UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

MENTAL HEALTH, POSITIVE EXPERIENCES OF AGING, AND APPEARANCE AMONG ADULTS AGES 50–80

A THESIS

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

MASTER OF SCIENCE

By

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Norman, Oklahoma
2022

MENTAL HEALTH, POSITIVE EXPERIENCES OF AGING, AND APPEARANCE AMONG ADULTS AGES 50–80

A THESIS APPROVED FOR THE
DEPARTMENT OF HEALTH AND EXERCISE SCIENCE

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Abstract

Introduction: Poor mental health is a growing issue among U.S. older adults. Experiences and attitudes surrounding appearance may shape how positive older adults' experiences of aging are, which in turn may affect their emotional health. Questions remain about whether and how much appearance-related issues influence the aging experiences and mental health of older adults.

Methods: This study investigated relationships between three concepts related to appearance (relative appearance self-evaluation, exposure to ageist messages related to appearance, and endorsement of investing effort in looking younger), positive experiences of aging, and mental health among a nationally representative sample of U.S. adults ages 50-80 (N=2,023, 52% female, 71% White). Cross-sectional data derive from the December 2019 National Poll on Healthy Aging, which included a special module exploring experiences of aging, ageism, and health.

Results: More positive experiences of aging were associated with lower odds of depressive symptoms (OR=.731, p<.001) and poor/fair self-rated mental health (OR=.695, p<.001). Comparisons of these relationships by gender indicated that the odds of depressive symptoms were significantly lower among men than it was for women with comparable positive experiences of aging scores (p=.024); no other gender or age group differences were documented. All appearance-related concepts examined were significantly associated with positive experiences of aging. Those who evaluated themselves as looking younger than others their age and those who endorsed investing effort to look younger reported more positive experiences of aging (b=.941 and .505, respectively, both p-values <.001). Adults who reported more frequent exposure to ageist messages reported less positive experiences of aging (b= -147, p=.028). There were no gender or age group differences in these relationships. Bivariate Pearson correlations found that those who evaluated themselves as looking younger tended to endorse investing effort to look younger(r=.205, p <.001). Those who endorsed investing more time in looking younger also reported more frequent exposure to ageist media related to appearance (r=.124, p < .001).

Conclusion: This study adds to the literature on the roles of appearance and positive experiences of aging in shaping older adult mental health outcomes. Appearance has significance for older adults and may indirectly affect mental health via its influence on positive experiences of aging. Multilevel interventions, that aim to improve mental health outcomes among older adults, would benefit from addressing appearance related issues and positive experiences of aging. This will help to guide change in policies, practices, and social norms.

Key words: positive experiences of aging, appearance, mental health, depressive symptoms, older adults, ageism.

Chapter 1: Introduction

Introduction

Aging is an inevitable and natural progression of life. The idea of "age," however, is a social construct (Giles & Reid, 2005). Much like race and gender identity, age and its meaning are different depending on one's characteristics, experiences, and circumstances. What constitutes "old" or "young" is based on relative perceptions, societal and cultural attitudes and norms, and stereotypes. Those perceptions, attitudes, and stereotypes, whether implicit (unconscious) or explicit (conscious and accessible), can affect people's lives and health though multiple pathways such as cognitive and memory function, responses to stress, walking speed, and aging satisfaction (Levy et al., 2014; Levy, Slade, & Kasl, 2002; Kleinspehn-Ammerlahn et al., 2008). The direction and magnitude of those effects are dependent on factors such as where individuals fit on the chronological age scale, where they fit on the perceived age scale (as determined by self and assessed by others), to what extent they internalize and express aging-related beliefs & stereotypes, and how others interact and treat older adults.

The number of studies examining the effects of both social and biological aging on health has begun to grow in recent decades, corresponding with the rapid growth of the older adult population. The population of people aged 60 and over has grown 36%, from 50.7 million to 68.7 million, between the years of 2006 and 2016 in the U.S. alone (Administration of Aging [AoA], 2018). Research suggests that this upward trend will continue dramatically both in the US and worldwide. There are projected to be 2.1 billion people aged 60 and older worldwide by the year 2050 (World Health Organization [WHO], 2021). In response, interest in how ageism, age stereotypes, age perceptions, and age discrimination might affect the health of older adults has grown amongst researchers, healthcare practitioners, policy makers, and the public. One

understudied area is ways in which these types of issues shape older adults' experiences of aging and subsequent mental health, including the potential impact of aging-related appearance issues.

Mental health among older adults in the United States is often a topic that is glossed over and not taken seriously, despite older adults having some of the highest incidence and death rates from poor mental health outcomes (Federal Interagency Forum on Aging-related Statistics, 2016; Weyerer et al., 2013). Older adults are at increased risk for experiencing mental health disorders like depression and anxiety (Rodda et al., 2011). They are also more likely to be misdiagnosed and undertreated (Centers for Disease Control and Prevention [CDC], 2021). This may be due to the fact that health professionals mistake symptoms of poor mental health as a natural part of life and a reaction to the many of changes that occur in the lives of older adults (CDC, 2021). For the purposes of the current study, we focus on common, subclinical mental health outcomes such as depressive symptoms and fair/poor self-rated mental health.

The relationship between positive experiences of aging and mental health has not been the subject of extensive research and warrants more investigation. Positive experiences of aging, which are the focus of the current study, are defined as older adults' perceptions and report that their own experiences with aging and as older adults have been positive. This concept is meant to capture the degree of which older adults have positive experiences. This is different from looking at positive attitudes, beliefs, and perceptions. The concept is meant to capture the feelings associated to with some unique experiences of life as an older adult.

Although there is a growing literature surrounding ageism and its potential ramifications for health and wellbeing, there is less research focused on positive aspects of aging (Hu et al., 2020; Levy & Macdonald, 2016).

While I was unable to identify any research (or existing survey scales) capturing the nuances of this specific construct, literature has shown relationship between mental health and concepts related to positive experiences of aging. Related concepts include aging satisfaction, sense of purpose, positive self-perceptions of aging, and intergenerational and interpersonal respect (Campos & Kim, 2017; Levy, Slade, & Kasl, 2002; Kleinspehn-Ammerlahn et al., 2008; Windsor et al., 2015). Wurm and Benyamini, for example, found that people having a more optimistic self-perception of aging were more likely to have fewer depressive symptoms (2014). Another study conducted by Law and colleagues (2010) observed that people with more negative attitudes towards their aging were more likely to believe that depression was a natural and normal part of getting older. This belief may hinder older adults from getting help and treatment for depressive symptoms (Law et al., 2010). If there is a relationship between positive experiences of aging and mental health, this may provide a key target for incorporation into health promotion initiatives for older adults.

Positive aging, an extension of positive psychology, has been described as a coping strategy whereby older adults remain positive, happy, and have greater sense of well-being despite the presence of age-related decline (Hill, 2011). Positive aging among older adult populations is associated with better cognitive performance and diminished onset of diseases, improved mental health, and improved physical performance (Hill, 2011). Age satisfaction is defined by one's own evaluation of their satisfaction with their own aging as a process (Kleinspehn-Ammerlahn et al., 2008). Research suggests that throughout one's life people are relatively satisfied with their aging experience; this is held to be true throughout life with the exception of late in life when one is in proximity to death (Kleinspehn-Ammerlahn et al., 2008). Age satisfaction has also been linked to good health and living longer after controlling for other

predictors of mortality (Levy, Slade, & Kasl, 2002). Positive self-perceptions of aging, defined as when one internalizes positive age stereotypes, beliefs, and attitudes towards aging (Levy, Slade, & Kasl, 2002) is similar to other perception-based terminology like positive views of aging and often used interchangeably. Positive self-perceptions of aging are associated with superior cognitive and emotional well-being, better health outcomes, healthier behaviors, and reduced mortality (Diehl, et al., 2014). Focusing on positive experiences of aging may allow society to better respond to the various changes associated with aging.

There are also unique forms of positive treatment that older adults may receive that can be viewed as positive including discounts, low or reduced rent on housing, pensions, healthcare, tax exemptions, applications to older adult housing and communities (Levy & Macdonald, 2016). Positive experiences of aging characteristics have also been discussed in similar research about positive internalized perceptions (Levy et al. 2006) which is described as one's own perceptions of their own aging. Some characterizations of positive perceptions of aging for older adults are that they feel calm, cheerful, helpful, intelligent, kind, and stable. Older adults can be seen as more reliable and attentive workers, less likely to commit crimes, more giving to communities (volunteering), and have higher social status in terms of wealth and power in government and higher positions in companies (Levy & Macdonald, 2016).

Visible appearance is one of the most common means by which age is determined and assumed by others. Further, there is some evidence that suggests that appearance can be tied to how older adults can view themselves and their aging process (Chonody & Teater, 2015). As one ages, there can be a sense of anxiety about being socially labeled as "old" and appearing old physically (Cooney et al., 2021). This is particularly true in most western societies that hold appearance as a status symbol such that looking younger is associated with more societal benefits

than looking older (Chonody & Teater, 2015). Entering into older adulthood is often seen as a loss of social status and wellbeing (Bronk, 2017; Chonody & Teater, 2015; Nelson, 2002). These values reinforce age stereotypes and can foster fear and ageist ideas (Nelson, 2002). Due to negative stereotypes and the fear of being attached to those age characteristics, older adults will often try and distance themselves from looking old and identifying with the age group by not interacting with those they deem old and even making efforts to look more youthful (e.g., using anti-aging products and procedures; Calasanti, 2005; Chonody & Teater, 2015; Fishman et al., 2010). Evidence has pointed to appearance having an impact on how one views and experiences the aging process. Therefore, it is plausible that older adults who do not perceived themselves as aligned with dominant beauty standards associated with youthfulness may have more negative experiences of aging entering the older adult life stage. In this study, appearance will be primarily discussed in terms of three appearance-related concepts: relative appearance self-evaluation, which refers to self-evaluation of one's appearance as older, same, or younger compared to others their same age; exposure to ageist messages and cues related to appearance in the media; and endorsement to invest efforts in looking younger. These concepts have not been studied extensively in the older adult population in general, and in their relationships to positive experiences of aging and mental health. The term 'appearance" will be used in this manuscript to refer to and convey ideas related to the three concepts.

Purpose Statement

The goal of this research is to fill a gap in the literature by providing insight into how positive experiences of aging may relate to the mental health of older adults and investigating the ways in which appearance may influence positive experiences of aging. This will be accomplished through investigation of the relationships between mental health (depressive

symptoms and poor/fair self-rated mental health), positive experiences of aging, and several appearance related concepts (relative appearance self-evaluation, exposure to ageist messages related to appearance, and endorsement to invest efforts in looking younger among a nationally representative sample of 2,048 United States adults ages 50–80 years old. Similarities and differences in these relationships by gender (women and men) and age (two age categories of 50–64 and 65–80 years old) will also be investigated. The study will entail secondary data analysis of cross-sectional data from the December 2019 National Poll on Healthy Aging, which included a special module examining older adults' perceptions and experiences of aging and ageism. Study findings will inform future intervention efforts to improve older adult resilience and quality of life.

Research Questions

The following research questions are explored in this study. The conceptual model, shown in figure 1, illustrates how these research questions are integrated.

RQ1: Are positive experiences of aging associated with mental health outcomes for adults ages 50–80 years old?

H_1 Older adults with more positive experiences of aging will have a lower probability of poor mental health, as indicated by the two outcome measures: poor/fair self-rated mental health; and report of any depressive symptoms.

RQ2: Is there a relationship between appearance–related concepts and positive experiences of aging among adults 50–80 years old?

H_1 Older adults who evaluated themselves as appearing older than others their chronological age will have less positive experiences of aging.

H_2 Older adults who reported more frequent exposure to ageist messages about the appearance of older adults will have less positive experiences of aging.

H_3 Older adults who endorsed investing effort in trying to look younger will have more positive experiences of aging.

RQ3. What are the relationships between the three appearance-related concepts examined in the current study?

H_1 These appearance-related concepts are hypothesized to be related to each other. This research question is exploratory due to the absence of existing research examining these concepts; therefore, the strength and direction of these relationships is not anticipated.

RQ4. Do the relationships above vary by gender or age group?

H_1 Relationships between mental health, positive experiences of aging, and concepts related to appearance will be stronger among women than among men.

H_2 Relationships between mental health, positive experiences of aging, and concepts related to appearance will be stronger among those aged 50–64 than among those aged 65–80.

Significance of the Study

The results of the study will help to address gaps in literature. It will provide insight on how mental health may be affected by positive experiences of aging. It will also explore how positive experiences of aging may be influenced by appearance-related concepts. Results of this research may help to understand pathways of mental health among older adults. Researchers have suggested the need for more studies investigating positive experiences of aging that complement existing work on ageism and negative consequences linked to aging processes and

old age. The current research can facilitate a more comprehensive perspective on aging and can inform the development and implementation of programs and policies aimed at building resilience among older adults by enhancing positive experiences of aging and dismantling negative and hurtful ageism, with a specific focus on appearance-related issues.

Delimitations

The confines of the study:

1. Adults aged 50-80 years old
2. Data collected from a total of 2,048 participants (2,023 in analytic sample)
3. Participants self-identified as either Women or men
4. Community dwelling individuals only
5. 71% of participants were Non-Hispanic White
6. 52% were Women
7. Survey completed online through Ipsos
8. Sample was weighted to be nationally representative

Limitations

Limitations for this study include:

1. Study involves secondary analysis of data that were not collected by the author.
2. The age range for the sample was 50–80 years old, so those older than 80 years were not included. Study may not be representative of all older adults.
3. Survey was conducted online, so individuals unable to complete the survey online may have been missed, though free internet and laptops were provided by Ipsos, as needed.

4. All data were self-reported. Therefore, there is potential for recall & social desirability biases.
5. Data is cross-sectional, so cause-and-effect relationships cannot be determined.

Operational Definitions

Poor Mental Health: Refers to any depressive symptoms, as measured by the two–item Patient Health Questionnaire (PHQ-2) and self-rated mental health as either fair or poor.

Positive Experiences of Aging: Older adults' perceptions and report that their own experiences with aging and as older adults have been positive.

Appearance-related concepts (3): relative appearance self-evaluation, exposure to ageist messages related to appearance, and endorsement to invest efforts in looking younger.

Relative Appearance Self-Evaluation: older adults self-evaluation of their physical appearance as either older, same, or younger than other older adults their age.

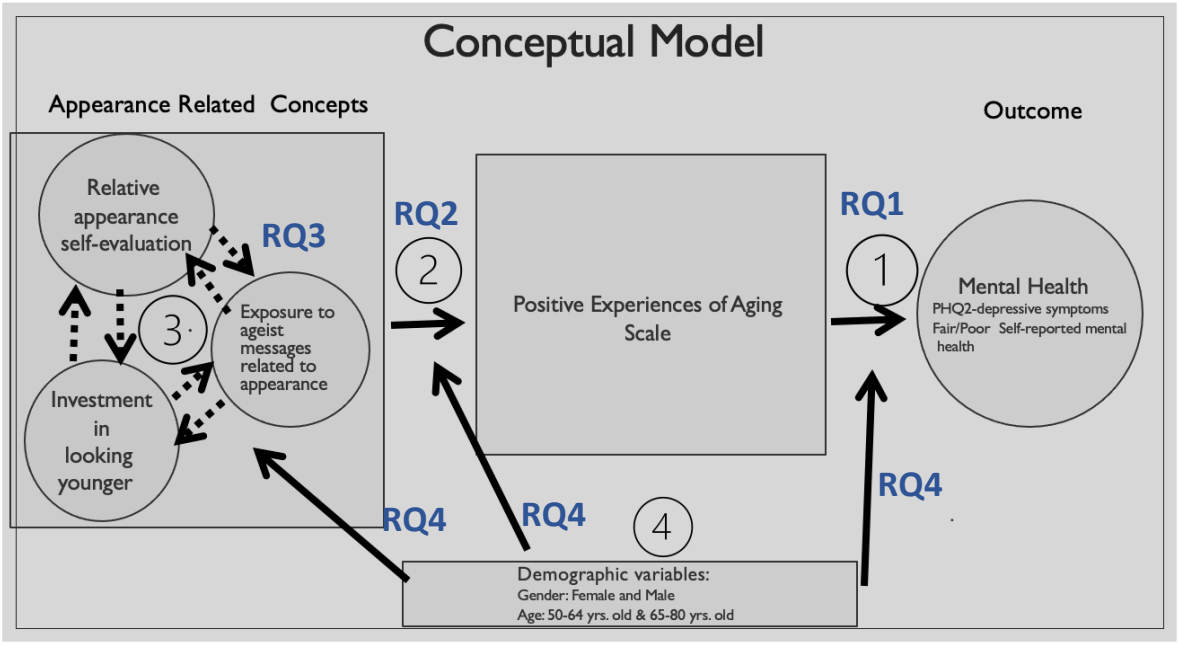
Exposure to Ageist Messages Related to Appearance: The frequency of seeing, hearing, and reading about ageist messages in their everyday life about the appearance of older adults as unattractive or undesirable.

Endorsement to Invest Efforts in Looking Younger: Older adults' agreement that they invest effort and time to look younger.

Aging: The biological and social changes experienced by people associated with increasing chronological age.

Older adults: Adults ages 50 to 80 years old.

Figure 1. Conceptual Model



Chapter 2: Literature Review

Introduction

This section examines existing research on the relationships between mental health, positive experiences of aging, and appearance-related concepts among older adults. It provides context for the current study and informed our hypotheses. Research on differences by gender and age strata will also be explored. While the primary outcomes of interest in this study is the mental health of older adults, this paper focus heavily on positive experiences of aging and the ways in which these may be influenced by appearance-related concepts. These are understudied potential factors that may influence mental health warranting more research.

Mental Health Among Older Adults

Good mental health among older adults is essential to their health and functioning. However, literature on mental health among older adults in the United States is not extensive (Bryant et al., 2012). The majority of the existing literature focuses on functional mental health in the form of cognitive disorders (e.g., dementia and Alzheimer's), while studies focusing on mood disorders such as depression and anxiety are lacking (Byers et al., 2010). In the United States, prevalence of any mental illness among older adults ages 50 and over is 14.1% (National Institute of Health, 2019). Of those adults aged 65 and over, 4.8% live with serious mental illnesses that significantly impair function (Substance Abuse and Mental Health Services Administration [SAMHSA], 2017). The most common mental health disorder among older adults is depression followed by anxiety disorders. Although depression among older adults seems to increase with age and be common, depression is not a normal part of aging (CDC, 2008). Depressive mood affects up to 20% of older adults in the U.S. (Barry et al., 2008). A meta-analysis found that sub threshold-depressive symptoms, referring to those who failed to

meet diagnostic criteria, were two to three times more prevalent than major depression among people ages over 55 (Rodda et al., 2011). Collectively, these findings may suggest something about the aging experience that puts this population at increased risk for developing depressive symptoms and other mood disorders.

Poor mental health increases the risk of suicide, developing severe mental illness, disability, and lower cognitive and physical function (CDC, 2014). Those with poor mental health have substantially higher rates of chronic disease and other comorbidities associated with premature death, disability, and poor physical and cognitive function (SAMHSA, 2017; WHO, 2017). This may be because those with poor mental health may not engage in healthy lifestyle habits that mitigate the development of chronic health conditions (SAMHSA, 2017). There are numerous factors linked to increased risk of poor mental health amongst older adults including loneliness, lack of social support, social isolation, poor physical health, widowhood, low educational attainment, and impaired functional status (CDC, 2008; 2014; WHO, 2017). Being women and being divorced, separated, or never married were also characteristics that have been associated with higher likelihood of developing mood disorders (Rodda et al., 2011).

Researchers have also identified several buffering factors that aid to mitigate negative mental health outcomes and are associated with better mental health outcomes. Examples of these are positive aging (Diehl, et al., 2014; Hill, 2011; Levy, 2002), gender norms like traits associated with masculinity (Clarke & Korotchenko, 2016), older age (Karel et al. 2012), social support (CDC, 2008), and being in good physical health (CDC, 2008; Magweene et al., 2017). From an intervention standpoint, research has found that strategies surrounding identifying with younger age groups can help to maintain more positive mental wellbeing and lower the risk for developing negative mental health outcomes like depression (Westerhof & Barrett, 2005). For

populations ages 60–95, higher life satisfaction, better self-esteem, and more purpose in life have been associated with lower odds of depressive symptoms, adding to the idea of these factors being protective against depressive symptoms (Rodda et al., 2011).

Gender differences in mental health disorders and symptoms exist among older adults. Men are less likely to report poor mental health than women (Rodda et al., 2011) and are also less likely to seek help for mental health issues (Barry et al., 2018; Hedegaard et al., 2018). Research has suggested that mood disorders like depression are higher in women compared to men in participants older than 55 (Beyer et al., 2010). Men are more likely to hide their problems and are more reluctant to seek treatment and one reason is because of internalized masculinity. Some researchers posit that having more internalized masculinity does not protect men from depression but instead masks depressive symptoms as aggression and dominance (Smith et al., 2018). Researchers have also identified gender differences in how these disorders present themselves, which may be due to social conditioning such as masculine culture (Smith et al., 2018). Mental health measures designed to capture more internalized disorders like depression and anxiety seem to better capture women's symptoms and not those of men. This can help to explain why more women are successfully identified and diagnosed (Smith et al., 2018). However, despite the lower report of men suffering from mental health disorders, men have higher rates of death by suicide than women, with men ages 85 and older having one of the highest rates of suicide death in the U.S. (CDC, 2014). Even though men are more likely to die from suicide, women are more likely to attempt suicide (CDC 2014; CDC 2016).

Research has found age groups differences in mental health outcomes when comparing older adults aged 50–64, commonly called young old, and older adults aged 65–85, commonly called mid old (Byers et al., 2010). Trends for depression and mood disorders among adults

follow a U-shaped curve pattern. After a peak in early adulthood, the prevalence of depression drops and continues to decrease until slowly rising again through young older adulthood, reaching another peak around the age of retirement 65–70 years old (Beyers et al 2010; Clarke et al., 201; Federal Interagency Forum on Aging-related Statistics, 2016). Those aged 50–64 years old are also more likely to seek and receive mental health treatment as opposed to those over 65 years old (Beyers et al., 2010). Having depression in later life (70 and older) has been shown to be associated with worse health outcomes and prognoses than when experienced by younger age groups (Weyerer et al., 2013). These trends may reflect the social and physical changes associated with each of the life stages of older adulthood. Due to the fact that younger older adults are just entering into older adulthood, the impacts of aging may have more of a negative influence on their mental health. The negative influence reaching a peak at around 70 years old and then decrease, perhaps due to acceptance of and coping with older age after being in that age category for longer (Clarke et al., 2011).

Positive Experiences of Aging

Positive experiences of aging refers to older adults' perceptions and report that their own experiences with aging and as older adults have been positive. Positive experiences of aging have not been formally measured within the older adult population or in the United States. Although there is a lack of measures capturing this specific construct, studies have used scales developed to measure negative and positive attitudes, beliefs, and expectations about aging. While related to positive experiences of aging, these scales differ in that they focus on perceptions, attitudes, beliefs rather than experiences and feeling associated with those experiences.

One of the more common measures used among older adult populations is the Attitude Towards Own Aging (ATOA) subscale of the Philadelphia Geriatrics Center Morale Scale. This subscale assesses self-perceptions of aging with a 5–item instrument (Lawton 1975; Liang & Bollen, 1983). The Ageing Perception Questionnaire developed by Baker and colleagues (2007) assesses self-perceptions of aging among middle aged and older aged adults. It has 7 subscales focusing on some key topics such as, awareness of ageing beliefs about the impact of ageing that has negative and positive sub-dimensions, beliefs about how much control a person has over aspects of ageing again both negative and positive, and negative emotional responses to ageing, including anxiety, depression, and worry (Sexton et al., 2013). Another measure is The Attitudes of Aging Questionnaire developed by Laidlaw and colleagues (2007), which assesses the experiences and attitudes of older adults in relation to aging, using three subscales on psychosocial loss, physical change, and psychological growth. The scale was designed for adults ages 40–60 (Laidlaw et al., 2007). Although all these scales were developed for older adults, they were largely tested and validated in studies using younger samples (Faudzi et al., 2019). Many measures used to investigate relationships and concepts related to this study were also developed over 20 years ago and have not been adapted to reflect the contemporary attitudes and practices in western society today (Shaw & Langman, 2017).

Older adults' positive experiences can be shaped a variety of life circumstances, beliefs, and perceptions that ultimately can lead a person to believe their experience with aging is positive. Research has found that having positive age expectations, like not believing loneliness is something that happens when growing old, has been associated with better physical and mental health, quality of life, lack of depression, and increased physical activity (Andrews et al., 2017; Levy. 2009; Menkin, Robles et al., 2017). These expectations can influence perceptions

and ideas on one's own aging experience. Having a strong sense of purpose has been identified as an integral part of maintain health and wellbeing over one's life span (Windsor et al., 2015). Researchers have indicated that older adults who scored higher on sense of purpose reported better self-rated health, fewer depressive symptoms, and better well-being (Koenig et al., 2014; Windsor et al., 2015). An individual's sense of purpose can be influenced and affected by their physical health, attitudes towards aging, gender, and age. Men report higher levels of purpose than women (Hedberg et al., 2010; Pinquart, 2002). One's sense of purpose can interact and affect their experiences, like existing social and family networks and relationship quality (Pinquart, 2002). Although purpose is an important part of maintaining a positive experience of aging, many older adults struggle to maintain purpose in life as they age. Sense of purpose often declining with age (Bronk, 2017; Irving et al, 2017). This can be due to the fact that age related losses in social roles, relations, and physical and cognitive function may cause older adults to be unable to engage in activities and task they may have previously held that made their lives more purposeful (Bronk, 2017). Having respect for older adults in society can encourage people to value and seek advice and wisdom from older adults. This social function can be emotionally positive for older adults and provide some form of purpose (Campos & Kim, 2017).

Like race and gender stereotypes, an individual can form assumptions and stereotypes about older adults at an early age (Flamion et al., 2020). However, unlike race and gender stereotypes, age stereotypes become self-relevant several decades after assumptions are formed (Giles et al., 1993; Levy & Banaji, 2002). Stereotypes of a group can then become internalized self-stereotypes. Levy (2009) describes this development of an individual's self-perceptions in Stereotype Embodiment Theory. This theory states that throughout one's life, individuals are exposed to age stereotypes, which they internalize over time. These stereotypes then shape how

people evaluate their own aging expectations and beliefs (Levy, 2009). When an individual reaches old age, stereotypes become self-relevant and can be incorporated as their own perceptions of themselves and their lived experiences (Levy, 2009).

Another concept called stereotype threat explains how the emotional toll taken from internalizing stereotypes can prime individuals to engage in patterns of harmful behaviors that can confirm those negative stereotypes (Wheeler & Petty, 2001). An example of this concept is seen in a study conducted by Lamont and colleagues (2015) in which individuals were subjected to ageist stereotypes through both general statements (i.e., loosely implying that age affects performance with no specifics) and specific statement (i.e., stating that older adults are more/less capable at performing a task). When performing the task, older adults formed expectations about themselves and their capability of performance. Simply put, this caused a self-fulfilling prophecy. The fears of poor performance, and thereby confirming negative stereotypes, turned out to be closely associated with actual poor performance. Having a more positive social identity, which means feeling as though older adults are socially respected and valued, acts as a buffering system against ageist stereotype threats (Rydell et al., 2009).

Studies suggest that people with positive age stereotypes are 44% more likely to recover from disability and perform more activities of daily life than those with more negative age stereotypes (Levy, Slade, Murphy, & Gill, 2012). A meta-analysis conducted by Lamont and colleagues (2015) found that having positive age stereotypes was associated with more favorable health behaviors like taking medications and exercising in older adults (Lamont et al., 2015). Moreover, research has shown that older individuals with more positive self-perceptions of aging on average lived 7.5 years longer than those who had negative self-perceptions. This effect was still seen after controlling for covariates such as age, gender, socioeconomic status, loneliness,

and functional health (Levy, Slade, Kunkel et al., 2002). A 2013 study found that when older individuals were primed with positive self-stereotypes about older adults being wiser and smarter in comparison to younger individuals, they had a better advantage in performing a cognitive task boosting their performance in positive stereotyped task (i.e., solving crossword puzzles; Smith et al., 2013). In contrast, a group of older adults who were primed with negative self-stereotypes, such as older individuals have difficulty with memory, were worse off in performing the task even though older adults had previously believed the task was better suited for them (Smith et al., 2013). Just priming older adults with negative or positive stereotypes can enhance or diminish the performance of tasks. Some positive aging stereotypes of aging for older adults are that they are calm, cheerful, helpful, intelligent, wise, kind, stable, polite, make good financial decisions, have a healthier diet, settle arguments, and understand others' viewpoints (Levy & Macdonald, 2016; Smith et al., 2013). Focusing on positive associations with aging has the potential to enhance positive experiences of aging and quality of life for older adults.

There are other factors that may contribute to one's development of positive experiences of aging such as one's own unique life experiences (Diehl et al., 2014). The influence of one's cultural upbringing can also influence and shape perceptions. For example, living in a society that is more individualistic, like the United States, or more collectivists can shape age expectations affecting behavior and development in a multidimensional way (North & Folk, 2015). A meta-analysis conducted by North & Folk found that individualism predicted having more positive perceptions of aging because the cultural upbringing allows for the acknowledgement of older adult's contributions and experiences, while in more collectivistic cultures, older adults are seen as a burden due to the lack of continued contribution they may have to the collective (North & Folk, 2015). Similarly, immigrant perceptions on aging can be

formed from their heritage and generational upbringing (Menkin, Guan et al., 2017). Differences in age expectations and racial and ethnic identities were found to be central to the understanding of perceptions of aging and depression. The study found that after adjusting for covariates, there was a link between age expectations and depression severity for Latino individuals but not for African American participants, such that Latinos with lower age expectations (i.e., expecting physical and mental decline with age) had greater levels of depression (Menkin, Guan et al., 2017).

There is evidence that positive internalized perceptions of aging can influence heath in numerous ways, with positive perceptions influencing better cognitive function, gait, cardiovascular response to stress, engagement in healthy practices, and extend life expectancy (Levy et al., 2000; Levy et al., 2002; Robertson & Kenny, 2016; Sargent-Cox et al., 2012). An individual's self-perception of their age is a psychological aspect of health that has been shown to be associated with physical and mental health (Levy & Macdonald, 2016; Levy, 2003; Sun et al., 2017).

There appear to be a gender difference in developing and having positive experiences of aging among older adults, though findings are mixed. A meta-analysis conducted by Lamont and colleagues (2015) found evidence that older women held more negative age stereotypes. The authors suggested that this may be because older women are a part of two identity groups that historically and socially have been subjected to negative stereotypes– being both women and older adults (Lamont et al. 2015). A study focused on Canadian older men found that men 65-89 held more ageist and sexist views about others than women, but not more negative views about themselves. They reported that negative stereotypes on age and sex existed, but they themselves were not victims of such negative stereotypes. This aligns with other masculinity theories stating

that internalized masculinity and lack of negative gender stereotypes might buffer self-perceptions and bolster more positive views of aging in relation to being a man (Clarke & Korotchenko, 2016).

Previous research suggests there may be differences in positive experiences of aging by age group (Chopik & Giasson, 2017). There may be differences in the degree to which someone internalizes stereotypes, with a decrease in the degree to which they internalize negative stereotypes seen among older groups of older adults as they age (Sun et al., 2017). Hes and colleagues (2009) suggested that as individuals age and became aware of both negative and/or positive stereotypes surrounding aging they formed when they were younger, those stereotypes and feelings become self-relevant. Younger older adults will have more negative internal aged-based stereotypes threats, as opposed to older adults because of newly experience of relevance of past and social perceptions. As people age and enter different social categories like becoming an older adult, they will adopt more positive attitudes towards older adults because they are now in the group (Chopik & Giasson, 2017). With aging comes more experiences with older adults, both over the life course and in their current lives. With those experiences, people will encounter information that violates the negative assumptions about aging and older adults they developed in earlier life. This reflection and self–relevance aides in revising opinions and attitudes (Chopik & Giasson, 2017; Levy, 2009). This suggest that, as people age and get older, people will have more positive attitudes and their experiences of aging will be more positive. In relations to age groups within the older adult population, it is plausible to assume that younger older adults ages 50–64 will have difference in their experiences of aging than older adults aged 65–80 years old such that younger older adults will have fewer positive experiences of aging.

Appearance Among Older Adults

While biological aging is inevitable and a part of the lived experience, social experiences of aging have more to do with the social construction of age, which is closely linked to observed physical signs of aging. The process of aging is accompanied by various changes, ranging from changes in physical appearance to cognitive and social changes. Transformations in appearance are often a sign of aging and can be categorized by a distinct set of physical features. These features may include changes in shape of the body and skin elasticity, hair loss and change of color, vocal changes, and weight changes (Jankowski et al., 2016). Those physical signs of aging can be expressed as the appearance of aging. This idea is supported by Gilles and Reid (2005), who state that individuals have a different definition of what old age is depending on how old the observer is. Characteristics and expectations of aging change as a person ages and experiences life (Giles & Reid, 2005). Since age is a fluid concept that can change over time, it is important to investigate how perceptions play a role in influencing experiences, judgments, and behaviors associated with aging.

Culturally, these natural changes of appearance hold weight in a society that places value and importance on looking youthful and not displaying these signs of aging (Becker et al., 2013). Older adults who display these characteristics of aging are often subjected to social pressure to conform to what society deems to be youthful (Becker et al., 2013; Chonody & Teater, 2015; Jankowski et al., 2016). Despite there not being a definitive rule or age group indicating when one enters older adulthood, these physical aging characteristics are often used as markers for that age demographic. These pressure to conform to a standard can impact how an individual sees him/herself and the aging process (Jankowski et al., 2016). Such pressures can have serious impacts on individuals in both psychological and physical ways such as the development of

depression, low self-esteem, and disordered eating. The pressures to conform to this more youthful standard of appearance can be difficult to adapt to and resist as one ages. The social and cultural implications of not conforming allows individuals to be subjected to injustices associated with aging known as ageism (Jankowski et al., 2016). Society can aid in shaping our age appearance expectations through multidimensional pathways such as exposure to negative images of aging and older adults as well as through cultural values that draw attention to negative aspects of aging especially surrounding the biological and physical changes (Löckenhoff, 2009).

Age Stratification Theory, developed by Matilda White Riley in the 1970s, is used to understand the role that age plays throughout the course of life. It describes how one moves between responsibilities and identities that are both brought on by individual choice and assigned to us by cultural rules that govern how one should act and act towards others throughout our lives (Riley, 1971). As one ages and changes, different social roles are assigned. With these changing roles, there are expectations and stereotypes for how one would act. People are vulnerable to the social expectations associated with that age category. Older adults are subjected to a myriad of societal stereotypes that can have negative effects on one's life. Ageism is a socially condoned form of discrimination experienced by older adults because they are considered old (Butler, 1969). Ageism operates closely with stereotypes about one's appearance because it is often what is used to identify an individual as old. This inequality based on age means that when one is seen as “old,” they lose power and status in a society that privileges youthfulness (Chonody & Teater, 2015; Nelson, 2002). As a result, individuals will engage in strategies to avoid looking old (Calasanti et al., 2018).

Appearance is linked to how one perceives health. “Old” is often associated with disease and declines in health (Calasanti, 2005; Ojala et al., 2016). Anti–aging media advertisements and entertainment often will show youthfulness as a form of health and older adults as physically, cognitively, and sexually inadequate (Chonody & Teater, 2015). People are encouraged to try to minimize the appearance of aging with commercial products like anti–aging creams, hair dye for graying hair, cosmetic procedures, and workout programs targeted towards aging bodies (Calasanti et al., 2018). Some positive aging ideas have had a focus on how to make an aging body look as youthful, healthy, and productive as possible; this outlook governs how aging bodies are viewed and perceived by society and can be harmful (Asquith, 2009; Dillaway & Byrnes, 2009). Studies suggest that we can internalize age stereotypes through being exposed to messages about aging through media and our everyday life and culture (Levy, 2009).

Many of the ageist and negative connotations associated with aging are linked to the fact that bodies visibly age. Ageism is grounded in stereotypes associated with old age like weakness and incompetency (Ojala et al., 2016). Such stereotypes, and the effects of them, are felt differently between men and women. Studies suggest that aging stereotypes become more internalized for women as compared to men (Levy et al., 2013). There seems to be a double standard when it comes to gender and expectations related to appearance and aging. It is less acceptable for women to show signs of aging than men (Lamont et al., 2015, Fishman et al., 2010; Sontag, 1997). Women in the United States experience more social pressure to look younger and mitigate the effects of aging (Lamont et al., 2015). Since value is placed on women's appearance, aging can negatively impact that value. Women are thought to lose their sexual and physical attractiveness as they age (Ojala et al., 2016). This highlights the intersectionality with being a woman and older adult. Men may more likely be concerned about

musculature and physical capability while women focus on beauty (Calasanti et al., 2018). Men as they age have been shown to lose their power or status due to life changes like retirement or loss of body performance resulting in a loss of masculinity, but if they keep their body performance, they may not experience agism very much or at all (Ojala et al., 2016).

Whether one's perception of their appearance (conforming to each stereotype are looking different i.e., younger) has been linked to their view of aging has been studied (Jankowski et al., 2016). Feeling older than one's chronological age in older adulthood has been associated with less positive outcomes (Diehl, et al., 2014). Identifying with a younger age group can be a way that older adults use to help remain more positive about their own aging process. A study found that older adults were more likely to internally disassociate from their own age group when negative age stereotypes become aware (Weiss & Lang, 2012). One way to do that is to identify themselves as looking younger, this is particularly true in cultures that treat and view old age in a negative light (Westerhof & Barrett, 2005). Having a younger age identity was found to have a greater association with having a better life satisfaction and more positive effect on life.

Summary

Aging presents a series of meaningful changes that alter an individual's life. With more people joining the older adult age group, studying their experiences of aging are important and can inform future research and interventions seeking to promote healthy aging. Understanding the uniqueness of aging and how aging is handled in society is important for understanding pathways of health and preventable health risks for older adults. While there are numerous studies investigating the negative effects of age perceptions and ageism on health (Calasanti, 2005; Clarke & Korotchenko, 2016; Cooney et al., 2021; Hu et al., 2020; Levy & Macdonald, 2016), more research is needed on positive aspects of aging to get a fuller picture of how aging

experiences influence older adult health. Given the evidence suggesting that appearance affects how one views aging and themselves, how appearance–related issues may influence positive experiences of aging and subsequent mental health is one line of inquiry warranting additional research.. This study seeks to provide insight on these relationships.

Chapter 3: Methods

Study Purpose

The purpose of this study was to investigate relationships between mental health, positive experiences of aging, and several concepts related to appearance among older U.S. adults. The study sought to explore the proposed research questions through secondary analysis of cross-sectional data collected in the December 2019 National Poll on Healthy Aging (NPHA) from a nationally representative sample of U.S. adults ages 50–80. While some preliminary findings relevant to the current study were published in a report (Allen et al., 2020), many of the research questions addressed in the current study have not been examined in this or other datasets. In this chapter, I outline the methodology for the study.

Research Design

This study involved secondary data collected from the NPHA. The dataset was based on responses to a cross–sectional quantitative survey. Benefits to conducting a secondary data analysis include it being cost effective and time saving. Using secondary data allows researchers to have a larger and better–quality dataset than they may have been able to collect themselves. Having a larger dataset can help with greater validity, generalizability of possible findings, and increased statistical power (Johnston, 2017). Furthermore, the target population of the current study is older adults, who are a vulnerable population that has been harder to conduct research with during the recent COVID–19 pandemic. As with other data collection methods, there are some limitations to using secondary datasets, one being that the researcher was not involved in the primary data collection. As a result, more nuanced information, and decision–making process may not be readily available for the researcher (Johnston, 2017).

Currently, most of the individual survey items relevant to the proposed study, which were novel items created by my co–authors specifically for the NPHA Ageism module, have not been published on, and the December 2019 NPHA data is not public. The current secondary analysis study provides an opportunity to contribute both information on responses to novel survey items within a nationally representative sample as well as answer the current study's specific research questions.

Data Source

The current study was conducted in collaboration with the University of Michigan National Poll on Healthy Aging (NPHA). The NPHA is directed by the University of Michigan Institute for Healthcare Policy and Innovation. It was funded by AARP and Michigan Medicine. The NPHA is a recurring, nationally representative household survey. This survey seeks to make sense of the outlooks of adults 50–80 years old on a range of issues such as health, healthcare, and health policy. The NPHA has been taking place for at least five years and includes topics such as telehealth, emergency planning, brain health loneliness, sexual health, and sleep. Cross–sectional polls are administered two or three times annually. Each poll contains up to three modules for thorough evaluation of timely issues relevant to this population. Findings of each of the polls are shared with the public in the form of various health communication media and reports; for more information and to see materials relevant to the current study, visit the NPHA website (www.healthyagingpoll.org). The current study is based on data collected in the December 2019 NPHA, which included a module on Ageism that explored older adults' attitudes, beliefs, and experiences related to aging and age–based discrimination.

Sample

The data for the current study were collected from a nationally representative sample of 2,048 adult participants ages 50-80 years old in the U.S. who completed the December 2019 NPHA. The response rate was 77%. The sample was selected using the online Ipsos KnowledgePanel®. This probability–based panel is the largest nationally representative online survey panel in the U.S. (Allen et al., 2020). The KnowledgePanel recruits community–dwelling individuals using address–based sampling. Because of the vast number of participants, they were capable of targeted oversampling, producing valid representation for hard–to–reach groups like older adults ages 65 and older, racial, and ethnic minority groups, people living in rural areas, and individuals without internet. The sample being used was stratified evenly by age groups 50–64 years old and 65–80 years old. Sample weights were calculated to be reflective of the geographic and demographic characteristics from U.S. Census Bureau and factored in a host of characteristics like age, sex, race and ethnicity, primary language, education, household income, homeownership, geographic region, metropolitan/nonmetropolitan residents, and differential nonresponse (Allen et al., 2020). More information on the sampling, weighting, and data collection of the KnowledgePanel is detailed elsewhere (www.ipsos.com/en-us/solutions/public-affairs/knowledgepanel).

A total of 2,023 participants were included in the analytic sample for the current study. These participants all answered: 1) all positive experiences of aging items; 2) at least one mental health outcome measure item; and 3) at least one of the appearance-related items.

Data Collection

The NPHA was completed online. Ipsos provided participants with internet and computers as needed. The data collection period took place during wave 6 of the poll, in December 2019. Wave 6 of the poll included three survey modules. Participants on average took 15 minutes to complete each survey. The poll consisted of 70 total questions with the current study focusing on questions in section 1 Health & Household and section 4 Ageism. The Health and Household section consisted of questions 1–23 with questions 1,2, and 8 used in the current analysis. The Ageism section consisted of questions 53-56 with questions 53 and 55 being used for the current analysis. All questions were close ended. The NPHA is IRB exempt because all data were collected anonymously, and participant informed consent was collected.

Measures

Key variables used in the current study are provided in detail in Appendix B.

Poor Mental Health

Mental health was assessed with two dichotomous measures: depressive symptoms and poor/fair self-rated mental health.

Depressive symptoms. Depressive symptoms were assessed using the Patient Health Questionnaire-2 (PHQ-2) screener developed by Spitzer and colleagues (1999). This measure seeks to assess the presence of depressed mood and anhedonia over the past two weeks. The PHQ-2 is a validated measure that has been extensively tested and has demonstrated adequate reliability, construct and criterion validity, and sensitivity (Kroenke et al., 2003; Lowe et al. 2004; Lowe et al., 2005). A study by Li and colleagues (2007) found the PHQ-2 to be a useful

tool for screening to detect major depression in adults ages 65 and older. Li and colleagues measured PHQ-2 sensitivity and specificity in comparison to clinical diagnosis using the DSM-IV Youden Index, an index used to capture performance of dichotomous diagnostics test. The study found that sensitivity in detecting depression among older adults was 100% and specificity at 77%, indicating that the PHQ-2 can distinguish between those who are depressed and those who are not (Li et al., 2007). The PHQ-2 question stem is “Over the last two weeks, how often have you been bothered by any of the following problems?” The two items are “little interest or pleasure in doing things” and “feeling down, depressed, or hopeless.” For each item, the response options are “not at all,” “several days,” “more than half the days,” and “nearly every day” (Spitzer et al., 1999). For the purposes of the current study, we will classify those reporting any depressive symptoms in the past two weeks (e.g., responses of several or more days to either or both items) as demonstrating depressive symptoms. Individuals responding “not at all” to both items serve as the reference group of those reporting no depressive symptoms.

Fair/poor self-rated mental health. Self-rated mental health was assessed with a single question item, which is commonly employed in population survey research: “In general, would you say your mental health is: Excellent, Very Good, Good, Fair, or Poor?” (Ahmad et al., 2014). Individuals who reported "fair” or “poor” self-related mental health will be categorized as having fair/poor self-rated mental health. Those reporting “good” or better serve as the reference group. Self-rated mental health can be a powerful tool to identify how individuals are subjectively assessing their mental health. McAlpine and colleagues (2018) found survey self-rated mental health items to be a valid measure for mental illness. Of those who were surveyed, 95% of participants who did have depressive symptoms rated their mental health as poor (McAlpine et al., 2018), indicating that most people accurately assess their mental health status. While self-

rated mental health has been identified as a valid indicator of mental illness, it may be better at capturing overall mental health status (Levinson & Kaplan, 2014). A study conducted by Magwene and colleagues (2017) with U.S. older adults found that self-rated mental health was rated higher than their self-rated health. This is different from what other literature presents as the relationship between self-rated mental health and self-rated overall health. This can be for a variety of reasons. One being the nature and stigma attached to mental health and the stigma attached to aging can alter responses of older adults. Fear of being perceived as having poor mental health while also being older can cause altered responses (Magwene et al., 2017). This bias warrants more study to assess the extent to which it effects responses.

Positive Experiences of Aging Scale

There is currently no formal measure reported in the literature that captures this construct. Moreover, there is limited research on scales and measures designed to capture similar constructs among populations 50 years old and older. The current study used a set of questions created by the developers of the NPHA Ageism module (i.e., Dr. Allen and the NPHA staff) to create a novel positive experience of aging scale.

Strategies parallel to those implemented in the creation of the Everyday Ageism Scale (Allen et al., 2022) were used in developing and evaluating the psychometric properties of the Positive Experiences of Aging Scale used in the current study. Scale development is not the focus of this study. In brief, a systematic process was used to develop the items and subsequent scale. Individual items were developed and evaluated for face and content validity by a panel of experts. The items had to meet the NPHA requirements of brevity (i.e., limited number of items), language suitable for a diverse audience of U.S. adults ages 50–80, and development in a relatively short timeframe. The items were pilot tested in October 2019 with 100 adults ages 50–

80 and then used for collecting data from a nationally representative sample of 2,048 older adults as part of the December 2019 NPHA. Maximum Likelihood extraction with oblimin rotation and Kaiser Normalization exploratory factor analysis was conducted to assess the structure of the scale, which demonstrated a single factor structure explaining 52.% of the variance. The scale is made up of the following 5 items:

◦As I get older, my life is better than I thought it would be.

◦My feelings about aging have gotten more positive as I've gotten older.

◦I have a strong sense of purpose.

◦I feel more comfortable being around myself as I've gotten older.

◦People seek my guidance because of my wisdom or experience.

Response options for the first four items were a four–point Likert scale ranging from "strongly agree" to "strongly disagree." Response options for the fifth item were "Often, Sometimes, Rarely, or Never." Scores were created by summing responses to the five items, such that higher scores demonstrated more positive experiences of aging. The range of potential scores was 0–15, and the scale had a Cronbach alpha of .763. More detail is available in Appendix A.

Appearance Related Concepts

Three appearance-related concepts were explored. *Relative Appearance Self-Evaluation* was captured with a single item asking participants: "How would you compare how you look to other people your age?" Response options were younger, same, and older. Items were scored such that those answering with younger had a higher score (2), same having a middle score (1),

and older having a lower score (0), such that scoring a higher score on this measure indicated rating oneself as looking younger. *Exposure to Ageist Messages Related to Appearance* captured frequency of exposure to ageist appearance messages in social and environmental cues. This concept was measured with one item: "I hear, see, and/or read things suggesting that older adults an aging are unattractive or undesirable." Response options were: often (3), sometimes (2), rarely (1), and never (0). A higher score indicated more frequent exposure. *Endorsement to Invest Efforts in Looking Younger* was captured in one item: "I invest time or effort to look younger," with response options of "strongly agree (3), agree (2), disagree (1), and strongly disagree (0). Items in this measure were coded such that having higher scores indicated stronger endorsement of investment effort in looking younger. More detail of items shown in Appendix B.

Sociodemographic characteristics

Sociodemographic characteristics of the study included: age and age group (ages 50–64 and 65–80), in years; sex (men and women); race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic/Latino, other/Multicultural); married/living with partner (yes or no); education (high school diploma or less, some college, or bachelor's degree or higher); employment status (yes or no): metropolitan area (yes or no); and annual household income (21 income ranges starting at less than $5,000 and increasing in graduated increments to $250,000+) and income group (at or above $60,000 and below $60,000). There were no missing sociodemographic data.

Data Analysis

To address the research questions proposed in this study, a series of statistical analyses were conducted using SPSS version 28 (IBM Corp. Armonk, NY) and post stratification survey weights provided by Ipsos, as appropriate. All statistical tests were two–tailed, using $p<.05$ as the

threshold for significance. We conducted exploratory analyses of all variable distributions and bivariate correlations.

To explore research question #1, we conducted a series of multivariable logistic regression analyses in which we regressed the two mental health outcome variables (dependent variables), in separate models, on positive experiences of aging (independent variable), before and after adjusting for sociodemographic characteristics.

To explore research question #2, we conducted a series of ordinary least squares linear regression models in which we regressed positive experiences of aging (dependent variable) on all three appearance-related concepts (independent variables) modeled separately, before and after adjusting for sociodemographic characteristics. We elected to evaluate these relationships in separate models, rather than simultaneously, in order to assess the distinct relationships between each appearance-related concept and positive experiences of aging. This strategy was selected out of recognition that the appearance-related concepts were correlated (r=.041-.205) and warrant different intervention strategies.

For exploratory research question #3, we examined the strength and direction of relationships between the three appearance-related concepts in two ways. First, we examined bivariate Pearson correlations. Next, we examined pairwise relationships between the three appearance related concepts using one way ANOVA (relative appearance self-evaluation and exposure to ageist messages related to appearance; relative appearance self-evaluation and endorsement of investing effort in looking younger) and linear regression (endorsement of investing effort in looking younger and exposure to ageist messages related to appearance).

To explore research question #4, we first examined age group and gender differences in the variables of interest using independent sample *t*-and chi-squared tests. We then repeated the analyses described above with age-stratified models. Gender differences in stratified models were assessed using independent sample *z*-tests of parameter differences (Wuensch, 2019). To do this, we calculated the difference in model slopes divided by the standard error (SE) of the difference between the two slopes, i.e., ($b_{\text{women}} - b_{\text{men}}$)/square root ($SE^2_{\text{ages 50-64}} - + SE^2_{\text{ages 65-80}}$). These steps were then replicated when stratifying by Age group.

Chapter 4: Results

The purpose of this study was to investigate the relationship between mental health (depressive symptoms and self-rated mental health), positive experiences of aging, and several concepts related to appearance among U.S. older adults.

Key Study Variables

Table 1. Key Study Variables

Variables	No.	Coded	Weighted % or Mean (SD)	Meaning
Positive experiences of aging	2023	0-15	9.24 (2.61)	Higher scores indicted more positive experiences of aging
Depressive symptoms	2010	0=None	67.8%	Higher scores indicated more depressive symptoms
		1=Some	32.2%	
Fair/poor self-rated mental health	2017	0=Good/Better	92.9%	Higher scores indicated worst self-rated mental health
		1=Fair/Poor	71.%	
Relative appearance self-evaluation	2019	0=Older	6.4%	Higher scores indicate rating as younger
		1=Same	34.4%	
		2=Younger	59.1%	

Exposure to ageist messages related to appearance	2022	0=Never	22.4%	Higher scores indicate more frequent exposure to ageist messages
		1=Rarely	40.0%	
		2=Sometimes	31.6%	
		3=Often	6.1%	
Endorsement to invest efforts in looking younger	2018	0=St. disagree	14.7%	Higher scores indicate more endorsement to invest efforts in looking younger
		1=Disagree	50.2%	
		2=Agree	30.1%	
		3=St. agree	4.9%	

Sample Characteristics

Table 2 reports the sociodemographic characteristics of the study sample. The total number of participants in the study was 2,023 older adults. All characteristic percentages were calculated using post stratification weights. The mean age among the population was 64.28 (8.06) years. Within the sample, 39.5% of participants were between the ages of 65–80 years old (*N*=999) and 60.5% were between the ages of 50–64 years old (*N*=1023). The sample was 52.4% (*N*=1042) women and 47.6% (*N*=980) men. The racial and ethnic make-up of the sample was mostly Non-Hispanic White at 71.1%, with other racial and ethnic group percentages as follows: Non-Hispanic Black 10.7%, Hispanic/Latino 11.4%, and Other/Multicultural 6.7%. A total of 33.4% of the sample was married or living with a partner. Education make-up of the group was

39.8% had a high school diploma or less, 26.7% had some college, and 33.5% had a bachelor's degree or higher. A little over half of the sample was employed (51.2%), and the majority of the sample lived in a metropolitan area (84.9%). The median annual household income range of the participant population was $60–74,999, with 58.1% reporting an income at or above $60,000.

Table 2. Participant sociodemographic characteristics Total (*N*=2023)

Demographics	No.	Weighted % or Mean (SD)
Age, in years		64.28 (8.06)
Age group: 65–80	999	39.5%
Age group: 50–64	1023	60.5%
Gender		
Women	1042	52.4%
Men	980	47.6%
Race/ethnicity		
Non-Hispanic White	1537	71.1%
Non-Hispanic Black	190	10.7%
Hispanic/Latino	177	11.4%
Other/Multiracial	118	6.7%
Married/living with partner		
No	631	33.4%
Yes	1391	66.6%
Education		
High school diploma or less	687	39.8%
Some college	598	26.7%
Bachelor's degree or higher	737	33.5%
Employed		
No	1058	48.8%
Yes	964	51.2%

Metro area		
No	314	15.1%
Yes	1708	84.9%
Income		
Annual household income range, median		$60–74,999
Income at or above $60,000	1267	58.1%
Income below $60,000	755	41.9%

RQ1: Are positive experiences of aging associated with mental health outcomes for older adults ages 50–80 years old?

As indicated in Table 3, more positive experiences of aging were associated with lower odds of reporting depressive symptoms in both unadjusted (Model 1: *OR*=.723 (.692, .755), *p* <.001) and adjusted models (Model 2: *OR*=.731 (.699, .765), *p*<.001). Models indicated that there were also lower odds of having depressive symptoms with increasing age (*OR*=.572 (.450, .728) *p* <.001), amongst those who were married or partnered as an opposed to those who were not (*OR*=.738 (.590, .923), *p*=.008), and for those who had an annual income of over $60,000 as opposed to those who earned below $60,000 (*OR*=.672 (.528, .855), *p*<.001). Gender, race/ethnicity, education, employment, and whether or not someone lived in a metropolitan area were unrelated to odds of reporting depressive symptoms in these models.

Table 4 indicates that more positive experiences of aging were also associated with lower odds of reporting fair/poor self-rated mental health in both unadjusted (Model 1: *OR*=.680 (.638, .725), *p* <.001) and adjusted models (Model 2: *OR*=.695 (.649, .745) *p* <.001). Lower odds of poor self-rated mental health were also associated with increasing age (*OR*=.433 (.279, .673), *p*<.001), being married or partnered (*OR*=.592 (.398, .879), *p*=.009), living in a metropolitan area

(*OR*=423 (.270, .662), *p*<.001), and having an annual household income over $60,000 (*OR*=.529 (.337, .830) *p*=.006). Gender, race/ethnicity, education, and employment status were unrelated to odds of fair/poor self-rated health in these models.

In summary, the results provide consistent evidence in support the hypothesis (RQ1 H_1) that higher scores on the positive experiences of aging scale, reflecting more positive experiences of aging, were significantly associated with lower odds of poor mental health. This finding was demonstrated for both indicators of poor mental health examined in the current study: depressive symptoms and fair/poor self-rated mental health.

Table 3. Relationships Between Positive Experiences of Aging and Depressive Symptoms (*N*=2022)

	Model 1	**Model 2**
	Unadjusted	**Adjusted**
Variables	**Odds Ratio [95% CI]**	**Odds Ratio [95% CI]**
Positive experiences of aging	.723 [.692, .755] ***	.731 [.699, .765] ***
Age 65-80 (ref=50–64)		.572 [.450, .728] ***
Women (ref=men)		1.152 [.937, 1.416]
Race/Ethnicity (ref=White)		
Non-Hispanic Black		.883 [.626, 1.247]
Hispanic/Latino		1.027 [.740, 1.426]
Other/Multiracial		.810 [.525, 1.249]

Married/living with partner		.738 [.590, .923] **
Education (ref= High school or less)		
Some college		1.115 [.862, 1.442]
Bachelors or more		1.130 [.865, 1.476]
Employed		.925 [.730, 1.172]
Metro area		.908 [.682, 1.208]
Household income above $60K		.672 [.528, .855] ***
Model X^2	261.494, p<.001	48.122, p<.001

Table 4. Relationships between Positive Experiences of Aging and Fair/poor Self Rated Mental Health (*N*=2022)

Variables	**Model 1 Unadjusted Odds ratio [95% CI]**	**Model 2 Adjusted Odds Ratio [95% CI]**
Positive experiences of aging	.680 [.638, .725] ***	.695 [.649, .745] ***
Age (ref= 50–64)		.433 [.279, .673] ***
Gender (ref= men)		.840 [.574, 1.230]

Race (Ref=White)		
Non-Hispanic Black		1.225 [.657, 2.283]
Hispanic/Latino		.909 [.492, 1.679]
Other/Multiracial		1.882 [.984, 3.599]
Married/living with partner		.592 [.398, .879] **
Education (ref=High school or less)		
Some college		1.135 [.724, 1.779]
Bachelors		.832 [.492, 1.407]
Employed		.673 [.441, 1.026]
Metro area		.423 [.270,.662] ***
Income greater $60K		.529 [.337, .830] ***
Model X^2	150.686, p<.001	61.581, p<.001

***Odds Ratio is significant at the p<.001 (2–tailed).

**Odds Ratio is significant at the p<.01 (2–tailed).

*Odds Ratio is significant at the p<.05 (2–tailed).

RQ2: Is there a relationship between appearance-related concepts and positive experiences of aging among adults aged 50–80 years old?

Table 5 indicates that relative appearance self-evaluation was associated with positive experiences of aging (*b*=.941, *p* <.001), such that self-evaluation as rating oneself younger was associated with more positive experiences of aging when compared to those who evaluated themselves as appearing the same or older. Increasing age (*b*=.398, *p*=.002), being Non-Hispanic Black (*b*=.984, *p* <.001), being married or living with a partner (*b*=.428, *p* <.001), having more education (*b*=.157, *p*=.030), being employed (*b*=.296, *p*=.021), and higher household income (*b*=.533, *p* <.001) were also associated with more positive experiences of aging in these models. This is consistent with the hypothesis (RQ2 H_1) that those who evaluated themselves as appearing older would have lower scores on positive experiences of aging.

Table 5. Relationships Between Relative Appearance Self-Evaluation and Positive Experience of Aging (*N*=2019)

	b	**SE**	***p*–value**
Variables			
Relative appearance self-evaluation	.941	.092	**<.001*****
Age (ref=50–64)	.398	.129	**.002****
Gender (ref=men)	.159	.113	.158
Race (ref=White)			
Non-Hispanic Black	.984	.183	**<.001*****
Hispanic/Latino	.317	.180	.078

Other/Multiracial	.037	.225	.870
Married/living with partner	.428	.125	**<.001*** **
Education (ref=High school or less)	.157	.072	**.030***
Employed	.296	.129	**.021***
Metro Area	-.165	.158	.296
Income greater $60K	.533	.132	**<.001*** **
Constant	6.277	.304	<.001
Model *F*, *p*	20.660, *p*<.001		

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2– tailed).

Table 6 indicates that exposure to ageist messages related to appearance was negatively associated with positive experiences of aging (*b*=-.147, *p*=.028), such that more frequent exposure to ageist media was associated with less positive experiences of aging. Increasing age (*b*=.505, *p* <.001), being women (*b*=.278, *p*=.016), Non-Hispanic Black (*b*=1.004, *p* <.001), Hispanic (*b*=.368, .046), marital status (*b*=.400, *p*=.002), education (*b*=.241, *p* <.001) employment status (*b*=.410, *p*=.002), and income (*b*=.607, *p* <.001) were all associated with more positive experiences of aging in these models. This is consistent with the RQ2 H_2 that older adults who reported more frequent exposure to ageist messages about the appearance of older adults would have less positive experiences of aging.

Table 6. Relationships Between Positive Experience of Aging and Exposure to Ageist Messages

Related to Appearance (*N*=2022)

	b	**SE**	***p*–value**
Variables			
Exposure to ageist messages related to appearance	-.147	.067	**.028***
Age (ref=50–64)	.505	.131	**<.001****
Gender (ref=men)	.278	.115	**.016***
Race (ref=White)			
Non-Hispanic Black	1.004	.189	**<.001****
Hispanic/Latino	.368	.184	**.046***
Other/Multiracial	.097	.231	.674
Married/living with partner	.400	.128	**.002****
Education (ref=High school or less)	.241	.074	**.001****
Employed	.410	.131	**.002****
Metro area	-.058	.162	.722
Income greater $60K	.607	.135	**<.001****
Constant	7.408	.306	<.001

Model *F*, *p*	10.979 , *p*<.001

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2– tailed).

Table 7 indicates that endorsement to invest efforts in looking younger was associated with positive experiences of aging (*b*=.505, *p* <.001), such that those who more strongly endorsed investing time in looking younger had more positive experiences of aging. Increasing age (*b*=.470, *p* <.001), Non-Hispanic Black (*b*=1.010, *p* <.001), Hispanic (*b*=.359, *p*=.050), being married or living with a partner (*b*=.399, p=.002), more education (*b*=.206, *p*=.005), being employed (*b*=.375, *p*=.004), and higher household income (*b*=.576, *p* <.001) were also associated with more positive experiences of aging. This is consistent with RQ2 H_3 that older adults who endorsed investing effort to look younger will have more positive experiences of aging.

Table 7. Relationships Between Positive Experience of Aging and Endorsement to Invest Efforts in Looking Younger (*N*=2018)

	b	**SE**	***p*–value**
Variables			
Endorsement to invest efforts in looking younger	.505	.076	**<.001*** **
Age (ref=50–64)	.470	.130	**<.001*** **
Gender (ref=men)	.091	.117	.435
Race (ref=White)			

Non-Hispanic Black	1.010	.186	**<.001*** **
Hispanic/Latino	.359	.183	**.050***
Other/Multiracial	.050	.227	.828
Married/living with partner	.399	.126	**.002****
Education (ref=High school or less)	.206	.073	**.005****
Employed	.375	.130	**.004****
Metro area	–.055	.159	.732
Income greater $60K	.576	.133	**<.001*** **
Constant	6.820	.299	<.001
Model *F*, *p*	14.849, *p*<.001		

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2-tailed).

In summary all appearance-related concepts were associated with positive experiences of aging such that evaluating yourself as looking younger, experiencing less frequent exposure to ageist messages related to appearance, and stronger endorsement to invest efforts in looking younger were all associated with reporting more positive experiences of aging.

RQ3. What are the relationships between the three appearance-related concepts examined in the current study?

As shown in table 8, some but not all of the three appearance-related concepts were correlated with one another. A significant bivariate Pearson correlation was identified between relative appearance self-evaluation and endorsement to invest efforts in looking younger (r=.205, p <.001), such that those who evaluated themselves as looking younger tended to endorse investing effort to look younger. A significant Pearson correlation was identified between endorsement to invest efforts in looking younger and exposure to ageist messages related to appearance (r=.124, p < .001), such that those who endorsed investing more time in looking younger also generally reported more frequent exposure to ageist media related to appearance. Relative appearance self-evaluation and ageist messages were unrelated. Not included in the table, the ANOVA test found significant differences in endorsement of investing effort in looking younger based on relative appearance self-evaluation (F =30.721, p<.001). There were no significant relationships found between relative appearance self-evaluation and exposure to ageist messages related to appearance (F =1.797, p= .146). The regression analysis indicated there was a significant association between the endorsement of investing effort in looking younger and exposure to ageist messages related to appearance (b=.102, p <.001, Model F 26.62, p<.001), such that older adults who endorsed investing more effort in looking younger also reported more frequent exposure to ageist media related to appearance. Results partially support exploratory RQ3 H_1, which hypothesized that the three concepts were significantly associated with each other.

Table 8 Bivariate Correlation Analysis of Appearance Related Concepts

	(1)	(2)	(3)
(1) Relative appearance self-evaluation	1.00		
(2) Ageist messages related to appearance	.041	1.00	
(3) Endorsement to invest efforts in looking younger	.205***	.124***	1.00

*** Correlation is significant at the .001 level (2-tailed).

RQ4 (part 1). Do the relationships above vary by gender?

As shown in table 9, *t*-and chi squared tests did not identify significant gender differences in reported positive experiences of aging, depressive symptoms, or fair/poor self-rated mental health. There was a significant difference between relative appearance self-evaluation by gender (X^2(2, 2019)=8.4*, p=.015)*, with women being more likely to report themselves as appearing younger than their peers (62.0%) than men (55.9%). Women also reported more frequent exposure to ageist messages related to appearance in the media (M=1.255, SD=.892) than men (M=1.167, SD=.818; *p*<.001). Endorsement to invest efforts in looking younger also differed significantly by gender, such that men were more likely to endorse efforts to look younger than women (men: M=1.413, SD=.754; women: M=1.075, SD=.754; *p*=<.001). Results partially support RQ4 H_1, in that there was a significant genders difference in appearance related concepts and women had a stronger larger response to two concepts—relative appearance self-evaluation and frequency of ageist messages related to appearance—when compared to men. Contrary to the study hypothesis, men had stronger endorsement to invest efforts in looking younger.

Table 9 Comparison of Key Study Variables by Gender

Variables		**Women**	**Men**	***p*-value**
Positive experiences of aging		9.289 (2.647)	9.190 (2.576)	.210
Depressive symptoms				
	None	66.2%	69.5%	
	Some	17.8%	14.5%	.114

Fair/poor self-rated mental health			
Fair/Poor	7.2%	7.0%	
Good or Better	92.8%	93.0%	.834
Relative Appearance Self-Evaluation			
Older (0)	6.4%	6.5 %	
Same (1)	31.6%	37.6%	**.015 ***
Younger (2)	62.0%	55.9%	
Frequency of Ageist Messages (0–3)	1.255 (.892)	1.167 (.818)	**<.001****
Endorsement to invest efforts in looking younger (0–3)	1.075 (.733)	1.413 (.754)	**<.001****

*** p<.001 (2– tailed); ** p<.01 (2– tailed); * p<.05 (2– tailed)

Table 10 reports the findings from gender-stratified models examining relationships between depressive symptoms and positive experiences of aging. While more positive experiences of aging were associated with lower odds of depressive symptoms for both women (*OR*=.763 (.719, .809) p<.001) and men (*OR*=.685 (.638,.737) p<.001), comparison by gender indicated that the odds of depressive symptoms were significantly lower among men than it was for women with comparable positive experiences of aging scores (p=.024). The results do not support the hypothesis (R4 H_1) that the relationship between mental health and positive experiences of aging will be stronger among women than men. Rather more positive experiences of aging were associated with lower depressive symptoms among men rather than women.

Table 10. Relationships Between Positive Experiences of Aging and Depressive Symptoms in Gender-Stratified Models

Variables	Women *OR* [95% CI], *p* (*N*=1042)	Men *OR* [95% CI], *p* (*N*=980)	*p*–value
Positive experiences of aging	.763 [.719,.809] ***	.685 [.638, .737] ***	**0.024***
Age 65–80 (ref=50–64)	.604 [.436,.836] ***	.542 [.374, .784] ***	0.664
Race (ref=White)			
Non-Hispanic Black	.928 [.590, 1.459]	.834 [.488, 1.424]	0.764
Hispanic/Latino	.988 [.637, 1.533]	1.089 [.663, 1.787]	0.774
Other/Multiracial	1.157 [.664, 2.015]	537 [.261, 1.105]	0.098
Married/living with partner	.722 [.543, 1.030] *	.799 [.563, 1.132]	0.669
Education (ref=high school or less)	1.080 [.904, 1.291]	1.035 [.844, 1.268]	0.755
Employed	1.102 [.803, 1.514]	.754 [.525, 1.081]	0.120
Metro Area	.793 [.551, 1.141]	1.040 [.652, 1.659]	0.369
Income greater $60K	.748 [.543, 1.030]	.585 [.403, .850] **	0.329
Constant	18.279	52.800	0.110
Model X^2	132.6, $p<.001$	189.774, $p<.001$	

*** p<.001 (2– tailed); ** p<.01 (2– tailed); * p<.05 (2– tailed).

Table 11 reports the findings from gender-stratified models examining relationships between positive experiences of aging and fair/poor self-rated mental health. More positive experiences of aging were associated with lower odds of fair/poor self-rated mental health for both women (OR=.657, (.595,.725) p<.001) and men (OR=.715 (.645,.792) p<.001). Comparison by gender did not identifying differences in the strength of magnitude of these relationships (p=.248). The results did not support the hypothesis ($RQ4_1$) that the relationship between fair/poor self-rated mental health and positive experiences of aging will be stronger for women than men. The results indicated there was no differences between the two genders.

Table 11. Relationships Between Positive Experiences of Aging and Fair/poor Self Rated Mental Health Stratified by Gender

	Women	**Men**	
Variables	**Odds ratio [95% CI] (N=1042)**	**Odds Ratio [95% CI] (N=980)**	***p*– value**
Positive experiences of aging	.657 [.595,.725] ***	.715 [.645,.792] ***	.248
Age 65–80 (ref=50-64)	.582 [.320, 1.059]	.354 [.175,.714] **	.288
Race (ref=white)			
Non-Hispanic Black	1.743 [.798, 3.803]	.772 [.258, 2.309]	.235
Hispanic/Latino	.384 [.125, 1.186]	1.696 [.774, 3.717] **	**.034***
Other/Multiracial	1.052 [.399, 2.771]	3.627 [1.452, 9.061]	.068

Married/living with partner	.614 [.355, 1.063]	.618 [.341, 1.121]	.988
Education (ref=High School *or* less)	.975 [.686, 1.386]	.896 [.619, 1.297]	.744
Employed	.912 [.505, 1.649]	.541 [.293, .999] *	.230
Metro Area	.416 [.228,.760] **	.389 [.192, .788]	.885
Income greater $60K	.829 [.441, 1.559]	.339 [.173, .663] **	.057
Constant	14.265	28.721	.480
Model X^2	115.768 , p<.001	114.992 , p<.001	

*** p<.001 (2– tailed); ** p<.01 (2– tailed); * p<.05 (2– tailed).

Table 12 reports the findings from gender-stratified models examining the relationships between positive experiences of aging and relative appearance self-evaluation. More positive experiences of aging were associated with evaluating oneself as younger for both women (b=.921, SE=.130, p <.001), and men (b=.934, SE=.130, p <.001). There was no significant gender difference in the strength and direction of these relationships (p=.944). The results did not support the hypothesis ($RQ4_1$) that the relationship between positive experiences of aging and relative appearance self-evaluation will be stronger for women than men. The results indicated there was no differences between the two genders.

Table 12. Relationships Between Positive Experiences of Aging and Relative Appearance Self-Evaluation Stratified by Gender

	Women (*N*=1061)	**Men (*N*=958)**

Variables	*b*	SE	*b*	SE	*p*–value
Relative appearance self-evaluation	.921***	.130	.934***	.130	.944
Age 65–80 (ref=50–64)	.244	.180	.599***	.187	.171
Race (ref=White)					
Non-Hispanic Black	1.100***	.249	.834**	.270	.468
Hispanic/Latino	.129	.249	.514*	.258	.283
Other/Multiracial	-.425	.312	.654*	.324	**.016***
Married/living with partner	.174	.169	.702***	.187	**.036***
Education (ref=high school or less)	.111	.100	.197	.104	.551
Employed	.200	.179	.443*	.187	.348
Metro area	-.194	.212	-.106	.237	.782
Income greater $60K	.956***	.178	-.018	.195	**<.001***
Constant	6.765	.403	5.943	.432	.164
Model *F, p*	14.275, *p*<.001		11.083, *p*<.001		

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2– tailed).

Table 13 reports the findings from gender-stratified models examining the relationships between positive experiences of aging and exposure to ageist messages related to appearance. There was no association between positive experiences of aging and exposure to ageist messages related to appearance for both women (*b*= -.150, SE=.091, *p*=.097) or men (*b*= -.150, SE=.100, *p*=.134). There was no significant difference between the relationship between positive experiences of aging and exposure to ageist messages related to appearances among women and men (*p*=1.00). The results do not support the hypothesis ($R4H_1$) that the relationship between positive experiences of aging and exposure to ageist messages related to appearance will be stronger among women than men.

Table 13. Relationships Between Positive Experiences of Aging and Exposure to Ageist Messages Related to Appearance Stratified by Gender

	Women (*N*=1059)		**Men (*N*=962)**		
Variables	***b***	**SE**	***b***	**SE**	***p*-value**
Exposure to ageist messages related to appearance	-.150	.091	-.150	.100	1.000
Age (ref=50-64)	.389*	.183	.678***	.191	.274
Race (ref=White)					
Non-Hispanic Black	.995***	.259	1.002***	.277	.985
Hispanic/Latino	.112	.255	.634*	.265	.155
Other/Multiracial	-.417	.320	.781*	.333	**.009****

Married/living with partner	.167	.173	.653***	.192	.060
Education (ref=High school or less)	.197	.102	.280**	.107	.574
Employed	.394*	.181	.479*	.192	.747
Metro area	-.043	.216	-.067	.243	.941
Income greater $60K	1.075***	.181	.003	.200	**<.001*** **
Constant	7.851	.406	7.235	.431	.298
Model *F*, *p*	9.036, *p*<.001		5.904, *p*<.001		

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2– tailed).

Table 14 reports the findings from gender-stratified models examining the relationships between positive experiences of aging and endorsement to invest efforts in looking younger. More positive experiences of aging were associated with greater endorsement to invest efforts in looking younger for both women (*b*=.483, SE=.104, *p* <.001) and men (*b*=.493, SE=.111, *p* <.001). There were no significant gender differences in the strength and direction of those relations *(p*=.948). The results did not support the hypothesis ($RQ4_1$) that the relationship between positive experiences of aging and the endorsement to invest efforts in looking younger be stronger for women than men. The results indicated there was no differences between the two genders.

Table 14. Relationships Between Positive Experiences of Aging and Endorsement to Invest in Efforts to Looking Younger Stratified by Gender

	Women (*N*=1056)		Men (*N*=962)		
	b	**SE**	***b***	**SE**	***p*-value**
Variables					
Endorsement to invest efforts in looking younger	.483***	.104	.493***	.111	.948
Age (ref=50-64)	.289	.181	.689***	.189	.126
Race (ref=White)					
Non-Hispanic Black	.219***	.252	.926***	.275	.703
Hispanic/Latino	.219	.252	.502	.264	.438
Other/Multiracial	−.415	.314	.673*	.331	**.017***
Married/living with partner	.141	.170	.672***	.190	**.037***
Education (ref=High school or less)	.151	.100	.249*	.106	.501
Employed	.324	.178	.465*	.190	.588
Metro area	.012	.212	-.122	.241	.676
Income greater $60K	.995***	.180	.039	.198	**<.001*****

Constant	7.193	.401	6.594	.424	.304
Model *F*, *p*	11.129, *p*<.001		7.742, *p*<.001		

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2– tailed).

As shown in table 15, a bivariate correlation was conducted to assess associations between the three appearance related concepts within each gender. A significant bivariate Pearson correlation was identified between relative appearance self-evaluation and Endorsement to invest efforts in looking younger (Women *r*=.213, *p*=.01, men r=.183, *p*=.01) among both genders, such that those who evaluated themselves as looking younger tended to endorse more strongly investing time in looking younger. A significant Pearson correlation was identified between Endorsement to invest efforts in looking younger and exposure to ageist messages related to appearance (women *r*=.062, *p*=.01, men r=.181, *p*=.01), such that those who endorsed investing more time in looking younger also generally reported more frequent exposure to ageist media related to appearance.

Table 15. Bivariate Correlation Analysis of Appearance Related Concepts stratified by Gender

	Women			Men		
	(1)	(2)	(3)	(1)	(2)	(3)
(1) Relative appearance self-evaluation	1.00			1.00		
(2) Exposure to ageist messages related to appearance	.034	1.00		.182	1.00	
(3) Endorsement to invest efforts in looking	**.213****	**.062***	1.00	**.183****	**.181****	1.00

younger	

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed)

R4 (part 2). Do the relationships above vary by age group?

As shown in Table 16, *t*-test identified there was no significant difference between positive experiences of aging scale scores, ageist messages related to appearance, and Endorsement to invest efforts in looking younger between age groups. A chi square test identified a significant age group difference for depressive symptoms ($X^2(1, 2010)=17.6, p=<.001$), with those ages 65-80 less likely to have no depressive symptoms (73.2%) than those ages 50-64 (64.2%). For fair/poor self-rated mental health, there was a significant difference between age groups ($X^2(1, 2017)=9.72, p=.002$), such that those ages 50-64 more likely to have fair/poor self-rated mental health (8.5%) than those ages 65-80 (4.9%). There was a significant age group difference for relative appearance self-evaluation ($X^2(2, 2017)=13.95, p=<.001$), such that those ages 50-64 were more likely to report themselves as appearing older than their peers (7.9%) than those ages 65-80 (4.0%). Results partially support RQ4 H_1 in that there was a significant difference among age group and mental health such that those who were 50-64 were more likely to have depressive symptoms and rate their mental health as fair/poor as well as evaluate their appearance as older than their peers.

Table 16. Chi square and t-test age group analysis

Variables	**50–64**	**65–80**	***p*-value**

Positive experiences of aging	9.181 (2.643)	9.336 (2.566)	.564
Depressive symptoms			
None	64.2%	73.2%	
Some	35.8%	26.8%	**<.001*** **
Fair/poor Self-rated mental health			
Fair/Poor	8.5%	4.9%	
Good or Better	91.5%	95.1%	**.002** **
Relative appearance self-evaluation			
Older (0)	7.9%	4.0%	
Same (1)	32.8%	36.9%	**<.001*** **
Younger (2)	59.2%	59.0%	
Ageist messages related to appearance (0-3)	1.185 (.866)	1.255 (.847)	.677
Endorsement to invest efforts in looking younger (0-3)	1.253 (.754)	1.250 (.777)	.208

*** $p<.001$ (2– tailed); ** $p<.01$ (2– tailed); * $p<.05$ (2– tailed).

Table 17 reports the findings from age group-stratified models examining the relationship of positive experiences of aging and depressive symptoms. While more positive experiences of aging were associated with lower odds of depressive symptoms among both older adults ages 50-64 (OR=.723 (.682, .766) $p<.001$) and 65-80 (OR=.744 (.691, .801) $p<.001$), there were no

significant difference in the direction or magnitude of these relationships by age groups (p=.544). The results do not support the hypothesis ($R4H_2$) that the relationship between mental health and positive experiences of aging will be stronger among older adults aged 50-64 than those 65-80.

Table 17. Relationships Between Positive Experiences of Aging and Depressive Symptoms Stratified by Age Group

	50-64	**65-80 years**	
Variables	**Odds Ratio [95% CI] (*N*=993)**	**Odds ratio [95% CI] (*N*=1017)**	***p*-value**
Positive experiences of aging	.723 [.682,.766] ***	.744 [.691,.801] ***	.544
Women (ref=men)	.723 [.682, .766]	1.052 [.740, 1.497]	.518
Race (ref=white]			
Non-Hispanic Black	.847 [.553, 1.296]	.923 [.507, 1.681]	.817
Hispanic/Latino	.843 [.562, 1.264]	1.492 [.846, 2.634]	.109
Other/Multiracial	.623 [.362, 1.074]	1.325 [.650, 2.700]	.098
Married/living with partner	.706 [.529,.942] *	.779 [.542, 1.121]	.675
Education (ref= high school or less)	1.063 [.900, 1.257]	1.070 [.856, 1.339]	.960
Employed	.983 [.735, 1.315]	.845 [.555, 1.285]	.561

Metro area	1.006 [.694, 1.458]	.776 [.494, 1.219]	.384
Income greater $60K	.609 [.448,.829] **	.753 [.510, 1.112]	.405
Constant	16.195	7.708	.171
Model X^2	205.435, p<.001	93.970, p<.001	

*** p<.001 (2– tailed); ** p<.01 (2– tailed); * p<.05 (2– tailed).

Table 18 reports the findings from age group-stratified models examining relationships between positive experiences of aging and fair/poor self-rated mental health. More positive experiences of aging were associated with lower odds of fair/poor self-rated mental health for both older adults aged 50-64 (OR=.715, (.659,.775) p<.001) and 65-80 (OR=.655 (.575,.747) p<.001), but these relationships did not statistically differ from each other (p=.268). The results do not support the hypothesis ($R4H_2$) that the relationship between mental health and positive experiences of aging will be stronger among older adults aged 50-64 than those 65-80.

Table 18. Relationships Between Positive Experiences of Aging and Fair/poor Self-Rated Mental Health Stratified by Age group

	50-64	**65-80**	
Variables	**Odds Ratio [95% CI] (*N*=996)**	**Odds ratio [95% CI] (*N*=1022)**	**p-value**
Positive experiences of aging	.715 [.659, .775] ***	.655 [.575,.747] ***	0.268
Women (ref=men)	.775 [.494, 1.217]	1.047 [.485, 2.261]	0.508

Race (ref=white]			
Non-Hispanic Black	1.209 [.579, 2.522]	1.238 [.371, 4.135]	0.975
Hispanic/Latino	.878 [.429, 1.797]	.949 [.285, 3.157]	0.912
Other/Multiracial	2.321 [1.123, 4.797] *	.761 [.150, 3.853]	0.218
Married/living with partner	.580 [.359, .937] *	.612 [.292, 1.283]	0.902
Education (ref=High School or less)	.909 [.675, 1.225]	1.023 [.629, 1.663]	0.685
Employed	.686 [.428, 1.099]	.717 [.279, 1.847]	0.932
Metro area	.410 [.238, .705] ***	.380 [.166, .869] *	0.878
Income greater $60K	.486 [.287, .824] *	.648 [.267, 1.568]	0.585
Constant	8.326	5.234	0.602
Model X^2	146.917, p<.001	58.298, p<.001	

*** p<.001 (2– tailed); ** p<.01 (2– tailed); * p<.05 (2– tailed).

Table 19 reports the findings from age group-stratified models examining relationships between positive experiences of aging and relative appearance self-evaluation. More positive experiences of aging were associated with evaluating oneself as younger for both age groups 50-64 (b=.918, SE=.114, p <.001) and 65-80 (b=.978, SE=.155, p <.001). There was no significant difference in the strength and direction of these relationships (p=.755). The results did not

support the hypothesis ($RQ4_2$) that the relationship between positive experiences of aging and relative appearance self-evaluation among the age groups. The results indicated no differences.

Table 19. Relationships Between Positive Experiences of Aging and Relative Appearance Self-Evaluation Stratified by Age Group

	50-64 (*N*=1222)		**65-80 (*N*=797)**		
	b	**SE**	***b***	**SE**	***p*–value**
Variables					
Relative appearance self-evaluation	0.918***	0.114	.978***	.155	.755
Gender (ref=men)	0.309*	0.144	-.090	.183	.086
Race (ref=White)					
Non-Hispanic Black	1.339***	0.23	.440	302	**.017***
Hispanic/Latino	0.666**	0.219	-.381	.315	**.006****
Other/Multiracial	0.006	0.28	.220	.375	.647
Married/living with partner	0.61***	0.164	.207	.194	.112
Education (ref=High school or less)	0.029	0.092	.316**	.115	.051
Employed	0.398*	0.162	.106	.211	.272

Metro Area	0.117	0.208	-.490*	.240	.055
Income greater $60K	0.623***	0.174	.408*	.199	.416
Constant	6.17	0.296	7.620	.353	.001
Model *F*, *p*	17.158, *p*<.001		8.330, *p*<.001		

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2– tailed).

Table 20 reports the findings from age group-stratified models examining the relationships between positive experiences of aging and exposure to ageist messages related to appearance. There was no association between positive experiences of aging and exposure to ageist messages related to appearance for older adults ages 50-64 (*b*=-.06, SE=.086, *p*=.487). There was a significant association between positive experiences of aging and exposure to ageist messages related to appearance for older adults ages64-80 (*b*=-.248, SE=.106, *p*=.020). There was no significant difference between the relationship between positive experiences of aging and exposure to ageist messages related to appearances among the age groups (*p*=.168). The results did not support the hypothesis ($RQ4_2$) that the relationship between positive experiences of aging exposure to ageist messages related to appearances. The results indicate no difference.

Table 20. Relationships Between Positive Experiences of Aging and Exposure to Ageist Messages Related to Appearance Stratified by Age Group

	50-64 (*N*=1223)		**65-80 (*N*=799)**		
Variables	***b***	**SE**	***b***	**SE**	***p*– value**

Exposure to ageist messages related to appearance	-0.06	0.086	-0.248*	0.106	.168
Gender (ref=men)	0.421**	0.147	0.047	0.187	.115
Race (ref=White)					
Non-Hispanic Black	1.37***	0.239	0.466	0.31	**.021***
Hispanic/Latino	0.707**	0.225	-0.299	0.322	**.010****
Other/Multiracial	0.086	0.288	0.236	0.385	.755
Married/living with partner	0.579***	0.168	0.195	0.198	.139
Education (ref=High School or less)	0.093	0.095	0.426***	0.117	**.027***
Employed	0.515**	0.166	0.231	0.214	.294
Metro area	0.229	0.214	-0.38	0.245	.061
Income greater $60K	0.687	0.179	0.503*	0.203	.496
Constant	7.296	0.295	9.09	0.32	<.001
Model *F*, *p*	9.960 , *p*<.001		4.772 , *p*<.001		

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2– tailed).

Table 21 reports the findings from age group-stratified models examining the relationships between positive experiences of aging and endorsement to invest efforts in looking younger. More positive experiences of aging were associated with investing more efforts in looking younger for both older adults aged 50-64 (*b*=.545, SE=.098, *p* <.001) and 65-80 (*b*=.462, SE=.118, *p* <.001). There were no significant age group differences in the strength and direction of those relations *(p*=.588). There was no significant difference between the relationship between positive experiences of aging and endorsement to invest efforts in looking younger among the age groups.

Table 21. Relationships Between Positive Experiences of Aging and Endorsement to Invest Efforts in Looking Younger Stratified by Age

	50-64 (*N*=1222)		**65-80 (*N*=796)**		
	b	**SE**	***b***	**SE**	***p*–value**
Variables					
Endorsement to invest efforts in looking younger	0.545***	0.098	0.462***	0.118	.588
Gender (ref=men)	0.267	0.148	-0.199	0.192	.054
Race (ref=White)					
Non-Hispanic Black	1.356***	0.233	0.474	0.306	**.022***
Hispanic/Latino	0.723***	0.223	-0.353	0.318	**.005****

Other/Multiracial	0.05	0.283	0.203	0.38	.747
married/living with partner	0.621	0.165	0.116	0.196	**.048***
Education (ref=High School or less)	0.046	0.093	0.406***	0.115	**.015***
Employed	0.482**	0.163	0.178	0.212	.255
Metro area	0.198	0.21	-0.344	0.242	.091
Income greater $60K	0.676***	0.176	0.436*	0.201	.369
Constant	6.705	0.284	8.423	0.312	<.001
Model *F*, *p*	13.808, *p*<.001		5.714, *p*<.001		

*** *p*<.001 (2– tailed); ** *p*<.01 (2– tailed); * *p*<.05 (2– tailed).

As shown in table 22, a bivariate correlation was conducted to assess associations between the three appearance related concepts within each age group. A significant bivariate Pearson correlation was identified between relative appearance self-evaluation and endorsement to invest efforts in looking younger (50–64 *r*=.203, *p*<.001 , 65–80 r=.210, *p*<.001) among both age groups such that those who evaluated themselves as looking younger tended to endorse more strongly investing time in looking younger. A significant Pearson correlation was identified between endorsement to invest efforts in looking younger and exposure to ageist messages

related to appearance (50–64 r=.147, p<.001 , 65–80 r=.089, p=.012), such that those who endorsed investing more time in looking younger also generally reported more frequent exposure to ageist media related to appearance.

Table 22. Bivariate Correlation Analysis of Appearance Related Concepts stratified by Age Group

	50-64			65-80		
	(1)	(2)	(3)	(1)	(2)	(3)
(1) Relative appearance self-evaluation	1.00			1.00		
(2) Exposure to ageist messages related to appearance	.037	1.00		.044	1.00	
(3) Endorsement in investing effort to look younger	.203***	.147***	1.00	.210***	.089**	1.00

*** Correlation is significant at the .001 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

In summary RQ4 findings were generally not consistent with research hypothesis that there was a gender and age group difference in the relationships investigated in this study. In gender and age group stratified samples there was no difference in the relationship of positive experiences of aging and both mental health outcomes (Depressive symptoms and fair/poor self-rated mental health) among both gender and age group with the exception of men who reported more positive experiences of aging having lower odds having depressive symptoms. There was also no significant difference between the relationship of appearance related concepts and

positive experiences of gaining among both gender and age group. Appearance related concepts relationship between each other did not differ between both gender and age group and relationships stayed consistent across samples. Such that that those who evaluated themselves as looking younger tended to endorse more strongly investing time in looking younger and those who endorsed investing more time in looking younger also generally reported more frequent exposure to ageist media related to appearance. Relative appearance self-evaluation and ageist messages were unrelated.

Chapter 5: Discussion

This study provides unique insight on how positive experiences of aging and appearance-related concepts may shape older adults' mental health outcomes, thereby suggesting these as potential levers in intervention strategies to prevent adverse mental health outcomes among this age group. This study adds to existing literature in several keyways. First, we were able to utilize novel items and a new measure of positive experiences of aging to capture more experience-related concepts, which are distinct from existing measure emphasizing older adults' positive perceptions, attitudes, and beliefs of aging. The scale captures a range of aging experiences encompassing aging satisfaction and comfort, sense of purpose, and positive interpersonal interactions. Second, we examined pathways through which appearance-related concepts may affect mental health, with a specific emphasis on the potential intermediary role these positive experiences of aging may play. Appearance may be a key part in shaping those experiences, and this study provides evidence to support that relationship.

This study found significant associations between positive experiences of aging and mental health outcomes among older adults. More positive experiences of aging were associated with fewer indicators of depressive symptoms and those who had more positive experiences of aging were more likely to have good or better self-rated mental health. This finding is consistent with previous literature demonstrating that those who have positive perceptions and beliefs surrounding aging are more likely to have better mental wellbeing and mental health (Diehl et al., 2014). This provides evidence that interventions and social changes surrounding older adults' experiences with aging may be important to their mental health. Health promotion interventions can utilize efforts to help change and shift older adults'

experiences of aging to be more positive in efforts to combat older adult poor mental health and wellbeing. Incorporation of positive experiences of aging into interventions may be an alternative or supplement strategies to help alleviate poor mental health outcomes and improve wellbeing.

Contrary to research that suggests that there are gender differences in mental health among older adults, our study found no evidence to support this other than men who have more positive experiences of aging having lower odds of having depressive symptoms (Rodda et al., 2011). There were age group differences among older adults ages 50-64 and 65-80 with those who were 50-64 more likely to have both poor/fair self-rated mental health and depressive symptoms. Findings were consistent with the literature (Weyerer et al., 2013). This is supported in literature that states younger older adults who are entering older adulthood may also experience the realities and negatives associated with aging. This sudden self-relevance can have a greater impact on their mental health. Further study should be conducted to evaluate the differences among younger older experiences of aging when they are newly entering older adulthood that can have a negative impact on their mental health. Although there wasn't consistent gender or age group differences in the relationships explored in this study, relationships affect older adults more generally and there is no need for more gender or age group interventions specifically tailored to meet differences

Positive experiences of aging were significantly associated with all appearance related concepts. This provided evidence that appearance does matter for positive experiences of aging. This can be particularly helpful if positive experiences of aging then have an effect on mental health. The findings that rating oneself as looking younger than their age compared to others was associated with having more positive experiences of aging is consistent with previous research

indicating that identifying as younger than your age group is associated with having a more positive outlook on with aging and with greater wellbeing (Westerhof & Barrett, 2005). This may be due to the fact that those who rated themselves as looking younger may do so to distance themselves from negative age appearance related stereotypes (Weiss & Lang, 2012). Aligning oneself to a younger appearance may help individuals to evaluate their experiences of aging as a younger looking person and maybe not experiencing or internalizing those negative appearance stereotypes assigned to those they believed looked their age or older. This can be a form of othering themselves from the group as a way to protect their positive self-perception. Identifying with younger appearance may also result in less interpersonal age-based discrimination which is also associated with poor mental health and has the protentional to influence their experience of aging.

The findings that those endorsing investing effort to look younger reported more positive experiences of aging was also consistent with research (Weiss & Lang, 2012). Older adults who endorsed investing effort and time to look younger may also be doing so to other themselves, similar to the idea of rating oneself as looking younger. They may do so in an effort to not confirm negative appearance related stereotypes and to better align themselves with a younger and more socially desirable image of youthfulness. This extended effort to look may increase their acceptance about their own aging. Furthermore, putting effort into appearance may boost confidence and translate into having a more positive experience, in general, and of aging, in particular (Diehl, et al., 2014). For both gender and age groups, positive experiences of aging were significantly related to both endorsement to invest efforts in looking younger and relative appearance self-evaluation. This finding should be taken with careful consideration. There seems to be a relationship between investing time to look younger and more positive experiences of

aging but interventions and public health professionals should use the information to understand that appearance related to looking younger is important to older adults. This may be due to self-esteem attached to appearance. Rather than encouraging older adults to invest more time and effort into look younger, there should be more interventions with emphasis on acceptance and increasing esteem surrounding their current physical appearance. Further research should investigate the depth and breadth in which this relationship interacts with the importance placed on looking younger.

The finding that more frequent exposure to ageist media was associated with less positive experiences of aging was also consistent with literature (Chonody & Teater, 2015). More ageist media exposure can lead to having less satisfaction with aging (Nakamura et al., 2022). Those who experienced more ageist media exposure was also more likely to have a negative outlook on aging and hold onto negative age stereotypes. Constant exposure to ageist messages surrounding appearance can regularly remind older adults of negative stereotypes and/or aspects of aging (Weiss & Lang, 2012). Exposure to ageist media it was not consistently significant amongst gender and age groups. More research is warranted to investigate the nuances of this concept and its possible relationships and interactions with positive experiences of aging and other appearance-related concepts.

The relationships between the three appearance related concepts were consistent for the whole sample, and when stratified by gender and age group. This may be indication that the relationships are still strong within each sample tested in the current study. Those who evaluated themselves as looking younger tended to more strongly endorse investing effort to look younger, while those who endorsed investing effort to look younger also reported more frequent exposure to ageist media related to appearance. These relationships are supported by research indicating

that frequent exposure to ageist media may apply a pressure on older adults to undertake steps to look younger (Becker et al., 2013; Chonody & Teater, 2015; Jankowski et al., 2016). In the current study we tested each model separately to establish any found unique relationships each concept had. In an intervention standpoint there seems to be a relationship and correlation between endorsement to invest efforts in looking younger and the other two concepts. It may be more advantages to look at that concept and better understand its influence on appearance.

Limitations

When interpreting the results of this study, some limitations should be taken into consideration. First, the main concept—positive experiences of aging—is measured using a novel and newly created scale that has yet to be fully evaluated and warrants more research to ensure that it is valid and reliable. Second, the three appearance-related items used in the current study may not capture the full nuances of important appearance concepts among older adults. Research questions developed for this study were exploratory in nature due to the fact that there are limited research investigating the topic and few examples in the literature to draw on.

Current study utilized data from secondary data, there is acknowledgement of limitations associated with using secondary data such as the inability to personally develop and collect data that may better fit research questions. Future studies may benefit from collecting nationally representative primary data to better tailor to research questions. Study sample included only those ages 50-80 years old. Future studies want to examine older adulthood should strive to also include older adults beyond this age range as their experiences may change and other factors may come into play, such as, nearing the end of life.

Within the study there are a variety of possible ways of examining the study variables. In the current study we used stratification to test for differences and relationships but acknowledge that interaction statistics are also a viable option to validity test for interactions of the variables. There is also room to recognize that the concepts and relationships explored in the current study may vary by other sociodemographic variables, such as, race, SES and education that should warrant some further research. It should also be said that there were alternative ways of assessing the study variables specifically in terms of how we coded the appearance related concepts. Some suggestions for future research are to do further exploratory testing using categorical variables.

Future Research and Considerations

One recommendation for future research is to include older adults over the age of 80. This sample only included individuals who were ages 50–80 but aging experiences do not end at 80 years old. For mental health where older adults seem to experience more negative effects, including adults over the age of 80 may better explain what is happening in U-shaped curve we see in development of poor mental health outcomes like depression and depressive symptoms (Beyers et al 2010). It is also suggested that both gender and age group stratification analysis could be done within demographic characteristics to examine if those relationships differed with in a sample. For example, a study may find it useful to investigate the relationship between positive experiences of aging and mental health within a sample of women and see if there are age group differences. Future studies investigating appearance and positive experiences of aging may want to also investigate the factors that can lead to how and why older adults answer relative appearance self-evaluation questions.

Future research should explore other protentional factors that may influence the nature of the relationships explored in this study, such as health status. More exploratory studies should be

done to Looking at what factors influence appearance related concepts and their relationship to positive experiences of aging. There also warrants more exploration on and youthfulness, particularly older adults' perception of what youthfulness is. Current study used a novel Positive Experiences of Aging Scale. More research is warranted to investigate and evaluate the scale and its components. As well as its relationship to other aspects of aging other than appearance and mental health. Future interventions should be conducted at all levels and stages of life to help prevent negative attitudes and booster positive experiences with aging for all people. Experiences help shape our attitudes and beliefs and if socially we can help to create an environment where aging is a positive one it will better impact the lives of all people not only older adults.

References

Administration on Aging. (2018, April). 2017 Profile of Older Americans. *U.S* https://acl.gov/sites/default/files/Aging%20and%20Disability%20in%20America/2017OlderAmericansProfile.pdf

Ahmad, F., Jhajj, A. K., Stewart, D. E., Burghardt M., Bierman, A. S., (2014). Single item measures of self-rated mental health: a scoping review. *BMC Health Services Research, 14*(398). doi:10.1186/1472-6963-14-398

Allen, J. O., Solway, E., Kirch, M., Singer, D., Kullgren, J. T., & Malani, P. N. (2020, July 13). *Everyday Ageism and Health: Older adults experience with everyday ageism.* University of Michigan National Poll on Healthy Aging. https://www.healthyagingpoll.org/report/everyday-ageism-and-health

Andrews, R. M., Tan, E. J., Varma, V. R., Rebok, G. W., Romani, W. A., Seeman, T. E., ... & Carlson, M. C. (2017). Positive aging expectations are associated with physical activity among urban-dwelling older adults. *The Gerontologist*, *57*(suppl_2), S178-S186. https://doi.org/10.1093/geront/gnx060

Asquith, N. L. (2009). Positive ageing, neoliberalism, and Australian sociology. *Journal of Sociology, 45*(3), 255–269. doi:10.1177/1440783309335650

Barker, M., O'Hanlon, A., McGee, H. M., Hickey, A., & Conroy, R. M. (2007). Cross-sectional validation of the Aging Perceptions Questionnaire: A multidimensional instrument for assessing self-perceptions of aging. *BMC Geriatrics, 7*(9). doi:10.1186/14712318-7-9

Barry, L. C., Allore, H. G., Guo, Z., Bruce, M. L., & Gill, T. M. (2008). Higher burden of depression among older women: The effect of onset, persistence, and mortality over time. *Archives of General Psychiatry, 65*(2), 172–178. doi:10.1001/archgenpsychiatry.2007.17

Becker, C. B., Diedrichs, P. C., Jankowski, G., Werchan., C. (2013). I'm not just fat, I'm old: has the study of body image talk overlooked "old talk"? *Journal of Eating Disorders, 1*(6). doi:10.1186/2050-2974-1-6.

Bronk, K. C. (2014) Purpose in life. A critical component of optimal youth development, London, England: Springer.

Butler, R. N. (1969). Ageism: Another Form of Bigotry. *The Gerontologist*, *9*(4_Part_1), 243-246. doi:10.1093/geront/9.4_Part_1.243

Byers, A., Yaffe, K., Covinsky, K., Friedman, M. B., Bruce, M. L. (2010). High occurrence of mood and anxiety disorders among older adults: The National Comorbidity Survey Replication. *Archives of General Psychiatry, 67*(5), 489–496. doi:10.1001/archgenpsychiatry.2010.35Calasanti T., King N., Pietilä I., & Ojala H. (2018). Rationales for Anti-aging Activities in Middle Age: Aging, Health, or Appearance? *The Gerontologist, 58*(2), 233–241. doi:10.1093/geront/gnw111

Calasanti, T. (2005). Ageism, gravity, and gender: Experiences of aging bodies. *Generations*, *29*(3), 8–12.

Calasanti T., King N., Pietilä I., Ojala H. (2018). Rationales for anti-aging activities in middle age: Aging, health, or appearance? The Gerontologist, Volume 58, Issue 2, April 2018, Pages 233–241, https://doi-org.ezproxy.lib.ou.edu/10.1093/geront/gnw111

Campos, B., & Kim, H. S. (2017). Incorporating the cultural diversity of family and close relationships into the study of health. American Psychologist, 72(6), 543.

Centers for Disease control and Prevention (2021). Depression is not a normal part of growing older. Retrieved from https://www.cdc.gov/aging/depression/index.html

Centers for Disease Control and Prevention. (2014). Fatal injury reports, national and regional, 1999–2014. Retrieved from http://webappa.cdc.gov/sasweb/ncipc/mortrate10_us.html

Centers for Disease Control and Prevention and National Association of Chronic Disease Directors (2008). The State of Mental Health and Aging in America Issue Brief 1: What Do the Data Tell Us? Atlanta, GA: National Association of Chronic Disease Directors; 2008.

Chonody, J. M., & Teater, B. (2015): Why do I dread looking old?: A test of social identity theory, terror management theory, and the double standard of aging, Journal of Women & Aging, DOI: 10.1080/08952841.2014.950533

Chopik, W., J. & Giasson, H., L., Age Differences in Explicit and Implicit Age Attitudes Across the Life Span, *The Gerontologist*, Volume 57, Issue suppl_2, August 2017, Pages S169–S177, https://doi.org/10.1093/geront/gnx058

Clarke, L. H., & Korotchenko, A. (2016). 'I know it exists … but I haven't experienced it personally': Older Canadian men's perceptions of ageism as a distant social problem. *Ageing & Society, 36*(8), 1757–1773. doi:10.1017/S0144686X15000689

Clarke, P., Marshall, V., House, J., & Lantz, P. (2011). The Social Structuring of Mental Health over the Adult Life Course: Advancing Theory in the Sociology of Aging. *Social Forces, 89*(4), 1287–1313. doi: 10.1353/sof.2011.0036

Cooney C, Minahan J, Siedlecki KL. (2021). Do feelings and knowledge about aging predict ageism? *Journal of Applied Gerontology*, 40(1):28–37. doi:10.1177/0733464819897526

Diehl, M., Wahl, H. W., Barrett, A. E., Brothers, A. F., Miche, M., Montepare, J. M., Westerhof, G. J., & Wurm, S. (2014). Awareness of aging: Theoretical considerations on an emerging concept. *Development Review, 34*(2), 93–113. doi:10.1016/j.dr.2014.01.001

Dillaway, H. E., & Byrnes, M. (2009). Reconsidering Successful Aging: A Call for Renewed and Expanded Academic Critiques and Conceptualizations. *Journal of Applied Gerontology, 28*(6), 702–722. doi:10.1177/0733464809333882

Faudzi, F. N. M., Armitage, C. J., Bryant, C., & Brown, L. J. E. (2019). A Systematic Review of the Psychometric Properties of Self-Report Measures of Attitudes to Ageing. *Research on Aging, 41*(6), 549-574. doi: 10.1177/0164027518825117

Federal Interagency Forum on Aging-Related Statistics. (2016, June). Older Americans 2016: Key Indicators of Well-Being. Federal Interagency Forum on Aging-Related Statistics. https://agingstats.gov/docs/LatestReport/Older-Americans-2016-Key-Indicators-of-WellBeing.pdf

Fishman J. R., Settersten R. A., & Flatt M. A. (2010). In the vanguard of biomedicine? The curious and contradictory case of anti-aging medicine. Sociology of Health and Illness, 32, 197–210.

Giles, H., & Reid, S. A. (2005). Ageism across the lifespan: Towards a self-categorization model of ageing. *Journal of Social Issues*, *61*(2), 387–402. doi:10.1111/j.1540-4560.2005.00412.x

Giles, H., Fox, S., & Smith, E. (1993). Patronizing the elderly: Intergenerational evaluations. Research on Language & Social Interaction, 26, 129-149.

Hedberg, P., Gustafson, Y., Alex, L., Brulin, C. (2010) Depression in relation to purpose in life among a very old population: A five-year follow-up study. Aging & Mental Health 14(6): 757–763.

Hedegaard, H., Curtin, S. C., & Warner, M. (2018, November). *Suicide Mortality in the United States, 1999–2017: NCHS Data Brief.* (No. 330). U.S Department of Health and Human Services. https://www.cdc.gov/nchs/data/databriefs/db330-h.pdf

Hess, T. M., Hinson, J. T., & Hodges, E. A. (2009). Moderators of and mechanisms underlying stereotype threat effects on older adults' memory performance. *Experimental Aging Research, 35*(2), 153–177. doi: 10.1080/03610730802716413

Hill, R. D. (2011). A positive aging framework for guiding geropsychology interventions. *Behavior therapy*, *42*(1), 66–77. https://doi.org/10.1016/j.beth.2010.04.006

Hu, R. X., Luo, M., Zhang, A., & Li, L. W. (2020). Associations of Ageism and Health: A Systematic Review of Quantitative Observational Studies. *Research on Aging, 43*(7–8), 311–322. doi: 10.1177/0164027520980130

Irving, J., Davis, S., & Collier, A. (2017). Aging With Purpose: Systematic Search and Review of Literature Pertaining to Older Adults and Purpose. The International Journal of Aging and Human Development, 85(4), 403–437. https://doi.org/10.1177/0091415017702908

Jankowski, G. S., Diedrichs, P. C., Williamson, H., Christopher, G., & Harcourt, D. (2016). Looking age-appropriate while growing old gracefully: A qualitative study of ageing and body image among older adults Journal of Health Psychology, 21(4) 550–561

Johnston, M. P. (2017). Secondary Data Analysis: A Method of which the Time Has Come. *Qualitative And Quantitative Methods in Libraries, 3*(3), 619–626.

Karel, M. J., Gatz, M., & Smyer, M. A. (2012). Aging and mental health in the decade ahead: what psychologists need to know. *American Psychologist, 67*(3), 184–198. doi: 10.1037/a0025393

Kleinspehn-Ammerlahn A, Kotter-Grühn D, Smith J. (2008) Self-perceptions of aging: Do subjective age and satisfaction with aging change during old age?, The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, (63) (pg. 377–385) doi:10.1093/geronb/63.6.P377

Koenig, H. G., Berk, L. S., Daher, N. S., Pearce, M. J., Bellinger, D. L., Robins, C. J., King, M. B. (2014) Religious involvement is associated with greater purpose, optimism, generosity, and gratitude in persons with major depression and chronic medical illness. Journal of Psychosomatic Research 77(2): 135–143.

Kroenke, K., Spitzer, R. L., &Williams, J. B. W. (2003). The Patient Health Questionnaire–2: validity of a two-item depression screener. *Medical Care, 41*(11), 1284–1292. doi: 10.1097/01.MLR.0000093487.78664.3C.

Law, J., Laidlaw, K., & Peck, D. (2010). Is depression viewed as an inevitable consequence of age? The "understandability phenomenon" in older people. *Clinical Gerontologist: The Journal of Aging and Mental Health, 33*(3), 194–209. https://doi.org/10.1080/07317111003773627

Laidlaw, K., Power, M. J., Schmidt, S. (2007). The Attitudes to Ageing Questionnaire (AAQ): development and psychometric properties. *International Journal of Geriatric Psychiatry, 22*(4), 367-379. doi: 10.1002/gps.1683

Lamont, R. A., Swift, H. J., & Abrams, D. (2015) A review and meta-analysis of age-based stereotype threat: negative stereotypes, not facts, do the damage. *Psychology and Aging, 30*(1), 180–193. doi: 10.1037/a0038586

Levinson, D., & Kaplan. G. (2014). What does Self-Rated Mental Health Represent. *Journal of Public Health Research, 3*(3), 287. doi: 10.4081/jphr.2014.287

Levy, B. R. (2009). Stereotype embodiment: A psychosocial approach to aging. *Current directions in psychological science*, *18*(6), 332–336.

Levy, B. R., & Banaji, M. R. (2002). Implicit ageism. In T. D. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 49–76). Cambridge, MA: MIT Press.

Levy, B. R., Hausdorff, J. M., Hencke, R., & Wei, J. Y. (2000). Reducing cardiovascular stress with positive self-stereotypes of aging. The journals of gerontology series B: Psychological Sciences and Social Sciences, 55(4), P205–P213.

Levy, B. R., & Myers, L. M. (2004). Preventive health behaviors influenced by self-perceptions of aging. *Preventive Medicine, 39*(3), 625–629. doi: 10.1016/j.ypmed.2004.02.029

Levy, B. R., Pilver, C., Chung, P. H., Slade, M. D. (2014). Subliminal strengthening: Improving older individuals' physical function over time with an implicit-age-stereotype intervention. *Psychological Science, 25*(12), 2127–2135. doi: 10.1177/0956797614551970

Levy, B. R., Slade, M. D., & Kasl, S. V. (2002) Longitudinal benefit of positive self-perceptions of aging on functional health. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 57*(5), 409–417. doi: 10.1093/geronb/57.5.p409

Levy, B. R., Slade, M. D., Kunkel, S. R., & Kasl, S. V. (2002). Longevity increased by positive self-perceptions of aging. *Journal of Personality and Social Psychology, 83*(2), 261–270. doi: 10.1037/0022-3514.83.2.261

Levy, B. R., Slade, M. D., Murphy, T. E., & Gill, T. M. (2012) Association between positive age stereotypes and recovery from disability in older persons. *JAMA: Journal of the American Medical Association, 308*(19), 1972–1973. doi: 10.1001/jama.2012.14541

Levy, S. R., & Macdonald, J. L. (2016). Progress on Understanding Ageism. *Journal of Social Issues, 72*(1), 5–25. doi: 10.1111/josi.12153

Li, C., Friedman, B., Yeates, C., Fiscella, K., (2007) Validity of the patient health questionnaire 2 (PHQ–2) in identifying major depression in older adults. *Journal of American Geriatrics Society, 55*(4), 596–602. doi: 10.1111/j.1532-5415.2007.01103.x

Liang, J., & Bollen, K. A. (1983). The structure of the Philadelphia Geriatric Center Morale Scale: A reinterpretation. *Journal of Gerontology, 38*(2), 181–189. doi: 10.1093/geronj/38.2.181

Lowe, B., Kroenke, K., & Grafe, K., (2005). Detecting and monitoring depression with a two-item questionnaire (PHQ–2). *Journal of Psychosomatic Research, 58*(2), 163–171 doi:10.1016/j.jpsychores.2004.09.006

Magwene, E. M., Quinones A. R., Marshall G. L., Makaroun L. K., & Thielke, S. (2017). Older adults rate their mental health better than their general health. *Journal of Public Health Research, 6*(2), 967. doi: 10.4081/jphr.2017.967

McAlpine, D. D., McCreedy, E., & Alang, S. (2018). The Meaning and Predictive Value of Self-rated Mental Health among Persons with a Mental Health Problem. *Journal of Health and Social Behavior, 59*(2). 200–214. doi: 10.1177/0022146518755485

Menkin, J. A., Guan, S. S. A., Araiza, D., Reyes, C. E., Trejo, L., Choi, S. E., ... & Sarkisian, C. A. (2017). Racial/ethnic differences in expectations regarding aging among older adults. The Gerontologist, (57), 138–148. doi: 10.1093/geront/gnx078

Menkin, J. A., Robles, T. F., Gruenewald, T. L., Tanner, E. K., & Seeman, T. E. (2017). Positive expectations regarding aging linked to more new friends in later life. *Journals of*

Gerontology Series B: Psychological Sciences and Social Sciences, *72*(5), 771-781. https://doi.org/10.1093/geronb/gbv118

Mirowsky, J., & Ross, C. E. (1992). Age and Depression. *Journal of Health and Social Behavior*, *33*(3), 187–205. https://doi.org/10.2307/2137349

Nakamura, J. S., Hong, J. H., Smith, J., Chopik, W. J., Chen, Y., VanderWeele, T. J., & Kim, E. S. (2022). Associations between satisfaction with aging and health and well-being outcomes among older US adults. *JAMA Network Open*, *5*(2), e2147797. https://doi.org/10.1001/jamanetworkopen.2021.47797

Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). Harvesting Implicit Group Attitudes and Beliefs from a Demonstration Website. *Group Dynamics: Theory, Research, and Practice, 6*(1), 101–115. doi: 10.1037//1089-2699.6.1.101

Ojala, H., Pietilä, I., & Nikander, P. (2016). Immune to ageism? Men's perceptions of age-based discrimination in everyday contexts. *Journal of Aging Studies*, *39*(44–53). doi: 10.1016/j.jaging.2016.09.003

Pinquart, M. (2002) Creating and maintaining purpose in life in old age: A meta-analysis. Ageing International 27(2): 90–114.

Robertson, D. A., & Kenny, R. A. (2016). Negative perceptions of aging modify the association between frailty and cognitive function in older adults. *Personality and Individual Differences*, *100*, 120–125. https://doi/10.1016/j.paid.2015.12.010

Rodda, J., Walker, Z., & Carter, J. (2011). Depression in older adults. *Bmj*, *343*. doi: 10.1136/bmj.d5219

Rydell, R. J., McConnell, A. R., & Beilock, S. L. (2009). Multiple Social Identities and Stereotype Threat: Imbalance, Accessibility, and Working Memory. *Journal of Personality and Social Psychology, 96*(5), 949–966. doi: 10.1037/a0014846

Sargent-Cox, K. A., Anstey, K. J., & Luszcz, M. A. (2012). The relationship between change in self-perceptions of aging and physical functioning in older adults. *Psychology and Aging*, *27*(3), 750–760. doi: 10.1037/a0027578

Sexton, E., King-Kallimanis, B.L., Morgan, K. *et al.* Development of the Brief Ageing Perceptions Questionnaire (B-APQ): a confirmatory factor analysis approach to item reduction. *BMC Geriatr* **14,** 44 (2014). https://doi.org/10.1186/1471-2318-14-44

Shaw, R., Langman W. (2017). Perceptions of being old and the aging process. *Ageing int,* 42. Doi: 10.1007/s12126-017-9279-5

Smith, D. T., Mouzon, D. M., & Elliott, M. (2018). Reviewing the Assumptions About Men's Mental Health: An Exploration of the Gender Binary. *American Journal of Men's Health, 12*(1), 78–89. doi: 10.1177/1557988316630953

Spector, P.E. (1992). *Summated rating scale construction: An introduction. Sage.* https://doi.org/10.4135/9781412986038

Spitzer, R.L., Kroenke, K., & Williams, J. B. (1999). Validation and Utility of a Self-report Version of PRIME-MD: the PHQ Primary Care Study. *JAMA: Journal of the American Medical Association, 282*(18), 1737–1744. doi: 10.1001/jama.282.18.1737

Sun, J. K., Kim, E. S., & Smith, J. (2017). Positive Self-Perceptions of Aging and Lower Rate of Overnight Hospitalization in the US Population Over Age 50. *Psychosomatic Medicine*, *79*(1), 81–90. doi: 10.1097/PSY.0000000000000364

Swift, H. J., Abrams, D., & Marques, S. (2013). Threat or Boost? Social Comparison Affects Older People's Performance Differently Depending on Task Domain. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 68*(1), 23–30. doi: 10.1093/geronb/gbs044

Weiss, D., & Lang, F. R. (2012). "They" are old but "I" feel younger: Age-group dissociation as a self-protective strategy in old age. Psychology and Aging, 27(1), 153–163. https://doi.org/10.1037/a0024887

Westerhof, G., J. & Barrett, A., E. (2005). Age Identity and Subjective Well-Being: A comparison of the United States and Germany, *The Journals of Gerontology* 60 (3), 129–136, https://doi.org/10.1093/geronb/60.3.S129

Weyerer, S., Eifflaender-Gorfer, S., Wiese, B., Luppa, M., Pentzek, M., Bickel, H., Bachmann, C., Scherer, M., Maier, W., & Riedel-Heller, S. G., (2013). Incidence and predictors of depression in non-demented primary care attenders aged 75 years and older: results from a 3-year follow-up study. *Age and Ageing, 42*(2), 173–180. DOI: 10.1093/ageing/afs184

Wheeler, S. C., & Petty, R. E. (2001). The Effects of Stereotype Activation on Behavior: A Review of Possible Mechanisms. *Psychological Bulletin, 127*(6), 797–826. doi: 10.1037/0033-2909.127.6.797

Williams, B., Onsman, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. Australasian Journal of Paramedicine, 8(3). https://doi.org/10.33151/ajp.8.3.93

Windsor, T. D., Curtis, R. G., & Luszcz, M. A. (2015). Sense of purpose as a psychological resource for aging well. *Developmental psychology*, *51*(7), 975.

World Health Organization. (2022). Ageing. https://www.who.int/health-topics/ageing#tab=tab_1

Wuensch KL. *Comparing Correlation Coefficients, Slopes, and Intercepts*. 2019. http://core.ecu.edu/psyc/wuenschk/docs30/CompareCorrCoeff.pdf

Wurm, S. & Benyamini Y. (2014) Optimism buffers the detrimental effect of negative self-perceptions of ageing on physical and mental health, Psychology & Health, 29(7), 832–848, doi: 10.1080/08870446.2014.891737

Appendix A: Creation of the Positive Experiences of Aging Scale

The statements below are items included in the National Poll on Healthy Aging Ageism Module (December 2019).

As I get older, my life is better than I thought it would be.

Response options: Strongly Agree, Agree, Disagree, Strongly Disagree

My feelings about aging have gotten more positive as I've gotten older.

Response options: Strongly Agree, Agree, Disagree, Strongly Disagree

I have a strong sense of purpose.

Response options: Strongly Agree, Agree, Disagree, Strongly Disagree

I feel more comfortable being around myself as I've gotten older.

Response options: Strongly Agree, Agree, Disagree, Strongly Disagree

People seek my guidance because of my wisdom or experience.

Response options: Often, Sometimes, Rarely, Never

In collaboration with the NPHA team, Dr. Julie Ober Allen used a systematic process to identify items tapping into positive experiences of aging, assess the structure of a potential scale capturing this construct, and conduct initial tests of its psychometric properties. Dr. Allen conducted the preliminary development and evaluation of the scale, described below.

All analyses were conducted in SPSS 27 (IBM Corp., Armonk, NY) with unweighted data from NPHA participants with complete data on all five relevant items (n=2023). First, exploratory descriptive analyses of the relevant items were conducted to assess their distributions and bivariate correlations. All bivariate Pearson correlations were significant in 2-tailed test (p<.001). Next, it was determined that the study sample was adequate for factor analysis, as indicated by the Bartlett's test of sphericity (χ^2=$2782_{(10)}$, p<.001) and a Kaiser-Meyer-Oklin measure of .782, both of which met accepted thresholds of p <.05 and KMO>.5, respectively (Williams et al., 2010). Exploratory factor analysis (EFA) using Maximum Likelihood extraction with oblimin rotation and Kaiser Normalization extracted a single factor comprised of the five positive experiences of aging items, as anticipated. This had an Eigen value of 2.65, explaining 52.99% of the variance (Spector, 1992). All of the items loaded on the single factor. Internal consistency reliability was assessed with Cronbach's alpha and was .763.

Correlations

		Reverse coded seek guidance	Reverse coded life better	Reverse coded feelings more pos	Reverse coded sense of purpose	Reverse coded comfort around myself
Reverse coded seek guidance	Pearson Correlation	1	.210**	.199**	.321**	.212**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001
	N	2043	2037	2036	2038	2034
Reverse coded life better	Pearson Correlation	.210**	1	.620**	.475**	.417**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001
	N	2037	2039	2033	2035	2031
Reverse coded feelings more pos	Pearson Correlation	.199**	.620**	1	.528**	.468**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001
	N	2036	2033	2037	2034	2031
Reverse coded sense of purpose	Pearson Correlation	.321**	.475**	.528**	1	.525**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001
	N	2038	2035	2034	2039	2032
Reverse coded comfort around myself	Pearson Correlation	.212**	.417**	.468**	.525**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	2034	2031	2031	2032	2035

**. Correlation is significant at the 0.01 level (2-tailed).

Factor Analysis

Warnings

Only one factor was extracted. Factor plots cannot be produced.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
Reverse coded seek guidance	1.76	.743	2023
Reverse coded life better	1.74	.738	2023
Reverse coded feelings more pos	1.75	.707	2023
Reverse coded sense of purpose	1.99	.687	2023
Reverse coded comfort around myself	2.13	.658	2023

Correlation Matrix[a]

a. Determinant = .252

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.782
Bartlett's Test of Sphericity	Approx. Chi-Square	2782.115
	df	10
	Sig.	.000

Communalities

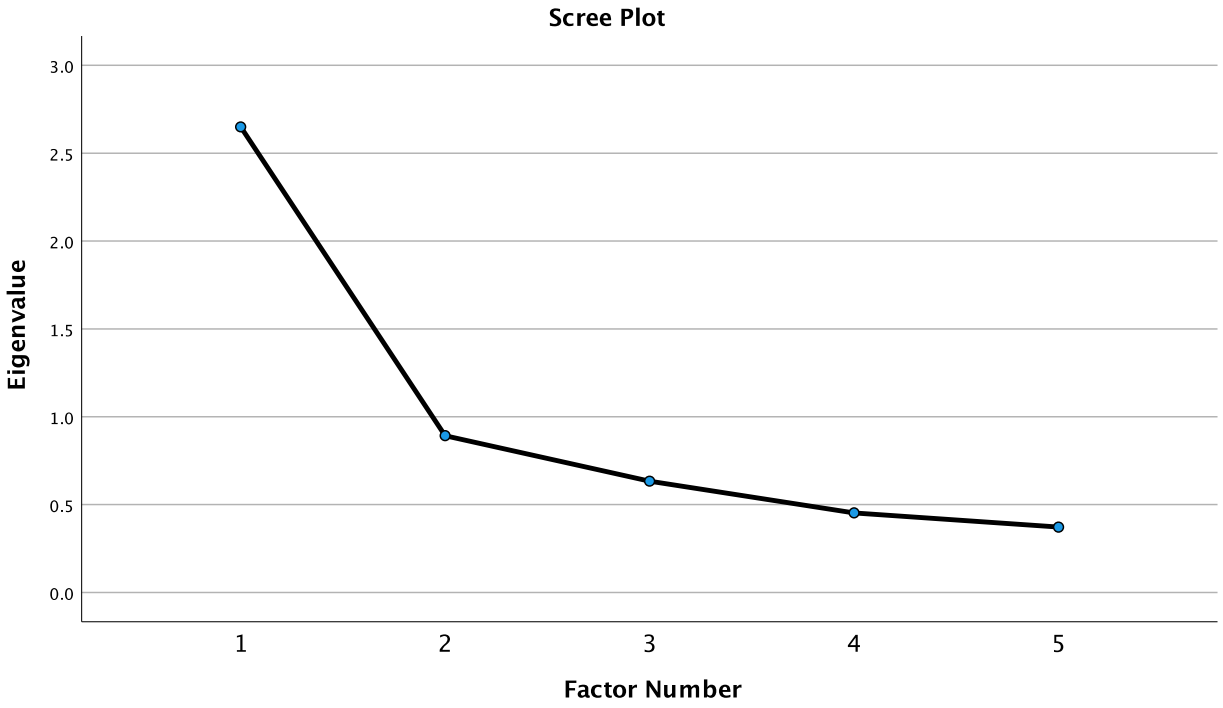
	Initial	Extraction
Reverse coded seek guidance	.108	.103
Reverse coded life better	.425	.529
Reverse coded feelings more pos	.470	.607
Reverse coded sense of purpose	.421	.502
Reverse coded comfort around myself	.332	.396

Extraction Method: Maximum Likelihood.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.650	52.993	52.993	2.137	42.737	42.737
2	.892	17.845	70.837			
3	.633	12.668	83.506			
4	.453	9.056	92.562			
5	.372	7.438	100.000			

Extraction Method: Maximum Likelihood.



Factor Matrix[a]

	Factor 1
Reverse coded seek guidance	.322
Reverse coded life better	.727
Reverse coded feelings more pos	.779
Reverse coded sense of purpose	.709
Reverse coded comfort around myself	.629

Extraction Method: Maximum Likelihood.[a]

a. 1 factors extracted. 4 iterations required.

Goodness-of-fit Test

Chi-Square	df	Sig.
153.487	5	.000

Reproduced Correlations

		Reverse coded seek guidance	Reverse coded life better	Reverse coded feelings more pos	Reverse coded sense of purpose	Reverse coded comfort around myself
Reproduced Correlation	Reverse coded seek guidance	.103[a]	.234	.251	.228	.202
	Reverse coded life better	.234	.529[a]	.567	.515	.458
	Reverse coded feelings more pos	.251	.567	.607[a]	.552	.490
	Reverse coded sense of purpose	.228	.515	.552	.502[a]	.446
	Reverse coded comfort around myself	.202	.458	.490	.446	.396[a]
Residual[b]	Reverse coded seek guidance		-.023	-.053	.092	.008
	Reverse coded life better	-.023		.053	-.040	-.040
	Reverse coded feelings more pos	-.053	.053		-.026	-.026
	Reverse coded sense of purpose	.092	-.040	-.026		.077
	Reverse coded comfort around myself	.008	-.040	-.026	.077	

Extraction Method: Maximum Likelihood.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 4 (40.0%) nonredundant residuals with absolute values greater than 0.05.

Extraction Method: Maximum Likelihood.
a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 4 (40.0%) nonredundant residuals with absolute values greater than 0.05.

Rotated Factor Matrix[a]

a. Only one factor was extracted. The solution cannot be rotated.

Factor Score Coefficient Matrix

	Factor 1
Reverse coded seek guidance	.066
Reverse coded life better	.284
Reverse coded feelings more pos	.364
Reverse coded sense of purpose	.261
Reverse coded comfort around myself	.191

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.

Factor Score Covariance Matrix

Factor	1
1	.816

Extraction Method: Maximum Likelihood.
Rotation Method: Oblimin with Kaiser Normalization.

Reliability

Scale: PosExperAging

Case Processing Summary

		N	%
Cases	Valid	2023	98.8
	Excluded[a]	25	1.2
	Total	2048	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.763	.767	5

Item Statistics

	Mean	Std. Deviation	N
Reverse coded seek guidance	1.76	.743	2023
Reverse coded life better	1.74	.738	2023
Reverse coded feelings more pos	1.75	.707	2023
Reverse coded sense of purpose	1.99	.687	2023
Reverse coded comfort around myself	2.13	.658	2023

Inter-Item Correlation Matrix

	Reverse coded seek guidance	Reverse coded life better	Reverse coded feelings more pos	Reverse coded sense of purpose	Reverse coded comfort around myself
Reverse coded seek guidance	1.000	.211	.198	.320	.211
Reverse coded life better	.211	1.000	.620	.476	.418
Reverse coded feelings more pos	.198	.620	1.000	.526	.464
Reverse coded sense of purpose	.320	.476	.526	1.000	.522
Reverse coded comfort around myself	.211	.418	.464	.522	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Reverse coded seek guidance	7.61	4.900	.296	.108	.803
Reverse coded life better	7.62	4.112	.590	.425	.699
Reverse coded feelings more pos	7.61	4.128	.626	.470	.687
Reverse coded sense of purpose	7.38	4.160	.640	.421	.683
Reverse coded comfort around myself	7.24	4.476	.544	.332	.717

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
9.36	6.425	2.535	5

Appendix B: Key Study Variables

Mental Health Outcomes:

Depressive symptoms assessed using **Patient Health Questionnaire -2 [PHQ-2]**

Over the last two weeks, how often have you been bothered by any of the following problems?:

Little interest or pleasure in doing things

- Not at all, Several days, More than half the days, Nearly every day

Feeling down, depressed, or hopeless

- Not at all, Several days, More than half the days, Nearly every day (1)

Not at all on both items (0=None) any report on either item (1=some)

Higher scores indicated more depressive symptoms*

Fair/poor self-rated mental health

In general, would you say your mental health is:

Excellent, Very good, Good(0), Fair, Poor (1)

Higher scores indicated worst self-rated mental health

Appearance Related Concepts:

Relative appearance self- evaluation

How would you compare how you look to other people your age?

- Older (0), Same (1), Younger (2)

Higher score indicated rating oneself as looking younger*

Exposure to ageist messages related to appearance

I hear, see, and/or read things suggesting that older adults and aging are unattractive or undesirable.

- Often (3), Sometimes (2), Rarely(1), Never (0)

Higher score indicated more frequent exposure*

Endorsement of investing effort in looking younger

I invest time or effort to look younger

- Disagree (0), Strongly disagree(1), Agree(2), Strongly agree (3)

Higher scores indicated stronger endorsement that they invested effort in looking younger*