have stopped to smell the roses more”; “I would have chosen a completely different career path”; and “I would put more emphasis on home and social life [and] less on work.”

Family regrets were mentioned 24.6% of the time and were often mentioned within contexts of wishing to have had children or wishing one had spent more time with their children and/or loved ones, as well as within contexts relating to marriage. Some responses included: “I wish my grandkids lived closer so I could have had more influence in their lives. I feel sad that they have

missed opportunities I could have given them.” And “I was a single mom for many years and dedicated too much time and effort to my job and wished that I had been more present and engaged with my kids when they were growing up.” This type of regret being expressed second-most frequently makes sense in consideration that many responses regarding career-related regrets were also regarding time spent with family and strengthening relationships. In some cases, however, family regrets were presented in negative contexts, where regrets were expressed as a wish to not have engaged in previous paths relating to family, such as: “My first marriage was ten years of hell. I was a battered wife with no freedom to do anything - almost like living with the Taliban.” And “I stayed at home with children. I should have continued with my career.”

The remaining themes were expressed as regrets considerably less frequently than career or family themes. For example, in contrast to previous research, which suggests that most regrets are related to career and education (e.g., Roese & Summerville, 2005), regrets concerning education were third-most frequent, and only mentioned 11.4% of the time. Some participant answers included: “I would not have become pregnant in my third year of college and had to quit school. I always felt a calling to be a teacher but with incomplete education, I became a secretary.” And “Maybe, if I had more education, I might had [sic] a different outlook all along.”

Personal constraints were mentioned 8.8% of the time and often in contexts relating to a personal attribute—e.g., feeling as though a personal characteristic facilitated an unfavourable outcome. For example: “I would like to be more strong in my actions. I will not get nervous when others are trying to be rude or unkind to me.” And, “My biggest problem is I am not “me-oriented”.

Financial regrets were only mentioned 7% of the time and often in contexts related to pension or savings. For example: “I would probably have worked full-time instead of part-time once my children were old enough, in order to have more income & pension.” And, “I would have not quite [sic] my work & I would [sic] have study [sic] income to support my family more than I have now.” In Canada, the poverty threshold for people in a one-income family is \$22,133 and in a two-income family is \$31,301 (Statistics Canada, 2015). The median income for the present sample ranged between \$40,000 and \$100,000. While the lowest end of the median range is not that far off from the two-income family threshold (and most participants in this sample indicated being married), the range is still above what is considered to be the poverty line in Canada, which may be an indicator of why this type of regret was not frequently expressed. Despite the participant examples outlined above regarding finances and work, most career-related regrets were expressed within contexts relating to type of work or time spent working, not within contexts relating to the type of income received.

Social restriction-related regrets were mentioned 5.2% of the time. Some examples of this type of regret include: “The partition of India in 1947, it effected me, on my early education very much because loss of guidance [sic].” And, “As a female audit partner there were many struggles, and the glass ceiling continued to exist for the 25 years that I was a partner.” As highlighted by these two examples, this type of regret was mentioned within societal and/or political contexts, and in reference to personally struggling as a result of something perceivably beyond the participant’s control.

Finally, health-related regrets were only mentioned 4.4% of the time. This type of theme represents mental and/or physical health but was not frequent in the current sample. Although not measured in the present study, this might indicate that generally speaking, the sample of

retirees represented here are healthy older adults. Some examples included: “I would not have done as much physical labour in my youth and been more body and health conscious.” And, “I was too focused on my career. I did not look after my health, physically and mentally...”

In Canada specifically, mandatory retirement was abolished in 1986 (Gillin, MacGregor, & Klassen, 2005). This may also have had an impact on what retirees regret most and why, especially in comparison to those who have been forced to exit the workforce prior to 1986. For instance, forced retirement could have consequences on a person’s financial situation, which was seemingly not the case in the present study. Though time since retirement was not a variable collected within the current study (discussed further in limitations), it is logical to assume that the present sample retired post-1986, given that the average retirement age in Canada is 63 (Statistics Canada, 2018) and the average age of this sample is 68. Furthermore, with there being no mandatory retirement policy in place, people may be able to work until they are ready, perhaps mentally, to stop. This could be why regrets in this study were related to more general, large-scale life-factors such as career and family in comparison to personal constraints or health.

Ultimately, for older adults especially, reflecting on a lifetime of memories may perhaps bring major life experiences to the forefront. Many retirees have most likely spent a considerable amount of time in the workforce, perhaps making their career one of the most personally significant experiences on which to reflect. It is not surprising then, that being in a new chapter of life, characterized by changes in roles and detachment from work-related responsibility, elicits career-related regrets more often than other types. Family regrets may have been the second most frequently expressed regret due to retirees having changes in daily routine and work-related roles. Retirement may, therefore, also prompt reflections on personal relationships and/or the desire to nurture these relationships, not just career-related regrets, given the potentially

newfound meaning of time. Moreover, although previous studies have indicated that many regrets in older adulthood are related to education, the current sample of retirees was highly educated: 32% had received a post-secondary education, and 52.5% had received some form of graduate school training. This may be why educational-related regrets were mentioned less often than career and family regrets. Regrets related to finances, health, personal constraints, and social restrictions were not as prominent in this sample. This might be due to education level, career type, and socioeconomic status, and is worth exploring in future studies.

Regret vs. No Regret: Levels of Generativity, Ego Integrity, and Well-being

Reflecting allows a person to work through past choices and experiences. In later life especially, the reality of time and age may elicit regrets toward the life one has lead. As previously discussed, it is not having regret that is important, but how the regret is processed (Stewart & Vandewater, 1999). Not being able to come to terms with - and subsequent rumination on - paths not taken may have a psychological impact on well-being. Drawing on a psychosocial framework to highlight the process of experiencing regret, I expected that generativity, ego integrity, and both measures of well-being would show significant differences in scores for those with regrets compared to those without regrets. Interestingly, however, only ego integrity and SWL showed significant differences in mean scores between groups. Levels of generativity and MIL were not significantly different between groups.

As Erikson (1950) initially theorized, the premise of achieving ego integrity lies within reflective processes that encourage integration of all past experiences into a present sense of acceptance and wholeness. Thus, the inability to reflect and come to terms with the life one has lived may result in despair. This process mirrors Butler's (1974) life review, which also promotes reflecting on the past, when prompted to do so (e.g., by a major life event) and making

assessments which may be positive or negative in scope. The results from the present study highlight the implications of achieving ego integrity with regards to coming to terms with regret. Within the current sample, where regrets were present, scores on ego integrity were lower than when regrets were not present. This is not surprising considering the body of literature surrounding ego integrity and regret, and the empirical evidence significantly highlighting the role of ego integrity in coming to terms with one's life (e.g., Torges, 2006; Torges, et al., 2008). Aligning with past research, the data presented here may suggest that those retirees with regrets may not have made positive appraisals when prompted to reflect on chosen paths, subsequently hindering their ability to come to terms with lingering thoughts regarding paths not taken and perceivably lost opportunities.

Although ego integrity has been commonly associated with coming to terms with regret, Erikson (1986) suggested that older adults are likely to engage in reflections concerning how generativity was expressed throughout the life course. Erikson and other researchers also theorized that generativity in older adulthood was an integral component to avoiding feelings of despair (Erikson, 1997; Cheng, 2009). This was exemplified in a study conducted by Urrutia et al. (2009), which conveyed that most generative concerns in older adulthood are related to familial relationships such as being a grandparent. Other studies, as previously indicated, have also found a link between generativity and regret resolution (Hauser, 2013). Interestingly, however, in the present study, scores on generativity did not differ between those with or without regrets. This may be attributed to the type of regret most frequently expressed by retirees in this sample (i.e., career).

Regrets regarding career may be due to one feeling as though their career path is not rectifiable at this point in older adulthood. Furthermore, career-related regrets may also be most

prominent due to shifts in social roles and perhaps identity as one adapts to changes in daily living. This type of shift might draw on the type of resources included in coming to terms with past choices regarding work, integrating previous experiences into balance and self-acceptance, and feeling as though one's life has been well-lived. As such, among the current sample, ego integrity may serve as a better function in assessing life path choices and overcoming any doubts or wishes regarding the past, which makes sense given the basic premise of this construct as theorized by Erikson. Moreover, although it has been further theorized that generativity may play a role in transcending despair (Erikson et al., 1986) and overcoming regret (e.g., Hauser, 2013) in older adulthood, the purpose of this stage (e.g., nurturance, creating) may not be as relevant as ego integrity in terms of processing regret, at least not within the current sample. Previous research on Erikson's final two stages has shown that generativity is likely to predict ego integrity later in life (e.g., James & Zarrett, 2005). The results of this study may, therefore, highlight the encompassing nature of ego integrity, in terms of integrating previous stages. Given the discrepancy in both theory and empirical research, generativity and regret would be worth exploring in future studies within different samples of older adults; i.e., the present sample is predominantly White and educated—something further discussed in limitations and future direction.

Previous studies have shown that when regret is present, levels of well-being are often lower than when regret is not present (Gilovich, Medvec, & Kahneman, 1998; Lecci et al., 1994; King & Hicks, 2007). In the current study, levels of both types of well-being were expected to be significantly different between regret and no regret groups. However, in contrast to previous research, this was only the case for SWL, and not for MIL. As the present results indicate, making global assessments of an entire life's worth of experiences, as measured through SWL

(Diener et al., 1985), has more of a relationship with regret than MIL. This might be due to the processes involved in achieving each type of well-being. Life satisfaction includes making overall judgements based on one's life-path choices, whereas MIL involves striving for personal meaning and feeling fulfilled. This might indicate that making an overall assessment of life experiences, as with SWL, has more weight with regards to whether or not regret is present than personal fulfillment and meaning, similar to comparisons between generativity and ego integrity.

Finally, it is also worth mentioning that answers to open-ended questions, such as the ones presented above from the current study, do not speak to the quality or intensity of the regret mentioned. Accordingly, open-ended answers were coded simply for thematic content and no interpretation of how strongly the type of regret expressed may have been felt was made. This is mentioned in light of discrepancies between the participant indicating "yes" or "no" to choosing the same lifestyle pattern over again, and the participant following up with an answer indicating some form of regret. It is not known whether answers were given upon feeling a deep sense of regret or more casually because the participant was prompted to answer. As such, only answers of "yes" or "no" to the first regret question regarding choosing the same lifestyle pattern over again was used to place each participant into either the regret or no regret categories for respective analyses. This may be a limitation of the current study and moving forward, including more questions regarding regret in order to gauge intensity and quality may help mitigate this issue.

Predicting Well-being

Contrary to my hypothesis, when combined with other psychosocial factors, regret did not predict any type of well-being. Both generativity and ego integrity, however, were predictors of both MIL and SWL. Aligning with the sequence of Erikson's theory, ego integrity was the

dominant predictor over generativity for both MIL and SWL. As previously mentioned, this may be a result of ego integrity encompassing all previous stages, with the person successfully achieving this stage having integrated all previous experiences into a whole and cohesive sense of self (Torges, 2006). Furthermore, when considering that a large component of ego integrity embodies the process of coming to terms with one's life which relates to regret, it might be that the variance regret on its own may have contributed to well-being was incorporated by ego integrity.

Although traditionally theorized as being associated with midlife, recent generativity research has also focused on older adults (Cheng, 2009). Consistent with past research, the results in this study highlight the importance of this stage in predicting well-being among retirees. Achieving a sense of personal legacy, and feeling as though one has made an impact on other people's lives through creative expression, volunteer work, and nurturing meaningful relationships (McAdams & de St. Aubin, 1992), may improve well-being among retirees. Generativity may be an important stage in retirement due to lifestyle changes upon exit from the workforce, and a desire to stay actively engaged with life. As outlined in Table 3, Generativity had a stronger correlation with MIL than with SWL. This may be attributed to what each of these constructs represent and may shed light on the changes in variance when generativity was entered into the model with MIL as the dependent measure versus SWL as the dependent measure. Generativity accounted for a lot more of the variance for MIL than for SWL, insinuating that, and consistent with the Pearson Correlation analysis, it has the strongest relationship and predictive value for MIL. This might be due to both variables being goal-oriented and involving striving for personal meaning and active engagement with life.

Misconceptions surrounding older adulthood suggest a decline in physical and mental health. However, as previously discussed, technological advancements are facilitating longevity and increasing time spent in retirement. Opportunities to engage in life differently than in previous years while working may, therefore, be presented in retirement. That is, retirement is not simply a final chapter where work and active lifestyles end; but perhaps a time to make personal, as well as societal, connections and explore life in new and meaningful ways, ultimately contributing to well-being.

Findings in the present study align with previous research, (e.g., Torges, et al., 2008) in that ego integrity has consistently demonstrated a relationship with generativity, well-being, and the presence or absence of regret. More specifically, and similar to the relationship between generativity and MIL, ego integrity and SWL held a strong relationship within the results from the present study. Ego integrity accounted for a lot more of the variance in SWL than in MIL but still, however, held the best predictive value over and above generativity. Thus, overall, while retirement may prompt reflections toward the past, the results reported in this study suggest that the processes involved in making positive appraisals of life outcomes is important for life satisfaction and personal meaning. Retirees, therefore, are capable of positively adapting to later adulthood in ways that enhance well-being. This might be achieved through meaningful, generative practices, but more importantly, as the results indicate, through gaining a sense of order and wholeness.

Limitations and Future Directions

The sample of retirees examined in this study was predominantly White and highly educated. Further research exploring retired Canadians across various cultural and socioeconomic contexts

might reveal different regrets in regards to life path choices, and subsequently, differences in levels of generativity, ego integrity, and well-being, in comparison to the present sample.

The current study did not examine length of retirement, which has been found to affect levels of well-being (Franca, 2015). Including such a measure may benefit future research, allowing for comparisons of developmental and well-being constructs between groups based on the time since retirement and age. This would also be interesting for regret-related questions. For example, comparatively speaking, which group of retirees has more regrets, and which types are most frequently expressed? Analyzing length of retirement may shed light on retirement-related regrets. For example, for older adults who have been retired for a longer period of time, in comparison to those newly retired, length of retirement could potentially soften any retirement-related regrets.

In considering the types of regret themes most frequently expressed, culture, gender, and cohort, may also play a role. For example, the political atmosphere, which can vary from country to country, may have an impact on life path choices and subsequent feelings of regret. There may be unique struggles embedded within cultural contexts that elicit certain types of regrets, which may also change across time. For instance, women's rights have changed drastically over previous decades, with women gaining increasingly more societal acknowledgement and rights within the workforce, in comparison to previous generations having to struggle for this type of outcome. This is interesting when considering that though the present sample was predominately female, not many participants indicated social constraints as having an impact on life-path choices. Comparing this outcome to previous and future studies examining regret, and women specifically, may shed light on how societal changes shape the types of regret related to life path choices.

Moreover, including a measure that assesses the intensity of regret would also be useful for similar research as the one presented throughout this thesis. Doing so would allow for analyses on the relationship between how intense a regret is felt and factors such well-being. Additionally, the researcher's interpretation based on participants' grammar or language in their written responses may distort the actual meaning behind each participant's qualitative responses. As such, it would be beneficial to understand the intensity of how each regret is felt in order to analyze its relevancy to the person's life; i.e., if the regret is a casual, passing thought upon prompt, or a lingering, negative presence; as well as the developmental processes involved in reducing the relative effects on well-being.

Similar studies may also benefit from including more open-ended questions asking about the process of coming to terms with regrets. This type of thematic content may be useful in understanding older adult development in relation to regrets, and the cognitive or environmental factors involved in how one processes regrets and furthermore, how intensely they are felt. For example, including a coding scheme that assesses open-ended content with regards to ego integrity and generativity may also be useful for future studies examining regret. This type of coding might highlight the nature of each particular regret and how it fits into a person's sense of self.

A potential limitation of this study may be the type of measure used to examine ego integrity while also examining regret as a separate construct. The premise of ego integrity involves acceptance and integration of one's lifetime experiences. One might conclude that scoring high on ego integrity means that a person does not have regrets. Within the Ryff and Heincke (1983) scale, there are specific statements that do index regret (see Appendix B); however, as previously mentioned, participant answers to regret questions were coded for themes and no conclusions

were drawn based on the quality or intensity of regret. The point of using this type of method was to gain a sense of what comes to mind when prompted to think about life path choices or regrets. As such, only frequency analyses were conducted. Ego integrity, as measured through the ego integrity scale (Ryff & Heincke, 1983), sheds light on the process of coming to terms with one's life and incorporating a sense of self-acceptance into the present moment. While seemingly similar, there may be a differentiation between the ego integrity scale and asking about regret in an open-ended manner. For instance, while certain topics come to mind when prompted to think about regret as with open-ended questions, scores on ego integrity might possibly address the issue of quality and intensity, and would be something worth exploring in future studies.

Finally, many participants recruited for this study were based out of community centers. This may be problematic in terms of generalizing the present study's findings across all Canadian retirees. Participation within a community center may indicate that a person is active in some type of capacity (i.e., physically or socially), which may contribute to positive outcomes, as with the current study. However, this issue also draws on the difficulty in reaching isolated adults who do not have a relationship within their community. This type of problem would likely arise in any study examining older adults, or retirement, in consideration that isolated adults are less likely to have knowledge of, or participate in, a study such as the one presented in this paper.

Conclusion

The research in this thesis presents an opportunity to help inform the field of adult aging and development concerning the contributions to well-being in retirement. Currently, despite the on-going research on retirement processes and experiences, the literature within a Canadian demographic is lacking. With continuing increases in the older adult population, government

policies and older adult care facilities will have to adjust to not only physically accommodate senior citizens, but must also be equipped with the knowledge and resources that aid in psychological health. The current study identifies some of these resources.

Retirement often marks a transition into the final years of one's life, potentially illuminating time constraints and perhaps the inevitability of death. The analyses performed throughout this study address the experience of regret and its relationship with adult development and well-being. Ruminating on paths not taken leaves room for negative feelings toward the self, potentially affecting well-being and quality of life. With consideration that retirement is an inherent part of older adulthood in Canada, it is imperative to highlight the psychosocial resources, such as generativity and ego integrity, that might serve in retirement as functions of well-being among older Canadian retirees.

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Table 1.

Summary of Participant Demographics

	Frequency	Mean (SD)	Median (range)
Age	--	68.5 (6.5)	(55-86)
Gender			--
Female	69.4%	--	--
Male	30.6%	--	
Race			
White	87.9%	--	--
Black	.8%	--	--
Asian/South Asian	10.5%		
Unspecified	.8%	--	--
Marital Status		--	--
Married	61.5%	--	--
Separated	.8%	--	--
Divorced	13.1%	--	--
Widowed	13.9%		
Single/Living with Partner/ Other	11.5%		
Annual Income	--	--	<\$40,000-\$300,000
Education			
No Post-Secondary	13.9%	--	--
University/College	32%	--	--
Graduate	52.5%	--	--
Other	1.6%	--	--

Note. $N = 122$ for Age, Gender, Race, Education; 1 participant was unresponsive to marital question, $N = 121$; 5 participants were unresponsive to income question, $N = 117$

Table 2. Chart of Codes for Regret Themes

Theme	Example	Number of times theme was applied (total=114)	%
1. Personal Constraint	“I would change my approach to life.”	10	8.8%
2. Social Restriction	“Nowadays there are more opportunities for women...”	6	5.2%
3. Career	“I think I could have been more aggressive about developing my career”	44	38.6%
4. Education	“I would have finished my degree quicker”	13	11.4%
5. Health	“I was too focused on my career. I did not look after my health, physically and mentally.”	5	4.4%
6. Family	“I did not get married or have children. I particularly regret not having a family.”	28	24.6%
7. Finance	“ I would probably have worked full-time instead of part-time once my children were old enough, in order to have more income & pension	8	7%

Note: $N = 64$

Table 3.

Means and Standard Deviations, and reliability for Each Scale Measure

Variable	<i>M</i>	<i>SD</i>	α
Ego Integrity	4.71	.71	.82
Generativity	4.46	.70	.88
Meaning in Life	3.28	.45	.91
Satisfaction with Life	5.63	1.14	.93

Note: $N = 122$; Maximum scores for ego integrity= 6; maximum score for generativity= 6; maximum score for meaning in life= 4; maximum score for satisfaction with life= 7.

Table 4.

Correlations between Generativity, Ego Integrity, Life Satisfaction, and Meaning in Life

<u>Variable</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
1. Generativity	--					
2. Ego Integrity	.40**	--				
3. Satisfaction with Life	.20*	.58**	--			
4. Meaning in Life	.45**	.33**	.53**	--		
5. Age	.06	-.10	-.10	.04	--	
6. Income	.11	.19	.29**	.02	-.24**	--

Note. $N = 122$; ** $p < .01$; * $p < .05$

Table 5.

Summary of Hierarchical Regression Analysis for Predicting SWL

Variable	<i>B</i>	SE <i>B</i>	β	<i>R</i> ²	ΔR^2	ΔF
Step 1				.01		0.65
Age	-0.06	.07	-0.08			
Step 2				.03	.02	2.26
Age	-0.04	.07	-0.06			
Regret	-1.49	.99	-0.15			
Step 3				.08	.05	5.27*
Age	-0.05	.07	-0.07			
Regret	-1.51	.97	-0.16			
Generativity	0.09	.04	0.23*			
Step 4				.35	.27	39.54***
Age	-0.02	.06	-0.03			
Regret	0.22	.87	0.02			
Generativity	0.28	.03	0.00			
Ego Integrity	0.27	.04	0.60***			

Note: *N* = 122; *** $p < .001$, ** $p < .01$, * $p < .05$

Table 6.

Summary of Hierarchical Regression Analysis for Predictors of MIL

Variable	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²	ΔR^2	ΔF
Step 1				.00		.29
Age	0.06	.10	0.06			
Step 2				.01	.01	1.09
Age	0.07	.10	0.07			
Regret	-1.45	1.39	-0.11			
Step 3				.22	.21	24.42***
Age	0.05	.09	0.05			
Regret	-1.54	1.23	-0.12			
Generativity	0.24	.05	0.46***			
Step 4				.26	.04	4.41*
Age	0.07	.09	0.07			
Regret	-0.64	1.29	-0.05			
Generativity	0.19	.05	0.37***			
Ego Integrity	0.13	.06	0.22*			

Note: *N* = 122; *** *p* < .001, ***p* < .01, * *p* < .05

Appendix A. Erikson's (1950) 8 Stages of Psychosocial Development

Age	1	2	3	4	5	6	7	8
0-1	Trust vs. Mistrust Virtue: Hope							
2-3		Autonomy vs. Shame Virtue: Will						
4-5			Initiative vs. Guilt Virtue: Purpose					
6-puberty				Industry vs. Inferiority Virtue: Competence				
Teen- (young adulthood)					Identity vs. Role Confusion Virtue: Fidelity			
Young Adult						Intimacy vs. Isolation Virtue: Love		
Middle Age							Generativity vs. Stagnation Virtue: Care	
Old Age								Ego Integrity vs. Despair Virtue: Wisdom

Appendix B: Ego Integrity Scale (Ryff & Heincke, 1983)

(-) = reverse coded

1. If I had to do it all over again, there are very few things about my life that I would change.
2. I feel generally contented with what I have accomplished in my life.
3. I wish my life were just beginning so I could avoid many of the mistakes I made earlier in my life. (-)
4. In general, I would say I have few regrets about my past life.
5. All in all, I am comfortable with the choices I made regarding my life's work.
6. I still feel angry about certain of my childhood experiences. (-)
7. If I had had just a couple more lucky breaks, my life would have turned out much differently. (-)
8. My life has been fulfilling, and I am not frightened by the thought of death.
9. If I could turn back the clock, there are many things I would do differently. (-)
10. Reading old diaries and letters usually brings more pain than pleasure. (-)
11. It doesn't bother me to think about goals I haven't reached and probably never will.
12. One of my greatest disappointments is that I have not been able to do more traveling. (-)
13. I often wish I had been born during a different period of history. (-)
14. There are many people whose life I would prefer to my own. (-)
15. When I consider the ups and downs of my past life, they somehow fit together in a meaningful way.
16. There are some disappointments in life I will never be able to accept. (-)

Appendix C: Loyola Generativity Scale (McAdams & de St. Aubin, 1992)

(-) = reverse coded

1. I have made and created things that have had an impact on other people.
2. I try to pass along the knowledge I have gained through my experiences.
3. I do not feel that other people need me. (-)
4. I think I would like the work of a teacher.
5. I feel as though I have made a difference to many people.
6. I have important skills that I try to teach others.
7. I do not volunteer to work for charity.
8. I try to be creative in most things that I do.
9. I think I will be remembered for a long time after I die.
10. Others would say that I have made unique contributions to society.
11. In general, my actions do not have a positive effect on other people. (-)
12. Other people say that I am a very productive person.
13. People come to me for advice.
14. I feel that I have done nothing that will survive after I die. (-)
15. I feel as though I have done nothing of worth to contribute to others.
16. I believe that society cannot be responsible for providing food and shelter for all homeless people. (-)
17. I have a responsibility to improve the neighborhood in which I live.
18. I have made many commitments to many different kinds of people, groups, and activities in my life.
19. I feel as though my contributions will exist after I die. (-)

Appendix D: Satisfaction with Life Scale (Diener, Emmons, Larson & Griffin, 1985)

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I've gotten the important things that I want in life.

Appendix E: Meaning in Life Scale (Krause, 2004)

1. I have a system of values and beliefs that guide my daily activities.
2. In terms of my life, I see a reason for my being here.
3. In my life, I have clear goals and aims.
4. I feel good when I think about what I have done in the past.
5. I have a philosophy of life that helps me understand who I am.
6. I feel like I am living fully.
7. I have a sense of direction and purpose in life.
8. I find it satisfying to think about what I have accomplished in life.
9. I have really come to terms with what is important in my life.
10. I feel like I have found a really significant meaning in my life.
11. I have a good sense of what I am trying to accomplish in the rest of my life.
12. I am able to make sense of the unpleasant things that have happened in the past.
13. I am at peace with my past.
14. I have discovered a satisfying life purpose.