

A GENDER-BASED MULTI-METHODS SECONDARY STUDY OF
AGE STEREOTYPES

by

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Dedicated to Evelyn, Caroline, Catherine, Jennifer, and Caroline.

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ABSTRACT

Introduction: With the aging population, it is vital to understand how the psychosocial environment influences the well-being of the population. Aging is more than just physical change; it is also a psychosocial construct. Age-based stereotypes are a major component of age discrimination, or ageism. Age stereotypes, particularly negative ones, can influence the behaviour and well-being of the older population. Like aging, gender is socially constructed and can also influence one's health and overall well-being. The purpose of this study is to explore how age stereotypes associated with the target words 'senior' and 'older' may be gendered and how they change across increasing age groups.

Methods: Secondary data collected on age stereotypes were examined using a multi-methods approach with quantitative statistical and quantitative content analyses.

Results: Statistical analysis found that participants' gender influences the gender assigned to an age-based stereotype. Overall, more feminine than masculine age-based stereotypes were found. The content analysis found that "wise" was the number one stereotype associated with 'Older' and "old" was the number one stereotype associated with 'Senior'.

Conclusion: The shift in age demographics requires policy makers and health professionals to enable a supportive and inclusive society for individuals living into "old age". This can be achieved by using terminology that is conscious of gender-related age stereotypes. The results could be used to inform professionals on language use in policy and program development, and to challenge the ageist and sexist social discourse.

LIST OF ABBREVIATIONS USED

-2LL	Two Log Likelihood
CAG ASEM	Canadian Association on Gerontology Annual Scientific and Educational Meeting
CI	Confidence Interval
CIHR	Canadian Institute of Health Research
JAGS	Journal of the American Geriatrics Society
REB	Research Ethics Board
SDOH	Social Determinants of Health
SET	Stereotype Embodiment Theory
TCPS	Tri-Council Policy Statement
WHO	World Health Organization

GLOSSARY

Age Stereotype	A preconceived notion of a person or a group of individuals based on their age, often towards older adults.
Gender	The socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people. It influences how people perceive themselves and each other, how they act and interact, and the distribution of power and resources in society. Gender is usually conceptualized as a binary (girl/woman and boy/man) yet there is considerable diversity in how individuals and groups understand, experience, and express it (CIHR, 2015).
Sex	A person's biological attributes, for example their hormone levels, gene expression, anatomical, and physiological features (CIHR, 2015).
Secondary Data	The utilization of data that was collected by someone else or for another research purpose that is used by a different person or a different research purpose.
Multi-Methods	Using two or more different research methods to better understand and address the same research question.
Target Word	The word that a participant was asked to elicit a stereotype in response to.
Trait Word	The word that a participant provided as their stereotype.
Valence	Relating to the positive or negative categorisation of a stereotype.

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CHAPTER 1: INTRODUCTION

1.1 Aging

Aging is an inescapable process that is frequently portrayed to be a negative aspect of life, most commonly depicted as deterioration of the body and mind (Meisner & Levy, 2016). However, aging is more than just a physical and cognitive change, it is also a psychosocial construct (Levy, 2009). This means that our aging experiences and our beliefs, about ourselves and others, as we age are influenced by societal views on aging and through our day-to-day social interactions with others. Levy's (2009) Stereotype Embodiment Theory (SET) builds on the construct of aging as a psychosocial process by explaining that age stereotypes encountered throughout our life are internalized and, in turn, unconsciously influence multiple aspects of health and well-being. There are many stereotypes associated with aging; for example, aging is commonly regarded as a loss of physical functioning (e.g., the onset of health conditions and becoming asexual) and appearance (i.e., wrinkles and loose skin), and overall aging is often viewed negatively (Clarke & Korotchenko, 2011; Ussher, Perz & Parton, 2015; Walz, 2002). The literature explains that age-related stereotypes can influence physical functioning, the psychosocial well-being of individuals, and can also impact memory (Levy, Pilver, Chung, & Slade, 2014; Levy, Zonderman, Slade, & Ferrucci, 2012; Meisner, 2012; Meisner & Levy, 2016; Ory, Hoffman, Hawkins, Sanner, & Mockenhaupt, 2003).

Age stereotypes can be positive or negative; however, there are more negative age stereotypes than positive (Hummert, 1990), and they are less malleable than their positive counterparts (Cuddy, Norton, & Fisk, 2005). Additionally, negative age stereotypes impact the health and well-being of older adults nearly three times more than positive

ones (Meisner, 2012). One of the first studies on age stereotypes conducted by Schmidt and Boland (1986) found that there are multiple stereotypes associated with “old people” by younger adults. Replicating this study, Hummert (1990) confirmed that there are specific age-related stereotypes that are associated with age, and additionally found that these stereotypes are different for younger adults compared to older adults. Adding to the literature, Hummert, Garstka, Shaner, and Strahm (1994) found that the participants’ age group (i.e., young adult, middle adult, older adult) can influence what age-related stereotypes are generated and how they are perceived as positive or negative.

1.2 Gender

Like aging, gender is also a psychosocial construct. At this juncture, gender should not be confused with sex. According to the Canadian Institute of Health Research (CIHR), ‘sex’ refers to a person’s biological attributes (e.g., hormone levels, gene expression, anatomical and physiological features), while the definition of ‘gender’ is:

Gender refers to the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people. It influences how people perceive themselves and each other, how they act and interact, and the distribution of power and resources in society. Gender is usually conceptualized as a binary (girl/woman and boy/man) yet there is considerable diversity in how individuals and groups understand, experience, and express it (CIHR, 2015).

It is important to understand the differences and definitions of sex and gender, particularly when it comes to reviewing the literature. Chapter 2 goes into more detail in the differentiation of sex and gender, and how the terms have been incorrectly used

interchangeably. Both sex and gender can influence a person's overall health and well-being and are both important to understand and consider.

Further, also like the psychosocial influence of aging on older adults, gender influences the health and well-being of identifying women and men across the life course and in later life. Studies show how expressions of gender can influence the physical performance of aging adults. For example, a study on the relationship of physical function and gender of older adults by Ahmed, Vafaei, Auais, Gurainik & Zunzunegui, (2016) found that 'feminine' individuals had higher rates of mobility disability and lower rates of physical functioning compared to 'masculine' individuals. Furthermore, masculinity is a hypothesized reason as to why men have a shorter lifespan than women, and often take more health- and life-related risks (Courtenay, 2010). Therefore, to promote a society that supports and values older adults in more specific and meaningful ways, it is necessary to understand what images or traits of aging (i.e., age stereotype words) represent gender-based age stereotypes.

Research on age stereotypes since Schmidt and Boland (1986) and Hummert (1990) have not yet incorporated a gendered lens. This is a significant gap in the current literature given that age and gender stereotypes are major components of prejudice (i.e., biased attitudes) and discrimination (i.e., differential treatment). Ageism and sexism, perpetuated via stereotypes, affects how older women and men are viewed, valued, and treated in society and, thus, a gender-based examination of age stereotypes needed to be performed (Meisner & Levy, 2016). It is now timely to study age stereotypes given that, for the first time, Canada's population of older female and male adults (age 65+ years) now exceeds the population of children (age 0-14 years) (Statistics Canada, 2015). This

age demographic shift requires health leaders, such as policy makers and health professionals, to work towards creating a supportive and inclusive social environment for groups within the aging population.

1.3 Purpose of the Study

This study explored age stereotypes and gender through the analysis of previously collected data. The objective of the original study conducted by Dr. Brad Meisner was to explore the age stereotype traits that are elicited by different age-related target words (i.e., elderly, old, older, senior) among younger, middle-aged, and older adults. The original study was a replication and extension of a study conducted by Schmidt and Boland (1986) and replicated by Hummert et al. (1994) where participants were asked to generate age stereotype traits describing the “typical old person” (Schmidt & Boland, 1986) or the “typical elderly adult” (Hummert et al, 1994). The original study did the same, but participants were randomly assigned to one of the four target words (elderly, old, older, senior) and participants were asked to attribute a stereotype valence (i.e., positive, negative, mixed, neutral) and gender (i.e., feminine, masculine, all genders [not applicable]) to each of their elicited age stereotype traits. This current research project builds on the purpose by bringing a gendered lens with a binary focus to the elicited age stereotypes in the previous study. Due to the gender binary that is predominant in Western society (See chapter 2 for more detail), this study focused on the feminine and masculine genders associated with the target words. Therefore, the ‘all gender’ selection of the data was not pertinent to the research questions of this study and were not included in the full analysis.

This study focused the analysis on the trait words elicited for two target words ‘Senior’ and ‘Older’. The target word ‘Senior’ was selected due to it being the primary word used by the Government for policies, programs, and reports (for example, see Public Health Agency of Canada, 2014). However, the term ‘Senior’ can have negative connotations in colloquial language such as having a “senior moment” (Nova Scotia Department of Seniors, 2017; Stone & McMinn, 2012). This was recognized by the Province of Nova Scotia when they released the *Shift* action plan in 2017 as they moved away from using the term ‘Senior’ in favour of ‘Older’ adult (Nova Scotia Department of Seniors, 2017). With this in mind, ‘Older’ adult may continue to be used in place of ‘Senior’ in future policies and programs and was also examined in this study.

Governmental policies can influence the direction of provincial programs and funding allocation which can impact the health and well-being of the population. The terminology used in policies may reinforce age-based stereotypes (positive, negative), as such this study explored the traits associated with ‘Senior’ and ‘Older’ with a gendered lens. This gendered approach offered a new, updated, and important perspective on age stereotypes and aging processes more broadly.

1.4 Research Questions of the Study

The following four research questions will be answered: a) Are there valence differences between masculine and feminine age stereotypes associated with being a ‘Senior’ or ‘Older’ adult?; b) Does the age of the participant influence the gender and valence assigned to an age stereotype?; c) Does the participants’ gender influence the gender and valence assigned to an age stereotype?; and d) What are the more prevalent

gender-based age stereotypes overall, by gender assigned, by valence, and by participant gender?

1.5 Overview of the Study Design

To best answer the research questions stated above, a multi-methods quantitative study was conducted using the available secondary data. The secondary data were originally collected through an online survey by Dr. Brad Meisner and his thesis student (Joy Munroe) at Dalhousie University in 2016. The collected data first underwent a statistical analysis (i.e., Research Questions A through C) that informed the content analysis process (i.e., Research Question D).

The quantitative statistical analysis used IBM SPSS Statistics 25 software to run a logistic regression analysis with chi-square follow-up tests to determine if there are statistically significant relationships ($p < .05$) between multiple categorical variables (Field, 2013). The categorical variables being examined include the gender that participant assigned to their trait word (feminine or masculine), the valence that participants assigned to the trait word (positive and negative), participants' gender (female or male), and participants' age group (younger adults, middle-age adults, or older adults).

Next, the manifest content analysis occurred and was informed by results of the statistical analysis. This stage of analysis resulted in a ranking of elicited traits for the word target word 'older' and 'senior' adult by gender assigned, valence, and by participants' gender. The trait words underwent a manifest content analysis to explore the usage of elicited stereotypes by participants (Hsieh & Shannon, 2005; Potter & Levine-Donnerstein, 1999). Potter and Levine-Donnerstein (1999) describe manifest content as

“... that which is on the surface and easily observable, such as the appearance of a particular word in a written text ...” (p. 259). Manifest content analysis is an objective and systematic process that involves the organizing, counting and recoding of manifest content relevant to the research questions (Hsieh & Shannon, 2005; Kondracki, Wellman & Amundson, 2002; Potter & Levine-Donnerstein, 1999). The manifest content analysis uses a descriptive approach that will represent participants’ own stereotyped trait words into a ranking of the top stereotypes per category (overall, participants’ gender, gender assigned, and valence) to address Research Question D.

CHAPTER 2: LITERATURE REVIEW

2.1 Aging and Ageism

Aging is an inevitable and continuous process that every person experiences throughout their life course; however, aging into older adulthood is frequently perceived to be a negative aspect of life that is most commonly depicted as a deterioration of the physical body (Meisner & Levy, 2016). Changes in physical appearance or the slowing of physical movement are often associated with aging. Aging may be frequently discussed on a biological level, but aging is also a psychosocial construct, meaning that our social interactions influence our aging process and experiences (Levy, 2009; McPherson & Wister, 2008). In Western society, the aging process may not be a positive experience due to age discrimination.

Ageism is defined as the discriminatory attitudes and actions against a person based on negative perceptions or beliefs of an individual or a group based on their age (Butler, 2005; McPherson & Wister, 2008). Unfortunately, ageism is deeply ingrained in Western society and is predominantly against older adults (Butler, 2005). As a result, ageism can lead to reduced social opportunities and impact the mental and physical well-being of the population of older adults (Levy & Macdonald, 2016). Social exclusion is a dynamic process that over time effects the health and well-being of an individual (or group) by creating limitations that reduces their capacity to be a full contributing member of society (Mikkonen & Raphael, 2010). Therefore, individuals that are socially included often have better health than individuals that are socially excluded (Mikkonen & Raphael, 2010). Individuals can be socially excluded due to factors such as age, gender, race, ethnicity, disability, or socioeconomic status (Mikkonen & Raphael, 2010). One

way that older adults can be excluded is through the use of language and words that are associated with negative age stereotypes.

2.2 Age Stereotypes and Stereotype Embodiment Theory

Age stereotypes are important to explore as they impact the health of the aging population when internalized. Age stereotypes can lead to discriminatory treatment of older adults by others who are younger, and they can become even more harmful when internalized by older adults. Levy's (2009) SET explains the process of how age stereotypes are internalized across the lifespan. The process of internalizing stereotypes takes place as individuals are exposed to age stereotypes over their life course. Through repeated exposure of age stereotypes, individuals may start to associate themselves with specific stereotypes and, now internalized, they become self-stereotypes (Levy, 2003; Levy, 2009; Meisner & Levy, 2016). Self-stereotypes can influence the health and well-being of individuals as they enter old age.

Research has shown that these self-stereotypes can impact physical functioning, memory, behavioural processes, and health-related outcomes (Levy, 1996; Levy, 2003; Levy, 2009; Levy, Pilver, Chung, & Slade, 2014; Meisner, 2012; Meisner & Levy, 2016). A study conducted by Levy et al. (2014) subliminally presented positive age stereotypes over a four-week intervention and measured physical function. The results of this study found that older adults exposed to this intervention significantly improved physical functioning and reduced negative self-stereotypes. While this study showed how positive stereotypes can increase older adult's well-being, not all stereotypes encountered in society are positive. In fact, there are more negative stereotypes found for aging and older adults than positive ones (Meisner, 2012). Negative age stereotypes can influence health

and well-being also. Levy (1996) conducted a study on memory function in older adults using stereotype priming. In the completion of four memory tasks, participants in Levy's (1996) study that were exposed to negative age stereotypes performed worse than those exposed to positive age stereotypes. Levy's (1996) results indicate that negative stereotypes can impact older adults' cognitive ability. Additionally, Meisner (2012) found that negative stereotypes can influence behaviour almost three times as much as positive stereotypes. Meaning that there are more negative age stereotypes in society, and they influence health more than their positive counterpart. Therefore, negative stereotypes can hinder the health and well-being of individuals. Aging into older adulthood is generally viewed negatively by Western society because of these negative stereotypes and the language commonly used about aging and older adults.

The negative age stereotypes encountered in daily life via policy, media, literature and much more contribute to ageism. For example, a commonly used ageist idiom having a "senior moment" is defined by Merriam-Webster Online Dictionary (2018) as "an instance of momentary forgetfulness or confusion that is attributed to the aging process." This expression was further explored by Bonnesen and Burgess (2004) who conducted a content analysis of newspaper articles and found that use of the phrase increased over the three-year period (1997-2000) and found that it was used by a wide variety of individuals (i.e., males and females, reporters, lay people). Additionally, Bonnesen and Burgess (2004) found that the term "senior moment" was used as a form of self-attribution, often as an excuse (i.e., I had a senior moment as I forgot what I was doing) and can be applied as attribution to others. When applied to others, the attributions were more negative than when self-applied and often in the form of condemnation, apprehension and dismissal

(Bonnesen & Burgess, 2004). The everyday language that we use, like the term “senior moment”, reinforces the Western public discourse that the process of aging and being ‘old’ is an overall negative experience.

The language used to describe aging or the aging population is important to consider as it can influence how both are perceived by society. The Government of Canada generally uses the word ‘senior’ in its policies, programs, grants, and reports. An example of this can be seen in the *New Horizons for Seniors Program* where the Government provides grants to support projects related to supporting, engaging, and expanding senior’s health and well-being (Government of Canada, 2018). The language used by the government is important as it can influence how language is used in society and by individuals in an everyday context (Partida, 2012; Krisberg, 2018). The term senior is used at multiple levels of government, even in the names of their departments (i.e., the Nova Scotia Department of Seniors) and their programs (i.e., Seniors’ Pharmacare). The term ‘senior’ continues to be used in many domains of society such as community programs (i.e., senior walking groups), in grocery stores (i.e., seniors discount day), in the built environment (i.e., senior apartments or senior centres), and public transit (i.e., seniors bus pass). The term ‘senior’ has been the predominant word to refer to the population of older adults, however, this is starting to change.

The change in age-related terminology has started to occur in both policy and research. The Province of Nova Scotia released a new action plan, *Shift*, in which they state that they specifically decided not to use the term ‘senior’ and in place will use the term ‘older adult’ (Nova Scotia Department of Seniors, 2017). By engaging with more than 300 individuals and organizations in the development of *Shift*, the province found

that the term ‘senior’ was disliked and had negative connotations (Nova Scotia Department of Seniors, 2017). This movement towards more inclusive language is also occurring in research as the *Journal of the American Geriatrics Society* (JAGS) recently changed its publication guidelines in regarding the language used about age, aging, and the population of older adults. JAGS recognized that language matters and now require authors to use the term “older adult”, as they stated that previously used terms (i.e., the elderly, seniors) have ageist and negative stereotypes associated with them (Lundebjerg, Trucil, Hammond & Applegate, 2017). This change in policy and research language acknowledges how the power of a word can influence society and its health and well-being. As individuals encounter words associated with negative stereotypes, this can lead to internalizing and self-stereotyping (Levy, 2003; Levy, 2009; Meisner & Levy, 2016). Therefore, negative age-based stereotypes could be detrimental to the health of the growing and aging population and they need to be challenged. To do so, a gender lens should be utilized when discussing aging, as aging and gender are intertwined socially constructed factors that influence health and well-being.

2.3 Sex and Gender Binary

The topic of sex and gender have been discussed and debated over the centuries, for example, Aristotle had interests in biological sex differences (Dea, 2016). Sex is often viewed as a binary, male or female, and as defined above is classified by several biological aspects, most commonly via genetics (i.e., ‘XY’ is male; ‘XX’ is female), primary sex traits (i.e., penis or vagina), and hormone production. The majority of a population may fit into this binary sex definition of male or female, but this is not the reality for all individuals (Dea, 2016). There are multiple sex variations where an

individual may not fit within a rigid definition of male or female. For example, an individual may genetically present as a male, but their hormones production and receptibility may have their physical appearance and anatomical sex characteristics be female (Dea, 2016).

Like sex, gender is often viewed as binary, but it is more complicated than 'masculine' and 'feminine'. Dea (2016) explains that the discourse of gender is closely intertwined with the binary sex categories, for example the common terminology used with gender (i.e., masculine and feminine) is grounded on the biological sex terms 'male' and 'female' (Dea, 2016). Over the years, the term 'gender' has changed and grown to be more inclusive of non-binary conforming genders. The term 'gender' was first used in 1955 to differentiate behaviours and feelings associated with being 'male' or 'female' from 'sex' (Money, 1955). Now, gender is more commonly viewed and discussed as a spectrum or continuum with numerous gender identities that includes a person's inner feelings and thoughts on gender (gender identity) and how they choose to externally communicate their gender (gender expression) through clothing, hair, body language, and other forms of expression (American Psychological Association Task Force on Gender Identity and Gender Variance, 2008; Pride Education Network, 2018). Gender is now viewed as one of the fundamental aspects of human identity, as many aspects of life are built around gender (PHAC, 2010).

While literature and research have grown to adapt and expand gender to a spectrum, much of Western society still operates predominantly on a binary (American Psychological Association Task Force on Gender Identity and Gender Variance, 2008). The predominant binary discourse may be due to most of the population fitting into the

cisgender binary discourse for both sex and gender and therefore continue to live and express in a binary fashion. Estimating the population of Canada that does not fit within the gender binary is difficult as Statistics Canada does not currently ask questions related to gender identity, however, Trans Care BC estimates that approximately 1-3% of the population is transgender identifying (Standing Committee on Health, 2019). The binary gender discourse is apparent today in many aspects of daily life such as physical environment (i.e., male or female bathrooms), government documents (i.e., birth certificates), identification cards (i.e., drivers licence), language (i.e., he/she pronouns), and many social norms that reflect binary gender such as gendered clothing items (i.e., dresses as feminine). The predominant binary discourse can influence an individual's thoughts at an unconscious level. For example, studies have found that health care providers will automatically assume that a patient identifies with one of the two binary genders (Baker & Beagan, 2014; Bauer et al, 2009). The binary discourse can be a barrier to assessing the health and well-being of non-binary individuals who may not be asked their gender identity. This binary discourse in Western society can be a health and well-being issue for individuals that do not fit or identify with one of the two binary genders.

2.4 Gender and Health

Gender is socially constructed and embodied, and like aging can also influence one's health and overall well-being (Connell, 2011). Gender is also considered a social determinant of health by Mikkonen and Raphael (2010) as women experience discrimination differently than men and this influences their health through a variety of social and economic ways. Connell (2011) explains that gender is complex and gender

research is not as simple as gender being an independent variable with health being the dependent variable.

When discussing gender in research, the terms masculine and feminine are commonly used and are not to be confused with an individual's sex. One study that did include and differentiate gender in their health research was conducted by Ahmed et al. (2016). This study was an international study with older adult participants (n=1995) from Albania, Brazil, Columbia, and Canada on mobility disability and gender identity. Gender identities included in this study were masculine, feminine, androgynous, and undifferentiated. Participants, regardless of biological sex, can fall high on the masculine scale (and low on the feminine scale) and as a result are placed in the "masculine" group. Likewise, participants who rank high on femininity and low on masculinity are placed in the "feminine" group (Ahmed et al, 2016). Androgyny is when a person has high levels of both masculinity and femininity; undifferentiated is the opposite (low on both scales) (Ahmed et al, 2016). Ahmed et al. (2016) found that older adults who had higher levels of femininity are more likely to have mobility disabilities and poor physical functioning, demonstrating that gender influences the physical health of individuals. This was also shown in a study conducted by Hunt, Lewars, Emslie, and Batty (2007) that found individuals who are born male and scored high on femininity had lower rates of coronary heart disease, yet no relationship was found among individuals who were born female with high levels of femininity. Gender was also found to influence health related behaviour in a study conducted by Zhu, Brescoll, Newman, and Uhlmann (2015). Zhu et al. (2015) found that participants (regardless of gender) preferred unhealthy food items, yet when exposed to feminine primes would choose healthier food options. Zhu et al.

(2015) found that gender-based priming influences decisions regarding the selection and purchasing of healthy and unhealthy food items. Therefore, gender influences physical health outcomes that may be partially explained by how gender influences health related behaviours of men and women throughout their life span.

In addition to physical and behaviour health outcomes, gender also influences mental health, as a connection between masculinity and suicidal thinking has been found (Pirkis, Spittal, Keogh, Mousaferiadis & Currier, 2017). An Australian longitudinal study on male health found a connection between self-reliance (a trait often viewed as masculine) and how individuals who adhere to a high level of masculinity believe they should be strong, independent, and self-reliant and therefore will not seek help (Pirkis et al, 2017). Pirkis et al. (2017) adds that these factors can lead to an increased risk of suicidal thinking. Similarly, the results of a recent meta-analysis on mental health outcomes and conformity to masculine norms found that individuals with high levels of masculinity had higher rates of poor mental health and were also less likely to seek out help for their mental health (Wong, Ho, Wang & Miller, 2017).

Mental and physical health are not isolated from each other as Needham and Hill (2010) found that gender differences in mental health can help explain the gender difference in physical health. It was concluded that women have more internalized disorders, which explains their higher rate of arthritis and migraines (Needham & Hill, 2010). Conversely, they found that men have more externalized disorders, which partially explains their higher rates of high blood pressure and heart disease (Needham & Hill, 2010). It is important to note that Needham and Hill (2010) use the term 'gender' but used biological sex as a proxy for gender. They defend this by explaining that most large-

scale epidemiological studies rarely include measures of femininity and masculinity (Needham & Hill, 2010). This speaks to the binary nature of research when searching the literature on gender. Many studies do not account for gender or use biological sex in place of gender. Though one's overall health and well-being may not directly be influenced by gender, the gender norms that individuals experience in society undeniably influence physical and mental health.

2.5 Gender and Aging

Gender and aging are strongly intertwined and aging is experienced differently depending on your gender. Aging is often regarded as a woman's issue due to their longer life expectancy and the unique challenges they face later in life (McPherson & Wister, 2008). Women are living longer than men in almost all developed countries, this is known as the longevity gap (Lipsky, Cannon & Lutfiyya, 2014; WHO, 2013). Women may live longer but they are not necessarily healthier than men. Women tend to have more long-term disability and chronic disease than men, however, men are more prone to accidents, extreme social exclusion, and are four times more likely to commit suicide which reduces their overall life expectancy (Mikkonen & Raphael, 2010).

Not only are women living longer, they also experience negative social stigma regarding aging due to their gender. A study by Martin (2012) explored images targeted towards older adults that were associated with health, risk, and well-being. Two key themes were found among the images, the first theme was on active aging and the second on health, risk, and dependency. Martin (2012) found that there was a gender and aging intersection within the images as women were more likely to be portrayed as dependant, at risk, and passive while men were more likely to be portrayed as active. This speaks to

how gender and aging are intertwined, portrayed, and perceived in society. In general, they present a positive aging process for men and more negative aging for women. This could further perpetuate negative aging stereotypes for women (or positive for men), that could lead to internalizing, self-stereotyping, and future negative health outcomes (or positive outcomes for men). Additionally, women are judged more about their physical appearance and on their ability to meet an unrealistic ideal of a thin and youthful appearance (Clarke & Griffin, 2008). These gender-based social stigmas associated with aging are predominantly harder on women than men due to the emphasis society places on physical appearance, which can lead to aging anxiety.

An anti-aging focus depicts a societal fear or anxiety against aging. A study conducted by Brunton and Scott (2015) found that men and women experience aging anxiety differently. Aging anxiety was found to be prevalent for both, but women experienced higher levels of aging anxiety regarding physical appearance (Brunton & Scott, 2015). Women, as they age, go through many hormonal changes that not only impact their fecundity, but also their appearance, and how they are perceived socially as feminine. A study by Clarke and Griffin (2008) described women's experiences of ageism as feeling invisible due to their physical appearance not meeting societal standards, which can lead to a loss of self-esteem. Aging for women is often experienced as a loss of fertility as well as the perceived loss of sexual attractiveness, social identity, and even social visibility (Craciun & Flick, 2016; Sontag, 1979; Thorpe, Fileborn, Hawkes, Pitts & Minichiello, 2014). There is also a gendered double standard where heterosexual women become unattractive as they age but heterosexual men become more distinguished (Sontag, 1972; Vares, 2009). The focus on the physical appearance of aging

also hinders women because Itzin and Phillipson (1995) found that women were perceived to be 'older' at a younger age than men. Simply put, the aging experience for women is different from men not only through physical appearance but in how they are perceived in society by others. Krekula (2007) explains that the interconnection of age and gender has been characterized as double jeopardy of ageism and sexism, and as a result this makes women's health more problematic than men's health. Therefore, it is critical to explore the health and well-being of the aging population together with gender, and not as two separate categories. Intersectionality is a concept that helps us understand how multiple factors interact to influence the health and well-being of a population.

The term intersectionality was first used in 1989 by Crenshaw to discuss how the marginalization and inequalities of race and sex are interconnected and therefore cannot be considered the result of a single factor. Over the years, intersectionality has grown and expanded to other oppressive institutions (i.e., homophobia, colonialism) and has various definitions (Hankivsky, 2014). A simple and general definition put forth by Hankivsky (2014) is "According to an intersectionality perspective, inequities are never the result of single, distinct factors. Rather, they are the outcome of intersections of different social locations, power relations and experiences" (p. 2). This study will not be looking at intersectionality of race, sex, and gender as race was not collected in the original data set, however, it is looking at it through the lens of gender and aging. Intersectionality lends an important focus on how the lives and experiences of individuals cannot be explained by a single category as people's lives are complex and multi-dimensional (Hankivsky, 2014). Additionally, intersectionality also recognizes that social processes (i.e., sexism, ageism) and location are linked with relationship and power dynamics and that they can change

over time and location (Hankivksy, 2014). The intersectionality of aging and gender are key components to this study as aging is a gendered experience. Shields (2008) argues that while gender may not always be the most significant social identity in a person's life, gender is the most pervasive, visible, and codified. Aging and gender are intertwined, and a deeper understanding of these intersections are needed (Krekula, 2007). Shields (2008) states that an intersectionality approach reflects that science can benefit society as the goal is to inform policy, not create it. One aim of this study is to gain a broader understanding of how age stereotypes are gendered, specifically regarding the terms 'senior' and 'older' adults that are commonly used in society through policy and programs.

2.6 Gaps in Literature & Relevance of Present Study

There are multiple gaps in the literature that this study contributes to addressing in a few key ways. The first is that the previous literature on the content of age-based stereotypes, while foundational in providing an understanding of how aging is stereotyped and perceived by society, is between 20 to 30 years old. While there is more recent age-based stereotype research, these studies focus on the positive and negative valence of age-based stereotypes, and not on the actual content of what the age-based stereotypes are. In addition to being outdated, previous studies have not included a gender-based lens to the age-based research. This study will help bridge this gap in the literature by addressing both concerns together. Additionally, due to the data source collecting gender identity over sex, this study adds to the gender-based and not sex-based literature. As noted above in this chapter, many (but not all) studies often interchange the words sex and gender or do not truly account for the gender identity of their participants.

It was timely and relevant to conduct this present study as addressed two key-words often used to refer to the older population in Canada's programs and policies (Senior, Older Adult). Understanding the language used to describe the aging and older population can allow health professionals, policy makers, and society to use more inclusive language to reduce negative stereotypes that influence the overall health and well-being of society.

CHAPTER 3: RESEARCH DESIGN AND METHODS

3.1 Introduction to Research Approach

This study was conducted with the use of secondary data analysis; therefore, this section begins by describing the study of the original data source followed by the description of the current study. The original data source is described in the first sections titled “3.1 Data Source” with two subsections outlining: Study Design, and Measures and Data Collected. The second section titled “3.2 Current Study” explains the multi-method study conducted.

The analysis of the data is conducted in two parts. Part One covers the statistical analysis and addresses the following research questions. Research Question A: Are there valence differences between masculine and feminine age stereotypes? The null hypothesis is that the valence of the age stereotype will not predict the gender assigned to the stereotype. Research Question B: Does the age of the participant influence the gender and valence assigned to an age stereotype. The null hypothesis is that a participants’ age will not predict the gender assigned nor the valence assigned to a stereotype. Research Question C: Does the participants’ gender influence the gender and valence assigned to an age stereotype? The null hypothesis is that the participants’ gender will not predict the gender or valence assigned to a stereotype. Part Two describes the content analysis and address Research Question D: What are the more prevalent gender-based age stereotypes overall, by gender assigned, by valence, and by participants’ gender? All four research questions will be conducted with each target words ‘Senior’ and ‘Older’, and then with both target words combined.

3.2 Data Source

A study was conducted at Dalhousie University in 2016 by Dr. Brad Meisner and his thesis student Ms. Joy Munroe. The study design was based on an age stereotype trait elicitation technique used by Hummert et al. (1994) to determine what age stereotypes were associated with four target words that are commonly used to label or signify an older person or population (i.e., 'elderly', 'old', 'older', 'senior'). Permission was granted by both Dr. Meisner and Ms. Munroe to use this data for a secondary analysis. The study design for the original study is explained next, followed by the measures used and data collected.

3.2.1 Study design. The study was conducted online, open to all people over the age of 18 years. This was a quasi-experimental study because random selection was not used with participant recruitment, and there were no control group conditions (Gray, 2014). Initially the survey was shared with students, employees, and faculty of Dalhousie University and then shared on social media platforms such as Facebook and Twitter. Snowball sampling was also used as the survey URL was sharable online allowing participants from all over Canada, and potentially internationally, to take the survey. To keep the survey anonymous, no identifying information (such as IP addresses) were collected other than participants' age and gender identity.

When the survey link was opened, each participant was greeted with the study details and an informed consent e-signature page. Once consent was provided the participant would move to the next page and begin the survey where one of the four target words (i.e., 'elderly', 'old', 'older', 'senior') were randomly assigned. To explain the process step by step, the target word 'Older' will be used. The first question

participants answered was: “When you think of the typical **older** person, what are the first five words that come to mind?” To report their responses, participants had five dialogue boxes where they could manually type in their answers, which represent age stereotype trait words (Hummert et al., 1994) (see Appendix A for a more specific example). The next page of the survey carried over the five elicited trait words provided by the participant where they were then asked to indicate if each trait word had a ‘negative’, ‘positive’, ‘mixed’, or ‘neutral’ connotation (i.e., age stereotype valence) from five drop-down selection boxes. Upon completion of this step, the next page of the survey asked the participant if they associated each trait as ‘masculine’, ‘feminine’, or ‘neutral (all genders)’. For the current multi-method study, the ‘neutral (all genders)’ response was not included in all levels of analysis as this study aimed to focus on the dichotomous construct of gendered age-based stereotypes.

3.2.2 Measures and data collected. A total of 1,194 participants completed the survey. Participants ages ranged from 18-29 years (n = 491), 30-59 years (n = 435), and 60+ years (n = 268). Participants identified as Female (n = 837), Male (n = 338), Queer (n = 8), Trans (n = 2), Other (n = 2), and seven participants decided not to disclose. As shown in Appendix A, the age and gender groups shown above are the same groups that were used when collecting the demographic information during data collection. Participants that decided not to disclose, or identified as Queer, Trans, or Other, were unfortunately not able to be included in all levels of analysis due to the small and insufficient sample sizes for advanced data analyses. In terms of sample size, Schmidt and Boland (1986) had a total of 86 participants and Hummert et al. (1994) had 280 participants total (40 per age group and target word). This study had over 280 participants

per target word, however, after setting exclusion parameters for the statistical models, there was a total of 88 participants' data used. Specifically, as described in Chapter 2, this study focused on the target words 'Senior' and 'Older'.

3.3 Multi-Methods Study

This study used a multi-method design to develop a current understanding of gendered age-based stereotypes associated with the target words 'Senior' and 'Older'. Bringing together two methods in a research study allows for a more complete understanding and view of the research questions. Multi-methods are different from mixed-methods, although they share a similar underlying principle. The underlying principle of mixed-methods research is that using a combination of methods (both quantitative and qualitative) allows for a better understanding of the research question than if either approach when used alone (Creswell, 2014). This allows for the combination of strengths and potentially reducing the limitations of both research methods (Creswell, 2014). The difference between mixed- and multi-method studies is that multi-methods use two quantitative or two qualitative methods, while mixed-methods uses both qualitative and quantitative methods combined. This multi-method study used two quantitative methods; statistical analysis of numerical data occurred first (Part 1) to then inform the manifest content analysis of the textual data (Part 2). Upon completion of both Parts 1 and 2, findings were combined for the results presented in Chapter 4 and interpretation in Chapter 5.

3.3.1 Part One: Statistical Analysis. For all the numerical data analyses, the latest version of IBM SPSS Statistics 25 software was used. The first step in the analysis was to exclude the cases that did not fit in the research parameters. All data that were

assigned by participants as ‘all gender’ were excluded from the remainder of the statistical analyses due to the aim of the study focusing on female and male binary, as the analysis focused on stereotypes that were assigned as ‘feminine’ and ‘masculine’. First, cases that were assigned as ‘all gender’ were removed, resulting in a loss of 240 cases for ‘Senior’, and 220 cases for ‘Older’. Next, cases that were not assigned at positive or negative were removed resulting in a loss of 24 cases for ‘Senior’ and 16 cases for ‘Older’. Finally, any participants that decided not to disclose their gender, or identified as Queer, Trans, or Other were excluded, resulting in the loss of one case for senior. For a visual representation of the sample size of the study and how it changed with the different levels of analysis refer to Figure 1 below.

After removing the cases that did not fit the research parameters, the next step in the analysis used a logistic regression analysis to create three models. Simply explained, binary logistic regression is used to predict the outcome for categorical data with two categories (Example: alive or dead) based on predictor variables. The predictor variable can be continuous or categorical, and logistic regression can have only one or multiple predictor variables (Field, 2013). If the outcome being predicted has more than two variables (Example: Single, Married, or Divorced), it is called multinomial logistic regression. Due to the use of categorical data we must use the frequency of an event occurring as we cannot use means. Reporting the deviance statistic, as known as the -2 Log-Likelihood (-2LL) for logistic regression, is important for understanding how much information is not explained by the statistical model. Also crucial for understanding the results of a logistic regression model is the odds ratio. The odds ratio is the “indicator of the change in odds resulting from a unit change in the predictor” (Field, 2013, p.767).

However, due to the cross-sectional nature of study design, odds ratio statistics were used for purposes of estimating effect size rather than effect direction. These analyses allow for the detection of reliable differences (statistical significance critical alpha of $p < .05$) across these groups in terms of how gendered aging is represented among different genders and age groups.

3.3.1.1 Models 1 & 2. The first two models conducted were both logistic regression models with the Model 1 focused on the target word ‘Senior’ ($n = 36$) and Model 2 focused on ‘Older’ ($n = 52$). Each model had the same outcome and predictor variables. The gender assigned (Feminine, Masculine) to the trait words was used as the outcome variable. Valence (Positive, Negative), participants age group (18-29, 30-59, and 60+ years), and participants’ gender (Female, Male) were the three predictor variables. Research Question A to C are answered through the results of all three Models (Model 3 explained below). Model 1 addressed these questions in relation to stereotypes associated with ‘Senior’ and likewise for Model 2 with ‘Older’ stereotypes. After completing these models, follow-up tests were conducted using crosstabulations and chi-square tests of difference to examine two-way relationships of the various model levels.

3.3.1.2 Model 3. The third model used data from both ‘Senior’ and ‘Older’ for a sample size of $n = 88$. Building on the analysis results for Model 1 and 2, Model 3 was designed to get a better understanding of how the participants’ gender, valence and the target word they were assigned (Senior or Older) influenced the gender assigned to trait words. Logistic regression was used for this model with the outcome variable as the gender assigned to the trait words (Feminine, Masculine). The predictor variables were the participants’ gender (Female, Male), valence (Positive, Negative) and the target word

(Senior, Older). After completing this model, chi-square crosstabulations were conducted for descriptive purposes and graph building. Research Questions A to C are answered by all three models, with Model 1 and 2 focused on each target word, and Model 3 brings it together by using the target words as a predictor.

After completing the statistical analysis, the next step of the study involved completing the content analysis which is outlined in the next section. The content analysis used the same exclusion criteria and sample sizes as the statistical analysis described in Figure 1 below. The detailed statistical results are provided in the next chapter.

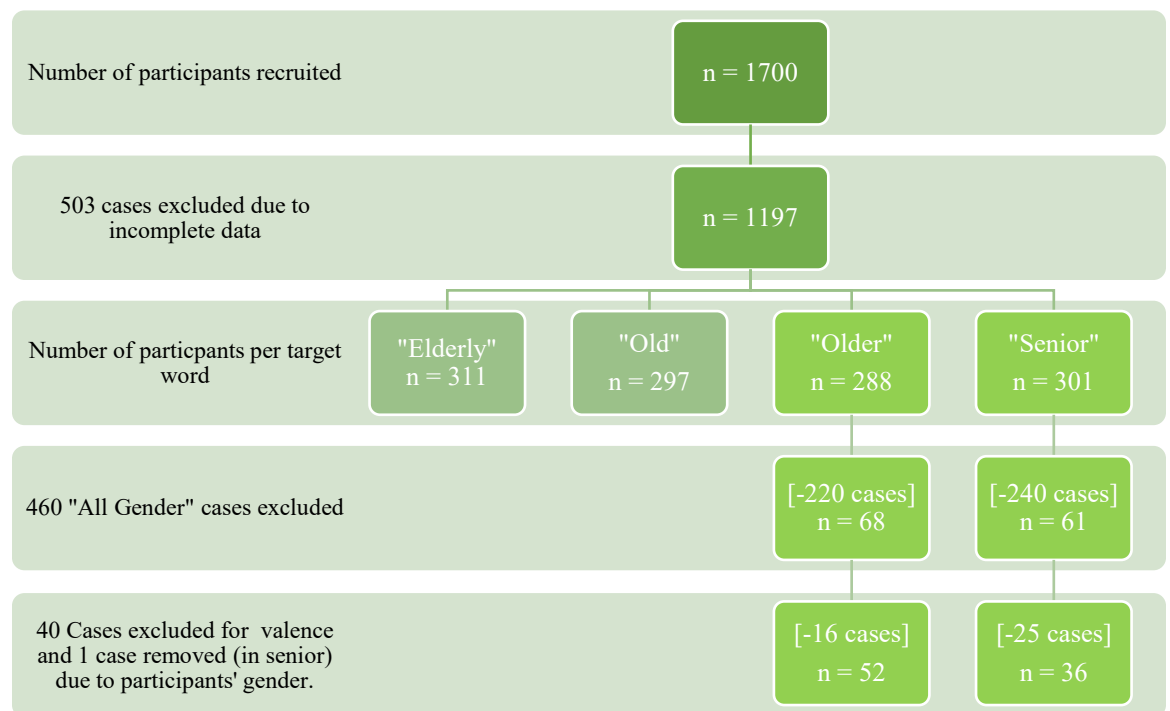


Figure 1. Sample Size at Various Levels of Data Exclusion.

Figure Note: All analyses were conducted with the final samples shown for, 'Senior' with $n = 36$ for Model 1, 'Older' target word with $n = 52$ for Model 2 and Model 3 with $n = 88$ ('Senior' and 'Older' data combined).

3.3.2 Part Two: Content Analysis. A manifest content analysis of the age stereotype traits (i.e., the stereotype word that participants associated with senior or older adult) in terms of their assigned rating by participants as ‘feminine’ and ‘masculine’ attributes was conducted. Elo and Kyngäs (2007) explain that content analysis can be done inductively, deductively, and can be used for qualitative or quantitative studies. Regardless of approach (inductive or deductive) or methodology (quantitative or qualitative), the content analysis process is conducted in three main phases: preparation, organizing, and reporting (Elo & Kyngäs, 2007).

In the preparation phase, the researcher must select a unit of analysis which can be pages, paragraphs, sentences, or words, and it must be decided if just the manifest content will be analysed or if latent content will be included (Elo & Kyngäs, 2007). Latent content is a qualitative level of analysis that goes beyond the manifest terms to look for deeper meaning in the text (Hsieh & Shannon, 2005; Kondracki, Wellman & Amundson, 2002; Potter & Levine-Donnerstein, 1999). For this study, the unit of analysis for the manifest content analysis was the singular trait words that were elicited by participants. The manifest content is easily observable surface level content and requires the counting of similar trait words that were elicited by participants (Kondracki, Wellman & Amundson, 2002; Potter & Levine-Donnerstein, 1999). The preparation phase began with the lead researcher following the same steps in the statistical analysis to remove excluded data. This left a combined total of 88 trait words for ‘Senior’ (n = 36) and ‘Older’ (n = 52). Next, the researcher familiarized herself with the data by reading

through the content several times. After the researcher was familiarized with the data she then moved on to the organizing phase (Elo & Kyngäs, 2007).

The organizing phase can be done inductively or deductively and depends on the aim of the study (Elo & Kyngäs, 2007). This study used an inductive analysis, which allowed for the themes, categories, and codes to naturally derive from the data (Elo & Kyngäs, 2007). However, due to the focus of the study being on the manifest level of analysis, “themes” would not be the proper term, instead groups of similar trait words will be referred to as a unit or a stereotype unit. The categorization for this study was based upon the results of the statistical analysis and resulted in a ranking of the stereotypes by participants’ gender, by gender assigned, and by valence. Categorization by participants’ age was not completed as the statistical results did not find it a significant variable (see Chapter 4, Part One: Statistical Analyses). Within the categorization matrix, manifest content is recorded in frequencies (word counts) and does not require any specific expertise to conduct other than the researcher’s ability to concentrate and to accurately count.

The coding began by putting all the elicited trait words for ‘older’ in alphabetical order. The next step was to group all repeated words and words with the same base (e.g. “Slow” and “Slower”). Then similar words with the same meaning were grouped (e.g. “frail” and “feeble”) to form a stereotype unit. The term “stereotype unit” is used to refer to the grouping of several similar words that represent the same stereotype. After the grouping of similar words, a final count was done for each unit and then placed in order from highest to lowest. Units that had the same count were organized alphabetically. All counts were triple checked, both by a manual hand count conducted by the lead

researcher and by confirming the total count of trait words at each step of the process using Excel's sum formula function. This resulted in a list of the ranked stereotypes associated with the target word 'Older'. The same steps were repeated for the following categories if found to be significant: stereotypes by gender assigned (Feminine, Masculine), by valence (Positive, Negative), and stereotypes by participants' gender (Female, Male). The same process used for the 'Older' content analysis was repeated for the target word 'Senior' and for Model 3, which combined both target words. This provided a list of elicited stereotypes for each category found significant for all three statistical models. After completing the analysis, the final stage is to report the findings.

Finally, the reporting phase involved the description of the analysis process and the results in detail so that there is a clear understanding of how the analysis was conducted that led to the explained results (Elo & Kyngäs, 2007). Describing the analysis process in as much detail as possible to increase the reliability, and appendices and tables should be used to demonstrate links between data and results (Elo & Kyngäs, 2007). To ensure that a detailed description of how the analysis was conducted was documented, the researcher took notes throughout every stage of the process to explain how each stage was conducted (as just described in this chapter). The reporting of the content analysis can be found in Chapter 4 under Part Two: Content Analyses.

3.4 Research Ethics Considerations

This study was exempt from the Dalhousie University's Research Ethics Board (REB) review due to the secondary data having been collected anonymously. As per article 2.4 of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans:

REB review is not required for research that relies exclusively on secondary use of anonymous information, or anonymous human biological materials, so long as the process of data linkage or recording or dissemination of results does not generate identifiable information (CIHR, NSERC & SSHRC, 2014).

This was confirmed with the Dalhousie University REB in May of 2018 (See Appendix B).

CHAPTER 4: RESULTS

This chapter contains the results of both the statistical analyses and content analyses. First shown is the statistical results in Section 4.1, followed by the content analysis in Section 4.2. The statistical results for the logistic regression include logistic regression findings from Model 1, Model 2, and Model 3. Chi-square follow-up tests are organized with each corresponding model. The statistical section addresses Research Questions A to C and the content analysis address Research Question D.

The data exclusion phase removed a total of 501 cases, 236 for older and 301 for senior, leaving a total of 88 cases for analysis. Out of the 88 remaining cases, 36 had the target word ‘Senior’ and 52 had the target word ‘Older’. Out of the 88 cases, 56 participants self identified as female and 32 identified as male. The first logistic regression model was for the trait word ‘Senior’ (n = 36), the second model was for the trait word ‘Older’ (n = 52), and the third model used both ‘Senior’ and ‘Older’ data combined (n = 88).

4.1 Logistic Regression Models

To answer Research Questions A to C, three logistic models were designed. The first two were preliminary models that were used to inform the design of the third and final model. This allowed for a preliminary analysis of the stereotypes associated with the ‘Senior’ (Model 1) target word and how they were gendered. Likewise, for stereotypes associated with ‘Older’ (Model 2) and how they were gendered. The results of the first two models then informed the variables included in Model 3, which used the ‘Senior’ and ‘Older’ cases combined. Combining the cases in Model 3 allowed the target words (Senior, Older) to be used as a variable to compare the two target words. Model 1 and

Model 2 had the same predictor variables, and Model 3 was built based on the results of the previous models. The results from Model 1 to 3 are all important for answering Research Questions A to C. All three models used the gender assigned as the outcome variable.

4.1.1 Model 1. The outcome variable for Model 1 ($n = 36$) was the gender assigned to a trait word (the stereotype), and the three predictor variables were stereotype valence, participant age group, and participant gender. The overall model for the word ‘Senior’ was found to be a significant predictor of gender assigned to the target word ($X^2(4) = 21.70, p < .001$) with a -2LL of 27.21. Therefore, there is a relationship between the word ‘Senior’ and how it is perceived as a gendered age-based stereotype. All parameter estimates and test statistics for Model 1 can be found in Table 1 below. Two predictors, valence ($p = .036$) and participants’ gender ($p = .031$) were found to be significant predictors of the gender assigned to a ‘Senior’ stereotype, therefore, rejecting the null hypothesis for Research Question A and C. In terms of the odds ratio statistics, for valence, age stereotypes that were assigned ‘masculine’ were 20.15 times more likely to be assigned a negative valence rather than a positive valence (95%CI = 1.22 - 333.69). For participant gender, participants were 20.37 times more likely to assign their own gender to a stereotype trait than the opposite gender (95%CI = 1.31 - 316.70). Thus, this indicates that the valence (positive, negative) and the gender of the participant (female, male) are important to how a ‘senior’ stereotype is predicted to be feminine or masculine. The remaining predictor variable, participants’ age, was not found significant in this model ($p > .05$). This indicates that we cannot reject the null hypothesis that the age of the participant influenced ‘Senior’ stereotypes and how they are gendered.

<u>Predictors</u>	<u>B</u>	<u>S.E.</u>	<u>Wald</u>	<u>df</u>	<u>Sig</u>	<u>Exp(B)</u> <u>(95% C.I.)</u>
Valence	3.003	1.432	4.396	1	.036	20.147 (1.216, 333.688)
Participant Age Group			5.131	2	.077	
Participant Age Group (1)	2.308	1.309	3.108	1	.078	10.053 (.773, 130.805)
Participant Age Group (2)	-1.641	1.470	1.246	1	.264	.194 (.011, 3.458)
Participant Gender	3.014	1.400	4.636	1	.031	20.373 (1.311, 316.701)
Constant	-1.975	1.110	3.167	1	.075	.139

S.E. = Standard Error, df = Degrees of Freedom, C.I. = Confidence Interval

After completing the logistic regression, crosstabs and chi-square test were conducted to generate a count-based description between gender assigned to a trait word and stereotype valence. The chi-square test indicated that the relationship of the valence and gender assigned to a 'Senior' stereotype was significant ($\chi^2(1) = 8.229, p = .004$). More specifically, of the total 36 stereotype responses included in the post hoc analysis, 24 (67%) were assigned as positive and 12 (33%) were assigned a negative valence. As illustrated in Figure 2, for the positive valence, 14 (58%) were assigned as feminine stereotypes with 10 (42%) assigned as masculine. For the negatively assigned stereotypes, also shown in Figure 2, 11 (92%) were assigned as masculine and 1 (8%) was assigned as feminine. It would indicate that there are more positive than negative stereotypes associated with the target word 'senior', but the negative stereotypes are more masculine.

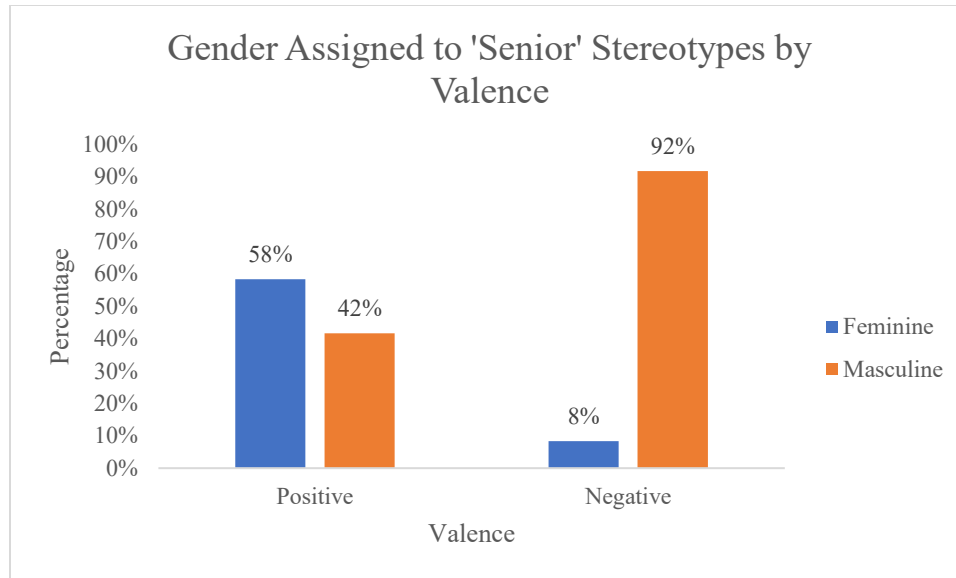


Figure 2. Gender assigned to ‘Senior’ stereotypes by valence.

The next follow-up test focused on participant gender with the gender participants assigned to ‘Senior’ stereotypes. Chi-square test results were significant ($\chi^2(1) = 7.646, p = .006$), indicating a relationship between participant gender and the gender assigned to ‘Senior’ stereotypes. Of the 36 participants in Model 1, 19 self-identified as female and 17 self-identified as male. Among the 19 female participants, 63% ($n = 12$) assigned stereotypes as feminine, and 37% ($n = 7$) assigned stereotypes as masculine. Similar trends are observed with male participants such that 82% ($n = 14$) of the male participants assigned stereotypes as masculine, and 18% ($n = 3$) assigned stereotypes as feminine. Thus, for ‘Senior’ based stereotypes, participants were more likely to assign their gender to the stereotypes elicited.

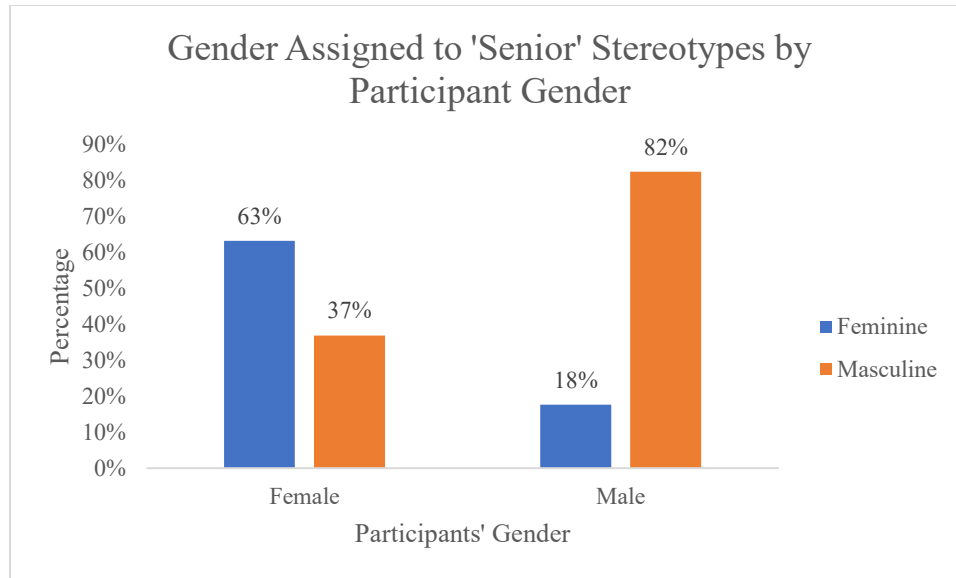


Figure 3. Gender Assigned to ‘Senior’ Stereotypes by Participants’ Gender.

4.1.2 Model 2. The logistic regression results for the ‘Older’ target word model ($n = 52$) demonstrated that the overall model was a significant predictor of the gender assigned to the word ($X^2(4) = 17.41, p = .002$) with a -2LL of 46.78. A summary table of the parameter estimates and test statistics is found in Table 2. Results indicated that the stereotype valence assigned to trait words and participant age group were not significant predictors of the gender assigned to the trait words by participants ($p < .05$). This indicates that the null hypothesis for Research Questions A and B are not rejected regarding the ‘Older’ target word. Thus, stereotypes associated with ‘Older’ were not found to be influenced by the valence assigned or the participant age group. Model 2, examining the ‘Older’ target word differs from the results of Model 1 as stereotype valence was found to be significant for the ‘Senior’ target word model. Similar to Model 1, Model 2 found that the participant gender was a significant predictor of the gender assigned to trait words ($p < .001$). Focusing on the odds ratio for participant gender, participants were 19.78 times more likely to assign their own gender to a stereotype trait

than the opposite gender (95%CI = 3.29 - 119.04). This significant result rejects the null hypothesis for Research Question C. Thus, the gender of the participant was found important to understand how stereotypes associated with ‘Older’ are gendered as feminine or masculine.

Table 2
Logistic Regression Results for Model 2 ‘Older’ (n = 52)
 Outcome Variable: Gender Assigned to Trait Word

<u>Predictors</u>	<u>B</u>	<u>S.E.</u>	<u>Wald</u>	<u>df</u>	<u>Sig</u>	<u>Exp(B)</u> <u>(95% C.I.)</u>
Valence	-1.672	.982	2.899	1	.089	.188 (.027, 1.288)
Participant Age Group			2.614	2	.271	
Participant Age Group (1)	-.654	.929	.496	1	.481	.520 (.084, 3.212)
Participant Age Group (2)	.907	.903	1.008	1	.315	2.476 (.422, 14.539)
Participant Gender	2.985	.916	10.621	1	.001	19.778 (3.286, 119.043)
Constant	-1.412	.648	4.755	1	.029	.244

S.E. = Standard Error, df = Degrees of Freedom, C.I. = Confidence Interval

As a follow-up to Model 2, two crosstabulation and chi-square tests were conducted. First, the inspection of the relationship of gender assigned to the trait word and stereotype valence for the ‘Older’ target did not demonstrate significant results ($\chi^2(1) = .116, p = .734$) unlike Model 1. This was unsurprising because the effect of valence was not significant in this overall model. Of the 52 ‘Older’ stereotypes, there were more positive stereotypes (n = 34) than negative (n = 18) stereotypes. Similar to Model 1, the majority of positive stereotypes in Model 2 were assigned as feminine (68%, n = 23) compared to masculine (32%, n = 11). This finding was also observed for negative stereotypes as the majority were assigned as feminine (72%, n = 13) versus masculine (28%, n = 5). Figure 4 provides an illustration of these proportions.

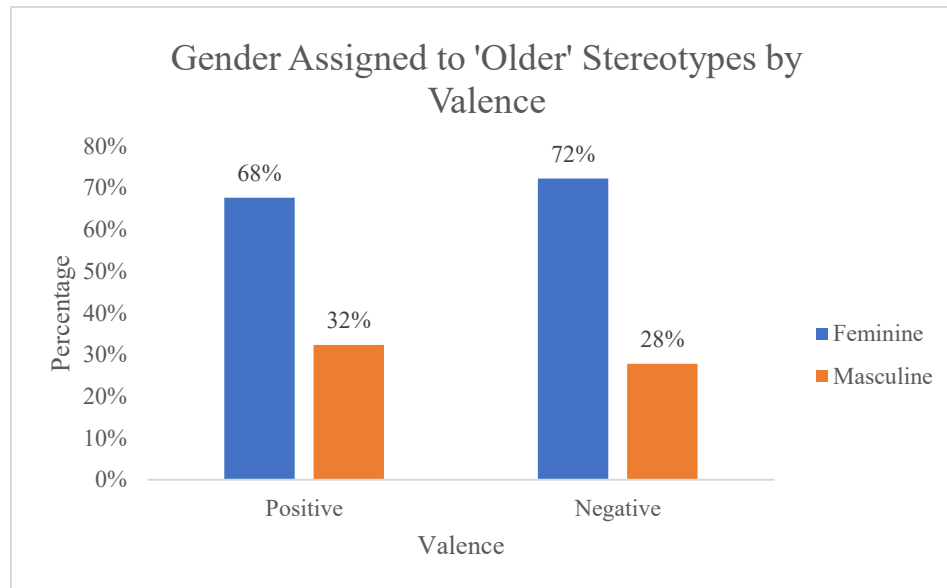


Figure 4. Gender Assigned to ‘Older’ Stereotypes by Valence.

The second follow-up test focused on the relationship of participants’ gender with the gender assigned to stereotypes. The chi-square test results were significant ($\chi^2(1) = 12.753, p < .001$), indicating an relationship between participant gender and the gender participants assigned to an ‘Older’ stereotype. Illustrated in Figure 5, female participants assigned a greater proportion of stereotypes as feminine. Of the 52 participants, 37 self-identified as female, and 15 self-identified as male. Of the 37 female participants, 84% ($n = 31$) assigned stereotypes as feminine and 16% ($n = 6$) assigned stereotypes as masculine. The same trend was observed among male participants where 67% ($n = 10$) assigned stereotypes as masculine and 33% ($n = 5$) assigned stereotypes as feminine. Like the Model 1 follow-up tests, these Model 2 results indicate that participants are more likely to assign an age-based stereotype in terms of their self-identified gender.

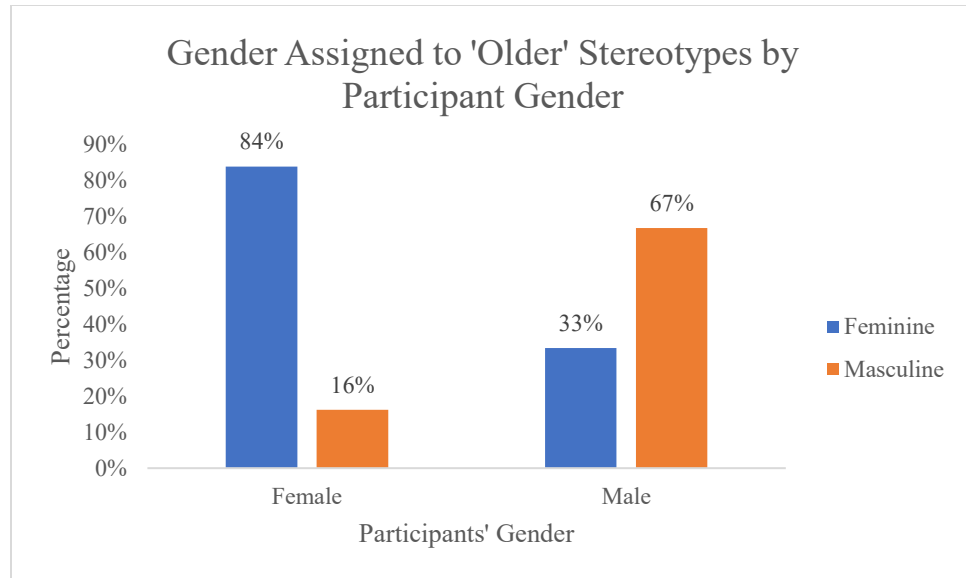


Figure 5. Gender Assigned to Stereotypes by Participants' Gender.

4.1.3 Model 3. This logistic regression model used both 'Senior' and 'Older' data combined, allowing for the target word (Senior, Older) to be used as a predictive variable. Simply explained, this model allows for an understanding of if the specific target word assigned influenced how the stereotypes were gendered. This model was built based on the significant predictor variables found in Models 1 and 2 with the addition of the target word (Senior, Older) as a predictor variable.

To review the research questions at this point in the analysis, the null hypothesis for Research Question A (i.e., the valence of the stereotype will not predict the gender assigned to the stereotype) was rejected for Model 1. Due to valence being found as a significant variable it was included as a predictive variable for Model 3. The null hypothesis for Research Question B (i.e., does the age of the participant influence the gender and valence assigned to a stereotype) was not rejected for both Model 1 and Model 2 as the age of the participant was not found to be a significant predictor. Therefore, the participants' age was not used as a predictive variable for Model 3. The

null hypothesis for Research Question C (i.e., the participants' gender will not predict the gender or valence assigned to a stereotype) was the only variable that had the null hypothesis rejected for both Model 1 and 2. Therefore, the participants gender was included as a predictive variable for Model 3.

Table 3
Logistic Regression Results for Model 3 'Older + Senior' (n= 88)
 Outcome Variable: Gender Assigned to Trait Word

<u>Predictors</u>	<u>B</u>	<u>S.E.</u>	<u>Wald</u>	<u>df</u>	<u>Sig</u>	<u>Exp(B)</u> <u>(95% C.I.)</u>
Valence	.164	.568	.083	1	.773	1.178 (.387, 3.583)
Participant Gender	2.177	.552	15.532	1	.000	8.817 (2.987, 26.027)
Target Word	-1.021	.519	3.865	1	.049	.360 (.130, .997)
Constant	-.620	.442	1.973	1	.160	.538

S.E. = Standard Error, df = Degrees of Freedom, C.I. = Confidence Interval

Like Models 1 and 2, the outcome variable for Model 3 was the gender assigned to trait words. Model 3 was significant ($X^2(3) = 27.035, p < .001$) ($n = 88$) with a -2LL of 92.72, showing that participant gender and target word measures predicted the gender assigned to stereotype trait words. Similar to Models 1 and 2, Model 3 showed that participant gender was significantly associated with the gender participants assigned to the stereotype trait word ($p < .001$). In terms of the odds ratio for participant gender, participants were 8.82 times more likely to assign their own gender to a stereotype trait than the opposite gender (95% CI = 2.99 - 26.03). Like Model 2, the valence was not found to be significant ($p > .05$); however, the target word (Senior, Older) was just significantly associated with the gender assigned ($p = .049$). With an odds ratio less than one between the target words (OR = .360), the target word 'Older' was less likely to be

rated as ‘masculine’ than the target word ‘Senior’ (95%CI = .130 - .997). A summary of the regression Model 3 results is shown above in Table 3.

As a follow-up, two crosstabulations with chi-square tests were conducted: First, to compare the target word assigned with the gender assigned, second to compare participants’ gender to the gender assigned to the trait words overall (i.e., with combined ‘Senior’ and ‘Older’ data). First, chi-square results indicated a statistically significant relationship between the target word and gender assigned ($\chi^2(1) = 7.60, p = .006$). As shown in Figure 6, the target word ‘Senior’ (n = 36) was assigned more ‘Masculine’ (58%, n = 21) than ‘Feminine’ (42%, n = 15) trait words by participants, and the opposite was found for the target word ‘Older’ (n = 52; Masculine: 31%, n = 16; Feminine: 69%, n = 36).

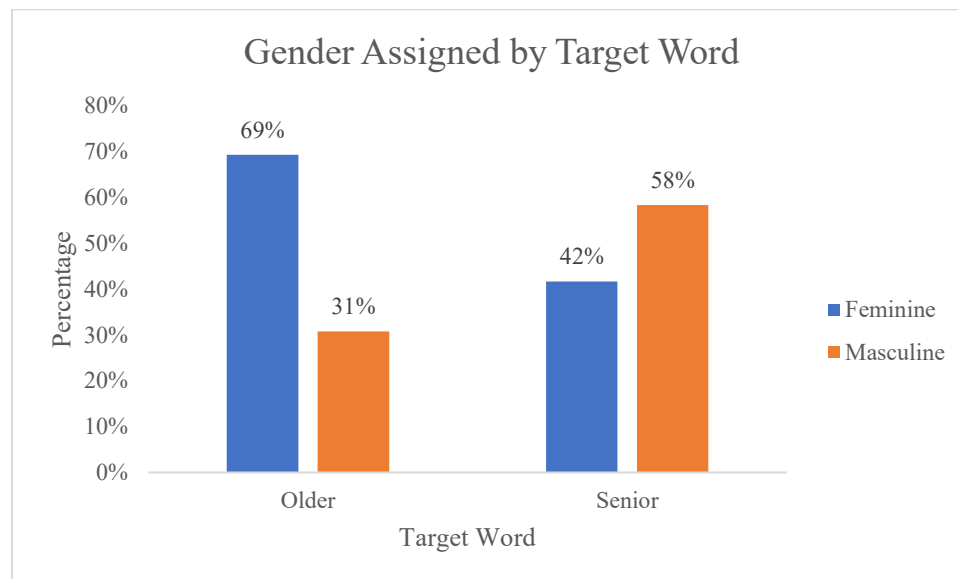


Figure 6. Gender Assigned to Target Words (Older, Senior).

After inspection of how each target word was gendered, the second crosstabulation and chi-square test were conducted to examine how participant gender was related to the gender participants assigned to stereotype traits. The chi-square test

indicated statistically significant results ($\chi^2(1) = 22.411, p < .001$). More specifically, participants were more likely to assign their gender to a stereotype trait. This was not surprising, as Models 1 and 2 previously showed the same pattern of participants assigning their own gender. This shows the same trend with the combined data in Model 3. Shown in Figure 7, 77% of female participants assigned stereotypes as “feminine” (n = 43) versus 23% as “masculine” (n = 13), while 75% of male participants assigned stereotypes as “masculine” (n = 24) versus “feminine” (n = 8). In other words, female participants were more likely to assign a trait word as feminine than masculine, and vice versa for male participants.

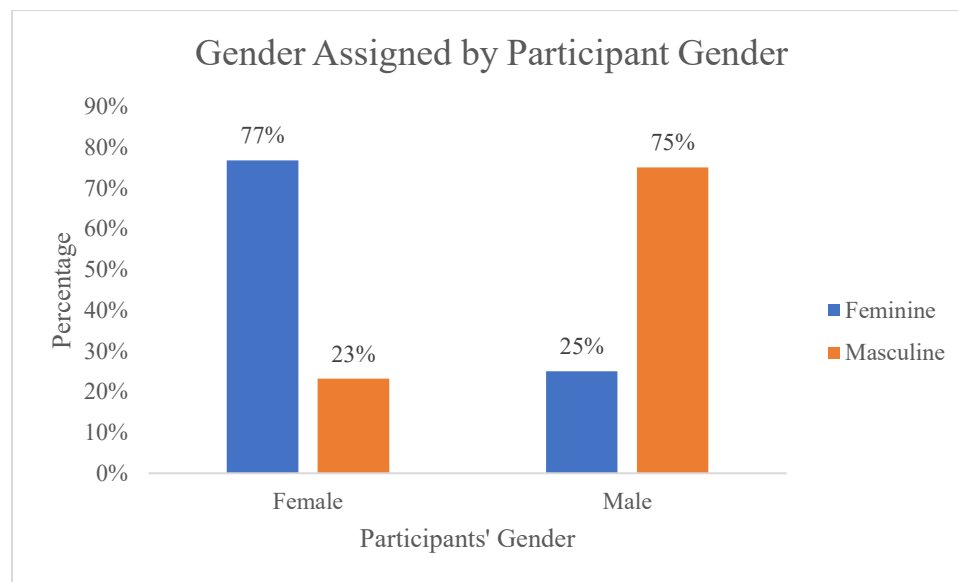


Figure 7. Gender Assigned to Stereotypes (Feminine, Masculine) by Participants' Gender (Female, Male) for Model 3 (Senior, Older).

4.2 Content Analysis

As described in Chapter 3, the final step of the content analytical procedure is to report the results. The results are the stereotype traits that participants attributed to the target words ‘Senior’ and ‘Older’ adult. Informed by the statistical results presented

above, the content analysis results associated with ‘Senior’ will be presented first in subsection 4.2.1, followed by the results for ‘Older’ in subsection 4.2.2, and finally subsection 4.2.3 will provide the results for the combined ‘Senior’ and ‘Older’ results. Each subsection lists and ranks based on the frequency of the stereotype traits in the categories found significant in the statistical models, by gender assigned, by valence, and finally by participants’ gender. Table 4 provides a summary of sample sizes by target word and by category for the content analysis. The table shows the total number of trait words provided by participants followed by the number of unique stereotype units within that total number (in parentheses) found for each trait word and variable category. For example, the ‘Senior’ target word had a total of 24 trait words that were assigned a positive valence, but after completing the analysis there were only 13 distinct stereotype units, this is written as “24 (13)” in Table 4 below.

Table 4 Content Analysis Summary Table			
Categories:	Trait Words		
	‘Senior’ (n = 36)	‘Older’ (n = 52)	Combined (n = 88)
Overall Ranked	36 (16)	52 (27)	88 (38)
By Assigned Gender			
Assigned Feminine	15 (9)	36 (19)	51 (25)
Assigned Masculine	21 (10)	16 (13)	37 (21)
By Valence			
Positive	24 (13)	-	-
Negative	12 (5)	-	-
By Participants’ Gender			
Female	19 (11)	37 (22)	56 (29)
Male	17 (8)	15 (12)	32 (18)
The number of trait words followed by the number of stereotype units (in parentheses) found for each trait word and category.			

A detailed list of all stereotype units associated with each significant variable found for each target word ‘Senior’ (Model 1), ‘Older’ (Model 2), and both target words combined (Model 3) are shown in the tables below. The categories for both target words

are in the following order: first according to the overall stereotypes, by gender assigned to a stereotype (Feminine, Masculine), by stereotype valence (Positive, Negative), and finally by stereotypes by participants' gender (Female, Male). Each table ranks the stereotype units first by count (highest to lowest) and for stereotypes with the same count, they are then organized alphabetically.

4.2.1 Stereotypes associated with 'Senior' (Model 1). This subsection is based on the statistical results of Model 1 and therefore reports the stereotypes associated with the target word 'Senior'. The target word 'Senior' had a total of 36 participants that provided gendered trait words. Looking first at the overall stereotypes that were associated with senior there were a total of 16 stereotype units. The number one stereotype found for senior was "old" with 25% of participants' responses, followed by "wise" with 19% of responses, and "grey hair" with 14% of responses. All stereotypes are shown in frequency-ranked order in Table 5 below.

The next categorization of stereotypes was based on the gender assigned to the trait words by participants. Out of all the trait words that were associated with 'Senior' (n = 36), 15 were assigned as feminine, resulting in a total of nine stereotype units. The number one age stereotype assigned as feminine was "wise" with 40% of participants' responses. This was followed by "grandma" with 13% of responses. The remaining seven feminine stereotypes (rank 3-9) account for 7% of participants' responses each and due to having the same count, can be found in alphabetical order in Table 5.

Of the 36 trait words that were associated with 'Senior', 21 were assigned as masculine, resulting in a total of 10 stereotype units. Like the overall categorization, the number one stereotype assigned as masculine was "old" with 38% of participants'

responses. This was followed by “grey hair” with 24% of responses. The remaining seven masculine stereotypes (rank 3-10) account for 5% of participants’ responses each and can be found in alphabetical order in Table 5 below.

Rank	Overall			Feminine Stereotypes			Masculine Stereotypes		
	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%
1	Old	9	25%	Wise	6	40%	Old	8	38%
2	Wise	7	19%	Grandma	2	13%	Grey Hair	5	24%
3	Grey Hair	5	14%	Alive	1	7%	Discount	1	5%
4	Grandma	2	6%	Disabled	1	7%	Kind	1	5%
5	Sweet	2	6%	Old	1	7%	Older	1	5%
6	Alive	1	3%	Polite	1	7%	Retired	1	5%
7	Disabled	1	3%	Sweet	1	7%	Slow	1	5%
8	Discount	1	3%	Thin	1	7%	Solid	1	5%
9	Kind	1	3%	Travelling	1	7%	Sweet	1	5%
10	Older	1	3%				Wise	1	5%
11	Polite	1	3%						
12	Retired	1	3%						
13	Slow	1	3%						
14	Solid	1	3%						
15	Thin	1	3%						
16	Travelling	1	3%						
Total		36	100%		15	100%		21	100%

All categories total to 100%. However, total summation of percentages shown per category of individually ranked stereotypes are rounded up and may total more than 100%.

Next, stereotypes were categorized by positive and negative valence. Model 1 (‘Senior’) was the only model that found valence significant, therefore, it is the only section that reports positive and negative stereotypes in this chapter. Of the 36 ‘Senior’ trait words the majority were found to be ranked as positive. There was a total of 24 trait words ranked positive that resulted in a total of 13 different positive ‘Senior’ stereotypes. The number one positive stereotype was “wise” with 29% of positive responses. The

second positive stereotype by rank with 13% of responses was “old”. These two positive stereotypes were followed by “grandma”, “grey hair” and “sweet” with each accounting for 8% of responses. The remaining eight stereotypes (rank 6-13) can be found in Table 6 below.

For stereotypes that were classified as negative by participants, there was a total of 12 trait words that formed five negative stereotypes. The number one negative stereotype that was found was “old” that accounted for 50% of responses. This was followed by “grey hair” with 25% of responses. Both “old” and “grey hair” appeared in the top three for positive stereotypes and were the top two for masculine found stereotypes. All negative and positive stereotypes can be found in Table 6 below.

Finally, age stereotypes were organized by the participants’ gender (Female, Male). The target word ‘Senior’ had 36 participants, with 19 participants identifying as female, and 17 as male. Female participants elicited 11 stereotypes that are listed by rank in Table 6 below. The number one stereotype that was associated with ‘Senior’ by female participants was “wise” with 26% of participant responses. Therefore, “wise” was the number one stereotype assigned by female participants and assigned as a feminine stereotype. “Wise” was followed by “grandma”, “grey hair”, “old”, and “sweet” with each stereotype accounting for 11% of responses by female participants.

Male participants (n = 17) elicited a total of eight stereotypes associated with ‘Senior’. The number one stereotype elicited by male participants was “old” with 41% of responses. Therefore, “old” is the number one stereotype not only elicited by male participants, but also attributed as a masculine stereotype, and the number one overall stereotype for ‘Senior’. “Old” was followed by “grey hair” with 18% of responses, and

“wise” with 12% of male participants’ responses. The full list of stereotypes elicited from both female and male participants can be found in Table 6 below.

Rank	Positive Stereotypes			Negative Stereotypes			Female Participants			Male Participants		
	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%
1	Wise	7	29%	Old	6	50%	Wise	5	26%	Old	7	41%
2	Old	3	13%	Grey Hair	3	25%	Grandma	2	11%	Grey Hair	3	18%
3	Grandma	2	8%	Disabled	1	8%	Grey Hair	2	11%	Wise	2	12%
4	Grey Hair	2	8%	Older	1	8%	Old	2	11%	Older	1	6%
5	Sweet	2	8%	Slow	1	8%	Sweet	2	11%	Retired	1	6%
6	Alive	1	4%				Alive	1	5%	Slow	1	6%
7	Discount	1	4%				Disabled	1	5%	Solid	1	6%
8	Kind	1	4%				Discount	1	5%	Thin	1	6%
9	Polite	1	4%				Kind	1	5%			
10	Retired	1	4%				Polite	1	5%			
11	Solid	1	4%				Travelling	1	5%			
12	Thin	1	4%									
13	Travelling	1	4%									
Total		24	100%		12	100%		19	100%		17	100%

All categories total to 100%. However, total summation of percentages shown per category of individually ranked stereotypes are rounded up and may total more than 100%.

Out of all 16 stereotype units found for ‘Senior’ overall, the top two most common stereotypes found were “old” and “wise”. In fact, “old” was the number one ‘Senior’ stereotype that was elicited by male participants, it was the number one stereotype assigned as masculine, it was the number one negative stereotype, and the second-highest ranked positive stereotype. However, “wise” was the number one stereotype elicited by female participants, it was the number one stereotype assigned as feminine, it was the highest-ranked positive stereotype for ‘Senior’, but it was not listed

on the negative stereotype list. All ‘Senior’ stereotypes by all categories can be found in one complete table in Appendix C.

4.2.2 Stereotypes associated with ‘Older’ (Model 2). This subsection is based on the statistical results of Model 2 and therefore reports the stereotypes associated with the target word ‘Older’. This next phase of the content analysis was to complete the same analysis procedure for the ‘Older’ adult target word. The target word ‘Older’ had a total of 52 participants that elicited trait words. The 52 trait words resulted in 27 unique stereotype units. The number one ranked stereotype was “wise” with 15% of participant responses. This was followed by “weak” with 10% of responses, and “grandparent” and “wrinkles” each with 8% of responses. Shown below in Table 7 are the overall age stereotype units elicited for the ‘Older’ target word.

The gender assigned to a stereotype by the participant was the next content analysis completed. Of the trait words associated with ‘Older’ (n = 52), 36 were assigned as feminine, with a total of 19 different stereotype units. The number one age stereotype assigned as feminine was “wise” with 14% of participants’ responses. This was followed by “weak” with 11% of responses. The remaining feminine stereotypes (rank 3-19) can be found in Table 7 below.

Of the 52 ‘Older’ trait words, 16 trait words were assigned as masculine traits, with 13 unique stereotype units. The top three ranked masculine stereotypes were “experienced”, “weak”, and “wise” each accounting for 13% of participants’ responses (39% collectively). The remaining 10 stereotypes (rank 4 -13) accounted for 6% of responses each and can be found in alphabetical order in Table 7 below.

Rank	Overall			Feminine Stereotypes			Masculine Stereotypes		
	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%
1	Wise	8	15%	Wise	5	14%	Experienced	2	13%
2	Weak	5	10%	Weak	4	11%	Weak	2	13%
3	Grandparent	4	8%	Grandparent	3	8%	Wise	2	13%
4	Wrinkles	4	8%	Grey Hair	3	8%	Active	1	6%
5	Age	3	6%	Wrinkles	3	8%	Age	1	6%
6	Grey Hair	3	6%	Age	2	6%	Conservative	1	6%
7	Cute	2	4%	Cute	2	6%	Grandfather	1	6%
8	Experienced	2	4%	Mature	2	6%	Grouchy	1	6%
9	Mature	2	4%	Mom	2	6%	Him	1	6%
10	Mom	2	4%	80 or older	1	3%	Kind	1	6%
11	80 or Older	1	2%	Adult	1	3%	Republican	1	6%
12	Active	1	2%	Care	1	3%	Senior	1	6%
13	Adult	1	2%	Decrepit	1	3%	Wrinkle	1	6%
14	Care	1	2%	Elderly	1	3%			
15	Conservative	1	2%	Feisty	1	3%			
16	Decrepit	1	2%	Freedom	1	3%			
17	Elderly	1	2%	Medical issues	1	3%			
18	Feisty	1	2%	Potential	1	3%			
19	Freedom	1	2%	Sweet	1	3%			
20	Grouchy	1	2%						
21	Him	1	2%						
22	Kind	1	2%						
23	Medical Issues	1	2%						
24	Potential	1	2%						
25	Republican	1	2%						
26	Senior	1	2%						
27	Sweet	1	2%						
Total		52	100%		36	100%		16	100%

All categories total to 100%. However, total summation of percentages shown per category of individually ranked stereotypes are rounded up in this table and may total more than 100%.

Lastly, the final significant category for ‘Older’ was the participants’ gender (Female, Male). The target word ‘Older’ had 52 participants, with 37 participants identifying as female, and 15 identifying as male. The number one stereotype that was associated with ‘Older’ by female participants was “wise” with 16% of participant responses. Followed by “grandparent” with 11% of responses and “weak” with 8% of responses. The full list of female elicited stereotypes is presented below in Table 8.

Male participants (n = 15) elicited a total of 12 stereotypes associated with ‘Older’. The top three stereotypes elicited by male participants were “weak”, “wise”, and “wrinkled” each representing 13% of responses. The remaining nine stereotypes each accounted for 7% of responses and can be found in Table 8 below.

Table 8						
Stereotypes by Participants’ Gender for ‘Older’						
Rank	Female Participants			Male Participants		
	Stereotype	Count	%	Stereotype	Count	%
1	Wise	6	16%	Weak	2	13%
2	Grandmother	4	11%	Wise	2	13%
3	Weak	3	8%	Wrinkled	2	13%
4	Age	2	5%	Age	1	7%
5	Grey Hair	2	5%	Conservative	1	7%
6	Mature	2	5%	Cute	1	7%
7	Mom	2	5%	Experienced	1	7%
8	Wrinkles	2	5%	Grey	1	7%
9	80 or older	1	3%	Him	1	7%
10	Active	1	3%	Kind	1	7%
11	Adult	1	3%	Medical Issues	1	7%
12	Care	1	3%	Republican	1	7%
13	Cute	1	3%			
14	Decrepit	1	3%			
15	Elderly	1	3%			
16	Experienced	1	3%			
17	Feisty	1	3%			
18	Freedom	1	3%			
19	Grouchy	1	3%			
20	Potential	1	3%			
21	Senior	1	3%			
22	Sweet	1	3%			
Total		37	100%		15	100%
All categories total to 100%. However, total summation of percentages shown per category of individually ranked stereotypes are rounded up in this table and may total more than 100%.						

Out of the 27 stereotype units that were elicited for ‘Older’ adult, the most common stereotypes were “wise”, “weak”, and “wrinkles.” “Wise” was also the number one stereotype elicited by female participants and the number one stereotype assigned as feminine. “Wise” and “weak” were tied as the most common stereotypes elicited by male

participants. For stereotypes assigned as masculine, “wise” was found to be the second-highest ranked stereotype, with the highest-ranked masculine stereotype being “experienced”. Interestingly, “experienced” originally ranked in 8th overall for the ‘Older’ stereotypes and is not listed at all in any stereotypes elicited by female participants, nor was it ever assigned as a feminine stereotype. A full table comparing all categorizations for ‘Older’ can be found in Appendix D.

4.2.3 Stereotypes associated with ‘Older’ and ‘Senior’ Combined (Model 3).

This subsection is based on the statistical results of Model 3 and therefore combined the stereotypes for both the ‘Senior’ and ‘Older’ target words. A total of 88 participants elicited 38 different age stereotype units. The number one ranked stereotype was “wise” with 17% of participant responses. This was followed by “old” with 10% of responses, and “grey hair” with 9% of responses. For a full overall ranked list of all combined stereotypes see Table 9 below.

The gender assigned to the combined stereotypes was the next content analysis classification completed. Of the total 88 trait words, 51 were assigned as feminine, resulting in a total of 25 unique feminine stereotype units. The number one stereotype assigned as feminine was “wise” with 11% of participants’ responses. This was followed by “grandparent” with 10% of responses, and “weak” with 8% of responses. The remaining feminine stereotypes (rank 4 - 25) can be found in Table 9 below.

A total of 37 trait words were assigned as masculine traits, and it resulted in 21 different masculine stereotype units. The top-ranked masculine stereotype was “old” with 22% of participant responses. This was followed by “grey hair” with 14% of responses,

and “wise” accounting for 11% of participant responses. The remaining masculine stereotypes (rank 4 - 21) can be found in Table 9 below.

Rank	Overall Stereotype			Feminine Stereotypes			Masculine Stereotypes		
	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%
1	Wise	15	17%	Wise	11	22%	Old	8	22%
2	Old	9	10%	Grandparent	5	10%	Grey hair	5	14%
3	Grey Hair	8	9%	Weak	4	8%	Wise	4	11%
4	Grandparent	6	7%	Grey Hair	3	6%	Experienced	2	5%
5	Weak	5	6%	Wrinkles	3	6%	Kind	2	5%
6	Wrinkles	4	5%	Age	2	4%	Active	1	3%
7	Age	3	3%	Cute	2	4%	Age	1	3%
8	Sweet	3	3%	Mature	2	4%	Conservative	1	3%
9	Cute	2	2%	Mom	2	4%	Discount	1	3%
10	Experienced	2	2%	Sweet	2	4%	Grandfather	1	3%
11	Kind	2	2%	80 or older	1	2%	Grouchy	1	3%
12	Mature	2	2%	Adult	1	2%	Him	1	3%
13	Mom	2	2%	Alive	1	2%	Older	1	3%
14	80 or older	1	1%	Care	1	2%	Republican	1	3%
15	Active	1	1%	Decrepit	1	2%	Retired	1	3%
16	Adult	1	1%	Disabled	1	2%	Senior	1	3%
17	Alive	1	1%	Elderly	1	2%	Slow	1	3%
18	Care	1	1%	Feisty	1	2%	Solid	1	3%
19	Conservative	1	1%	freedom	1	2%	Sweet	1	3%
20	Decrepit	1	1%	Medical issues	1	2%	Weak	1	3%
21	Disabled	1	1%	Old	1	2%	Wrinkle	1	3%
22	Discount	1	1%	Polite	1	2%			
23	Elderly	1	1%	Potential	1	2%			
24	Feisty	1	1%	Thin	1	2%			
25	Freedom	1	1%	Travelling	1	2%			
26	Grouchy	1	1%						
27	Him	1	1%						
28	Medical Issues	1	1%						
29	Older	1	1%						
30	Polite	1	1%						
31	Potential	1	1%						
32	Republican	1	1%						
33	Retired	1	1%						
34	Senior	1	1%						
35	Slow	1	1%						
36	Solid	1	1%						
37	Thin	1	1%						
38	Travelling	1	1%						
Total		88	100%		51	100%		37	100%

All categories total to 100%. However, total summation of percentages shown per category of individually ranked stereotypes are rounded up in this table and may total more than 100%.

The final content analysis classification for Model 3 was the participants' gender (Female, Male). The combined target word had 88 participants, with 56 participants identifying as female, and 32 identifying as male. Of the 56 female participants, a total of 26 stereotype units were found. The number one age stereotype elicited by female participants was "wise" with 20% of participant responses. This was followed by "grandparent" with 11% of their responses and "grey hair" with 7% of responses. The full list of female elicited stereotypes is listed below in Table 10.

Of the 32 male participants, a total of 18 stereotype units were identified. The number one stereotype elicited by male participants was "old" with 22% of their responses. This was followed by both "grey hair" and "wise" that each accounted for 13% of male participant responses. The remaining stereotypes (rank 4 -18) can be found in Table 10 below.

Rank	Female Participant			Male Participant		
	Stereotype	Count	%	Stereotype	Count	%
1	Wise	11	20%	Old	7	22%
2	Grandparent	6	11%	Grey hair	4	13%
3	Grey Hair	4	7%	Wise	4	13%
4	Sweet	3	5%	Weak	2	6%
5	Age	2	4%	Wrinkle	2	6%
6	Mature	2	4%	Age	1	3%
7	Mom	2	4%	Conservative	1	3%
8	Old	2	4%	Cute	1	3%
9	Weak	3	5%	Experienced	1	3%
10	Wrinkles	2	4%	Him	1	3%
11	80 or older	1	2%	Kind	1	3%
12	Active	1	2%	Medical issues	1	3%
13	Adult	1	2%	Older	1	3%
14	Alive	1	2%	Republican	1	3%
15	Care	1	2%	Retired	1	3%
16	Cute	1	2%	Slow	1	3%
17	Decrepit	1	2%	Solid	1	3%
18	Disabled	1	2%	Thin	1	3%
19	Discount	1	2%			
20	Elderly	1	2%			
21	Experienced	1	2%			
22	Feisty	1	2%			
23	Freedom	1	2%			
24	Grouchy	1	2%			
25	Kind	1	2%			
26	Polite	1	2%			
27	Potential	1	2%			
28	Senior	1	2%			
29	Travelling	1	2%			
Total		56	100%		32	100%

All categories total to 100%. However, total summation of percentages shown per category of individually ranked stereotypes are rounded up in this table and may total more than 100%.

CHAPTER 5: DISCUSSION

The purpose of this study was to gain an understanding of how age stereotypes associated with two target words, ‘Senior’ and ‘Older’, are gendered. This chapter will discuss the key findings in relation to the study purpose and the four research sub-questions in terms of the existing literature. As a reminder, Research Question A was: Are there valence differences between masculine and feminine age stereotypes associated with being a ‘Senior’ or ‘Older’ adult?; Research Question B was: Does the age of the participant influence the gender and valence assigned to an age stereotype?; Research Question C was: Does the participants’ gender influence the gender and valence assigned to an age stereotype?; and Research Question D was: What are the more prevalent gender-based age stereotypes overall, by gender assigned, by valence, and by participant gender? This chapter is organized into subsections based on Research Questions A to C with subsections on gendered aspects of age stereotypes in terms of valence, participant age, and participant gender. Observations from the content analysis helped address each research question; therefore, Research Question D is integrated into and addressed throughout each subsection pertaining to Research Questions A to C.

5.1 Overall Feminine & Masculine Age Stereotypes

This study found that age-based stereotypes are indeed gendered and influenced by the gender of the individual perceiving them. Disproportionately more feminine than masculine stereotypes were observed overall in this study. However, this is unsurprising as there were more females than male participants and statistically it was shown that participants are more likely to perceive stereotypes based on their gender.

Regardless, looking closer at the content of the stereotypes, there are specific words that were unique to each gender. Of the total 25 stereotypes that were assessed to be feminine, only 17 were strictly assigned as feminine and never listed as masculine. These 17 stereotypes were: adult, alive, care, cute, decrepit, disabled, elderly, feisty, freedom, mature, medical issues, mom, polite, potential, thin, traveling, and 80 or older. Likewise, of the total 21 stereotypes assessed to be ‘masculine’, only 13 were strictly masculine and never listed as feminine. These 13 stereotypes were: active, conservative, discount, experienced, grouchy, him, kind, older, republican, retired, senior, slow, and solid. Some of these words are already gendered, such as “mom” or “him” and would make sense why they are not listed under the opposite gender. However, importantly, many of the stereotype words are not distinctly gendered, for example “thin” was found to be feminine, where “solid” was found to be masculine. This finding reinforces the notion that stereotypes associated with aging, both directly and indirectly, are representations of gender.

Observing the overall list of feminine and masculine unique age stereotypes there are some clusters or themes that stand out. There were health-related terms like “decrepit”, “disabled”, and “medical issues” that were found to be uniquely feminine, and the only health-related masculine specific term was “active”. This is consistent with findings from an image-focused study on adults aged 50 and older conducted by Martin (2012) who found that women were more likely to be portrayed as a dependant and at risk, and men were more likely to be portrayed as active. It may also represent the consequences of the longevity gap that occurs between the genders. Women tend to live

longer than men and have more long-term disability and chronic diseases in comparison to men (Mikkonen & Raphael, 2010).

In comparison to the feminine stereotypes there were more career-focused terms like “experienced” and “retired”, or political terms like “conservative” and “republican” found to be uniquely masculine. This is consistent with Kornadt, Voss, and Rothermund (2013) who found that older men were ranked more favorably in terms of finances and work context compared to older women. In fact, this was the only domain that Kornadt and colleagues (2013) found this clear divide in all other social categories (leisure, friends, religion), women of all ages were found to be more positively ranked than men (Kornadt et al., 2013).

5.2 Gendered Age Stereotypes & Valence

The purpose of Research Question A was to see if feminine and masculine age-based stereotypes were more positive or negative. Looking at the gender assigned to valence, positive ‘Senior’ stereotypes were found to be similarly ranked as feminine or masculine, whereas the few negative ‘Senior’ stereotypes found were more likely to be ranked as masculine. This is reflected in the content analysis findings, where the top two positive stereotypes for ‘Senior’ were “wise” and “old”, which were both listed as feminine and masculine stereotypes. However, “wise” was the number one feminine and “old” was the number one masculine stereotype. The top two negative ‘Senior’ stereotypes were “old” and “grey hair”, and interestingly “grey hair” was only listed as a masculine stereotype for ‘Senior’. The number one ‘Senior’ stereotype overall was found to be “old”, and as stated it was both the number one negative ranked stereotype and the

second-ranked positive stereotype. Therefore, the content of feminine age stereotypes was more consistently ranked positively compared to masculine age stereotypes.

The finding and content patterns described above also indicate that age-based stereotypes do not singularly hold a positive or negative valence but can be mixed. This is congruent with findings from Cuddy, Norton, and Fiske (2005), who found perceptions of older individuals are often mixed, and not just as simple as one valence over the other. This trend is also found for the stereotypes “grey hair” that is listed both as a positive and a negative stereotype for both ‘Senior’ and ‘Older’ target words.

Focusing on the ‘Older’ target word, it was found that for both positive and negative stereotypes, participants were two times as likely to assign the stereotype as feminine than masculine. This is shown in the content analysis, where the number one positive ‘Older’ stereotype “wise” was listed as both a feminine and masculine stereotype but had greater than twice the count for feminine than masculine. This same trend was found for the number one ranked negative stereotype “weak”, while listed as both feminine and masculine the count was double for feminine compared to masculine.

The results of the logistic regression conducted found that valence was a significant predictor for gender assigned to stereotypes in Model 1 (‘Senior’), but not in Model 2 (‘Older’) or Model 3 (‘Senior’ & ‘Older’). Munroe and Meisner (2016) looked at young adult participants’ (ages 18-29) perceptions of age-based stereotypes from this data set and found that there was no significant difference for positive valence between target words. However, what Munroe and Meisner (2016) did find was that from young adults’ perspectives, the target word ‘Senior’ was the least negative. While valence may not have been found to be significant in this study, upon closer look at these data for both

target words it was observed that there were more positive stereotypes found than negative. This is the opposite of what Schmidt and Boland (1986) and Hummert (1990) found in their studies, which both indicated that there were more negative than positive age-based stereotypes.

5.3 Gendered Age Stereotypes & Participant Age

Research Question B was designed to see if the participant age influences the perception of age-based stereotypes. This study did not find any significant results with age as a variable as measured in the original data source that categorized participants' ages into three groups: 18 - 29, 30 - 59, and 60+ years (Munroe & Meisner, 2016). Analysis conducted included all three age groups as variables and all were found statistically insignificant in both Model 1 and 2, and therefore excluded from Model 3 and the content analysis.

These findings are inconsistent with those of Hummert et al. (1994), who found that a participant's age influenced their perception age-based stereotype valence. This could be due to the very specific sample size that occurred with the specific research parameters used in the current study. Indeed, the literature has shown that age does influence one's perception of age-based stereotypes. For example, young adults were found to have the most ageist beliefs, also young adult males were found to have more ageist beliefs than females of the same age (Kalavar, 2001; Rupp, Vodanovich, & Credé, 2005).

Further, Kornadt et al. (2013) also found that age influenced the perception of gendered age-based stereotypes. In their findings, Kornadt et al. (2013) found that middle-aged and older adults had more gendered age-based stereotypes in multiple

domains, where younger adults held less gendered age-based beliefs in most domains. Although participant age was not found significant in this study, age has been found in the literature to influence ageist beliefs. Therefore, it should continue to be a variable in future studies to explore more on how age influences both gender and age-based beliefs.

5.4 Gendered Age Stereotypes & Participant Gender

The intent behind Research Question C was to learn if participant gender in the study influenced age-based stereotypes. Indeed, participant gender was the only variable found to be significant for all levels of statistical analysis. In all three models, participants were more likely to assign their own gender to the stereotype participants elicited. In Model 1, it was found that females were twice as likely to assign “feminine” to stereotypes than males, and vice versa for male participants. Model 2 and Model 3 showed similar trends, and as such would indicate that when participants are asked to think of age-based stereotypes, they do so reflective of their gender. This is unique in that it contradicts what Kite (1996) found when exploring age and occupation labels. In this study, Kite (1996) found that regardless of the participants’ gender, the majority of participants would assume ‘male’ when no gender-specific details were provided about a person. However, it is consistent with Levy’s (2009) Stereotype Embodiment Theory which explains that for a stereotype to have an impact on a person’s life, the stereotype needs to be self-relevant. In this context, participants were eliciting stereotypes that were self-relevant to their gender.

The content analysis reflects the trend of participants eliciting stereotypes reflective of their gender. When comparing the list of stereotypes elicited by female participants to the list of stereotypes assigned as feminine, there is a clear overlap. Of the

nine feminine ‘Senior’ stereotypes, eight are cross-listed with stereotypes elicited from female participants, and two are cross-listed with stereotypes elicited by male participants. Male participants elicited a total of eight ‘Senior’ stereotypes and seven of these stereotypes are cross-listed with masculine stereotypes. This trend is also found for Model 2 and Model 3. In Model 2, of the total 25 feminine ‘Older’ stereotypes 23 are cross-listed with stereotypes elicited by female participants, and nine were cross-listed with stereotypes elicited by male participants. Looking closer and comparing the cross-listed words, some stereotypes were found to be only elicited by female participants and ranked feminine and a similar trend was found for male participants and masculine stereotypes were found. For example, “mature” was found to be uniquely feminine and only elicited by females, and “conservative” was found to be uniquely masculine and only elicited by male participants in Model 2. In Model 3, “polite” was found to be uniquely feminine and only elicited by females, and “retired” was found to be uniquely masculine and only elicited by male participants,

5.5 Limitations & Recommendations for Future Research

Due to the use of secondary data, there are some specific limitations to this study. The first is that IP addresses were not collected during data collection to maintain anonymity; therefore, there is no way to confirm the participants’ location to confirm if the survey went international or not. Although the use of the specific word “republican” may indicate that the survey was completed outside of Canada. This would indicate that some responses could be from across Canada, or the world. We have no geographical context to apply the findings to directly. Additionally, there was no information collected on cultural background, ethnicity, or race and therefore these variables could not be

considered in the intersectionality of aging and gender. Future research should include intersectionality to consider how sex, gender, race, sexuality, social class, and more are linked to age-based stereotypes (Bauer, 2014).

Other potential limitations pertain to the self-reported online survey method. For example, participant's self-reported responses (i.e., the stereotype trait as well as the valence and gender assigned to that trait) may have been influenced by social desirability bias. This social desirability bias may have resulted in participants providing more positive stereotypes overall as participants may have wanted their responses to be more socially appropriate rather than a more accurate reflection of their beliefs. Additionally, the order in which the questions were asked may be a limitation, as participants were first asked to assign valence to their stereotype followed by being asked to assign a gender to the stereotype. It is possible that by participants first assigning the valence and then asked to assign gender, that participants were more likely to assign "all gender" rather than specific "feminine" or "masculine". Replication of future studies should consider the order of their questions when conducting future age and gender-based stereotype research.

Another limitation of this study was the exclusion of all gender data to specifically look at masculine and feminine stereotypes. Recognizing that gender does not operate on a binary, it is apparent that with the removal of all gender data there were implications to some of the interpretations of specific stereotypes. There are ungendered words, that were labelled as gendered like the word "grandparent", some participants used gendered specific terms like "grandmother" or "grandfather" but "grandparent" was

also used. Without the inclusion of the “all gendered” data we do not have the full picture of how some of these ungendered words are perceived as gendered.

A recommendation for future studies could be in the design of the methods. This study was a multi-method study, but not necessarily a mixed-method as there is a debate on if the content analysis is more qualitative or quantitative. Due to the original study design, this study only had one-word responses to work with which resulted in a manifest content analysis. This allowed for a surface level of analysis only and therefore a deeper level of analysis is not possible to lead to the inferred meaning behind the stereotype content. A recommendation for future studies would be to have a more qualitative level of analysis to correspond with the statistical analysis, this would allow a greater understanding of how age-based stereotypes are gendered and experienced.

5.6 Novelty, Significance, & Implications

This study is novel considering that all people experience the social influences of gender and aging in some way and in turn it can impact the health of a population. This study addresses a gap in both the gender and age stereotype literature. This study is not only novel but also important because there was a focus on the terms ‘Senior’ and ‘Older’ adults which are commonly used in programming and policies. Age-related terms like ‘Senior’ are often associated with negative connotations as a result of ageism which furthers the stereotype that aging is a negative experience (Levy, 1996). Through understanding how age-related terms are perceived and used, there is potential to shift the ageist discourse in society that is predominantly held against older adults. Reducing ageist beliefs could lead to a healthier and more inclusive society for members of the aging population. This in turn could potentially have a trickle-down effect where a

reduction in ageist language and beliefs could positively impact middle and younger aged adults as they in turn age and become members of the older adult population with reduced ageing anxiety. As Popham and colleagues (2011) found, young adults with ageist attitudes were more likely to participate in risky health-related behaviours, so there is potential that this could influence the overall health and well-being of younger adults as well.

5.7 Methodological Approaches

Like using mixed-methods, the multi-method approach in this study allowed for a more robust understanding of the research question compared to using one method alone. This added value is done through triangulation which occurs when findings from more than one method are integrated to address the same research question. Triangulating the results of two methods allows for a richer understanding of the research question and provides stronger conclusions (Creswell, 2014; Hesse-Biber, 2010). Additionally, using multiple methods allows for the complementarity of the results allowing for deeper understanding and a more complete picture than one method in isolation (Hesse-Biber, 2010).

As such, using multiple methods for this study provided a better understanding of how age-based stereotypes are gendered. The statistical analyses provided an overall snapshot of significant results, to 95% confidence, of how gender relates with age-based stereotypes, such as learning that a participant's gender was the most statistically reliable factor found to associate with the gender assigned to age stereotypes. The statistical analysis also provided a focus for the second methodology, the content analysis.

Content analysis allowed for a different viewpoint, it brought out the actual stereotype content to give an additional and different perspective to the statistical results. Distinct and complementary patterns were found through this method. For example, how the same top ranked stereotypes assigned as feminine as well as masculine matched the top-ranked words elicited by female and male participants, respectively. Further, how ‘Senior’ based stereotypes “wise” and “grandma” were the top two words elicited by females and assigned as feminine. How “old” and “grey hair” age stereotypes were the top two words elicited by men and assigned masculine. The statistical analysis provided the understanding that participants’ gender is significant in understanding how age-based stereotypes are gendered, and the content analysis provided the actual stereotype content and how they are unique to each gender.

5.8 Knowledge Dissemination

The full thesis was presented in May 2020 for completion of the Master of Art’s Health Promotion degree requirement for a thesis defense. Upon completion of the program, the final thesis document will be available on the Dalhousie University online thesis portal. Additionally, the results of this study have been and will be shared in multiple formats. The preliminary findings of the content analysis were already shared at the Canadian Association on Gerontology’s Annual Scientific and Educational Meeting (CAG ASEM) held in Moncton, New Brunswick in October 2019. The results will be submitted for presentation in the next two years at a relevant health conference such as CAG ASEM or Public Health 2021 organized by the Canadian Public Health Association. Further, at least one manuscript will be written based on this study and submitted for publication in a peer-reviewed journal.

5.9 Relevance to Health Promotion

Understanding the language used to describe the aging population can encourage the use of more inclusive language to reduce negative stereotypes and help create a more inclusive psychosocial environment. As outlined in the Ottawa Charter for Health Promotion, the environment (political, social, cultural, behavioural, and much more) can favour or hinder the health of a population (WHO, 1986). Health promotion was built on a foundation of enabling people to have control and the ability to improve their own lives and health. As well, health is viewed by health promotion as more than just a physical aspect, it includes and is not limited to mental and social well-being, and capability to cope with the environment (WHO, 1986).

In the field of health promotion, building healthy public policy and creating supportive environments are two core pillars for enabling change. These are two important factors when considering the health needs of an aging population. To support and enable individuals to have control over their life and health as they age into older adulthood, an inclusive and supportive environment is needed. Policy is one factor that contributes to the support and environment of older adults, and it ideally should be considerate of the language used to reduce any ageist implications or causes of exclusion. As stated in the charter, health promotion should aim to achieve equity in health which requires developing supportive aging environments and being inclusive of gender. Therefore, it must be clear how aging stereotypes are gendered and how this influences the language used in society. In turn using positive and inclusive language in society could help foster a positive aging environment for people of all ages.

5.10 Policy and Practice Implications

The policy and practice implications of this research are complicated given that the results of this study illustrated the high level of complexity of age-based stereotypes. For example, comparing the two target words ‘Senior’ and ‘Older’, which represent two common terms of the aging population in policy and practice, it is not as simple as one term being less gendered or less negative than the other. Further, the statistical and content analyses of this study demonstrated that age-based stereotypes are gendered and complex; but, findings do not provide insight on the lived experiences of members from the aging population. Thus, it may be possible that the term ‘Senior’ is less negative overall, but, when discussed with members of the aging population, is found to be problematic, as identified in the SHIFT action plan (Nova Scotia Department of Seniors, 2017). It is also important that when addressing the aging-population it is not represented as a homogenous group but encapsulates a range of diverse individuals. So, one all-encompassing term may not be distinctly better or preferred. Term(s) used may require context-specific language and/or the acknowledgment that the terminology used in policy and practice may not reflect the entirety of the aging population. More research, primary in design, is required to assess or evaluate how age-based terms like ‘Senior’ and ‘Older’ adult are used in policy and practice and the implications of these terms on policy and practice outcomes.

5.11 Researcher Positionality

The lead researcher, Sara Brushett, identifies as a cisgender heterosexual female and is sensitive to the fact that she is not an older adult herself and that gender does not operate in discrete binaries. The primary researcher has completed a Bachelor of Science

in Psychology and Sociology, followed by a Bachelor of Science in Health Promotion where her honours thesis focused on social norms of aging, gender, and sexuality. These studies were developed from personal and academic interests in gender, the process of aging, and pursuing research on this topic area at the graduate level.

The lead researcher has the TCPS 2: CORE certification (Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics). She is also a student research scholar in the Healthy Populations Institute at Dalhousie University, and a student member of the Canadian Association on Gerontology.

The lead researcher, with guidance from supervisors Drs. Brad Meisner and Sara Kirk, was active at each stage of the study including: preliminary research; research question development; research ethics waiver submission; analyzing data; describing and interpreting the results; and dissemination. The supervisors and committee members aided with the analysis and interpretation of data and provided critical feedback throughout the entire process.

5.12 Conclusion

Aging and gender are both, in part, socially constructed and can both influence the overall health and well-being of a population. This study sought to explore gendered aspects of age-based stereotypes and found that aging is indeed a gendered experience. However, aging is multidimensional and complex. It is not as simple as one stereotype being positive or negative, or one target word (Senior, Older) being a better choice over the other. Nor is it as simple as feminine stereotypes being positive and masculine stereotype being negative. Valence and the participants are significant factors in age-based literature but were not found to be overall statistically significant in this study. This

study did find that the gender of a participant was influential to their perception of gendered age-based stereotypes. Participants were found to perceive age-based stereotypes in reflection of their gender, adding to Levy's (2009) SET concept that for a stereotype to be influential it needs to be self-relevant. What was found is that more research is needed that considers aspects of gender, both the gender assigned to a stereotype and the participants' self-identified gender, as key variables in understanding age-based stereotypes.

REFERENCES

- Ahmed, T., Vafaei, A., Auais, M., Guralnik, J., & Zunzunegui, M. V. (2016). Gender roles and physical function in older adults: Cross-sectional analysis of the International Mobility in Aging Study (IMIAS). *Plos ONE*, *11*(6), 1-18. doi: 10.1371/journal.pone.0156828
- American Psychological Association Task Force on Gender Identity and Gender Variance. (2008). Report of the task force on gender identity and gender variance. Washington, DC: American Psychological Association.
- Baker, K., & Beagan, B. (2014). Making assumptions, making space: An anthropological critique of cultural competency and its relevance to queer patients. *Medical Anthropology Quarterly*, *28*(4), 578-598. doi:10.1111/maq.12129
- Bonnesen, J.L. & Burgess, E.O. (2004). Senior moment: The acceptability of an ageist phrase. *Journal of Aging Studies*, *18*, 123-142. doi: 10.1016/j.jaging.2004.01.008
- Brunton, R. J., & Scott, G. (2015). Do we fear ageing? A multidimensional approach to ageing anxiety. *Educational Gerontology*, *41*, 786-799.
- Bauer, G. R. (2014). Incorporating intersectionality theory into population health research methodology: Challenges and the potential to advance health equity. *Social Science & Medicine*, *110*10-17. doi: 10.1016/j.socscimed.2014.03.022
- Bauer, G., Hammond, R., Travers, R., Kaay, M., Hohenadel, K., & Boyce, M. (2009). "I don't think this is theoretical; this is our lives": How erasure impacts health care for transgender people. *Journal of the Association of Nurses in AIDS Care*, *20*(5), 348-361. doi: 10.1016/j.jana.2009.07.004
- Butler, R. N. (2005). Ageism: Looking back over my shoulder. *Generations*, *29*(3), 84-86

- Canada. Parliament. House of Commons. Standing Committee on Health. (2019). The health of LGBTQIA2 communities in Canada. Report of the Standing Committee on Health. 42nd Parliament, 1st Session. Retrieved from: <https://www.ourcommons.ca/Content/Committee/421/HESA/Reports/RP10574595/hesarp28/hesarp28-e.pdf>
- Canadian Institutes of Health Research. (2015). *Definitions of sex and gender*. Retrieved from: <http://www.cihr-irsc.gc.ca/e/47830.html>
- Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada. (2014). *Tri-council policy statement: Ethics conduct for research involving humans*. Retrieved from: http://www.pre.ethics.gc.ca/pdf/eng/tcps2-2014/TCPS_2_FINAL_Web.pdf
- Clarke, L. H., & Griffin, M. (2008). Visible and invisible ageing: Beauty work as a response to ageism. *Ageing & Society*, 28(5), 653-674.
- Clarke, L. H., & Korotchenko, A. (2011). Aging and the body: A review. *Canadian Journal on Aging*, 30(3), 495-510. doi:10.1017/S0714980811000274
- Connell, R. (2012). Gender, health and theory: Conceptualizing the issue, in local and world perspective. *Social Science & Medicine*, 74, 1675-1683, doi:10.1016/j.socscimed.2011.06.006
- Courtenay, W. H. (2010). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. In S. R. Harper & F. Harris III (Eds.), *College men and masculinities: Theory, research, and implications for practice*. (pp. 307–336). San Francisco, CA: Jossey-Bass. Retrieved from:

<http://search.ebscohost.com/login.aspx?direct=true&db=psych&AN=2010-08736-016&site=ehost-live>

Craciun, C. & Flick, U. (2016). Aging in precarious times: Exploring the role of gender in shaping views on aging, *Journal of Women & Aging*, 28:6, 530-539, doi: 10.1080/08952841.2016.1223896

Crenshaw, K.W. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics. *University of Chicago Legal Forum*, 1989, 138–67.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks: Sage.

Cuddy, A. C., Norton, M. I., & Fiske, S. T. (2005). This old stereotype: The pervasiveness and persistence of the elderly stereotype. *Journal of Social Issues*, 61(2), 267-285. doi:10.1111/j.1540-4560.2005.00405.x

Dea, S. (2016). *Beyond the binary: Thinking about sex and gender*. Ontario: Broadview Press

Elo, S. & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107-115. doi:10.1111/j.1365-2648.2007.04569.x

Field, A. (2013). *Discovering statistics using IBM SPSS statistics (4th ed)*. London: Sage Publications.

Government of Canada. (2018). *New Horizons for Seniors Program*. Retrieved from: <https://www.canada.ca/en/employment-social-development/programs/new-horizons-seniors.html>

- Gray, D.E. (2014). *Doing research in the real world (3rd ed)*. London, UK: Sage Publications
- Hankivsky, O. (2014, April). *Intersectionality 101*. The Institute for Intersectionality Research & Policy, SFU. Retrieved from: https://www.researchgate.net/publication/279293665_Intersectionality_101
- Hesse-Biber, S. N. (2010). *Mixed methods research: Merging theory with practice*. Retrieved from <https://ebookcentral.proquest.com>
- Hsieh, H.F. & Shannon, S. E. (2005). Three approaches to qualitative content analysis *Qualitative Health Research, 15*(9), 1277-1288. doi:10.1177/1049732305276687
- Hummert, M. L. (1990). Multiple stereotypes of elderly and young adults: A comparison of structure and evaluations. *Psychology and Aging, 5*(2), 182-193. doi:10.1037/0882-7974.5.2.182
- Hummert, M. L., Garstka, T. A., Shaner, J. L., & Strahm, S. (1994). Stereotypes of the elderly held by young, middle-aged, and elderly adults. *Journal of Gerontology, 49*(5), 240-249.
- Hunt, K., Lewars, H., Emslie, C., & Batty, G. D. (2007). Decreased risk of death from coronary heart disease amongst men with higher 'femininity' scores: a general population cohort study. *International Journal of Epidemiology, 36*(3), 612-620. doi:10.1093/ije/dym022
- Itzin, C. & Phillipson, C. (1995). Gendered ageism: a double jeopardy for women in organizations. *Gender, Culture & Organizational Change: Putting Theory into Practice, 81-90*.

- Kalavar, J. M. (2001). Examining ageism: Do male and female college students differ? *Educational Gerontology*, 27(6), 507–513. Retrieved from: <https://doi.org.ezproxy.library.dal.ca/10.1080/036012701316894199>
- Kite, M. E. (1996). Age, gender, and occupational label: A test of social role theory. *Psychology of Women Quarterly*, 20, 361–374.
- Kondracki, N.L., Wellman, N.S., & Amundson, D.R. (2002). Content analysis: Review of methods and their application in nutrition education. *Journal of Nutrition Education and Behaviour*, 34(4), 224-230.
- Kornadt, A. E., Voss, P., & Rothermund, K. (2013). Multiple standards of aging: Gender-specific age stereotypes in different life domains. *European Journal of Ageing*, 10(4), 335–344. <https://doi-org.ezproxy.library.dal.ca/10.1007/s10433-013-0281-9>
- Krekula, C. (2007). The intersection of age and gender: Reworking gender theory and social gerontology. *Current Sociology*, 55(2), 155–171. <https://doi.org/10.1177/0011392107073299>
- Krisberg, K. (2018, April). What’s in a word? How language affects public health: Research shows word choices can influence well-being, treatment. *The Nation’s Health*. Retrieved from: <http://thenationshealth.aphapublications.org/content/48/2/1.1?fbclid=IwAR1vHSfPHRoBWdJv02zT4J7QLNeRlPa8RNo8sYcb7pWpuJC6XTfptp5MLwc>
- Levy, B. R. (1996). Improving memory in old age through implicit self-stereotyping. *Journal of Personality and Social Psychology*, 71(6), 1092-1107.

- Levy, B.R. (2003). Mind matters: Cognitive and physical effects of aging self-stereotypes. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 58, 203-211.
- Levy, B. R. (2009). Stereotype embodiment: A psychosocial approach to aging. *Current Directions in Psychological Science*, 18(6), 332-336. doi:10.1111/j.1467-8721.2009.01662.x
- Levy, S. R., & Macdonald, J. L. (2016). Progress on understanding ageism. *Journal of Social Issues*, 72(1), 5-25.
- 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.
- Levy, B. R., Zonderman, A. B., Slade, M. D., & Ferrucci, L. (2012). Memory shaped by age stereotypes over time. *Journals of Gerontology Series B: Psychological Sciences & Social Sciences*, 67B(4), 432-436.
- Lipsky, M.S., Cannon, M. & Lutfiyya, M.N. (2014) Gender and health disparities: The case of male gender. *Disease-a-Month*, 60, 138-144
- Lundebjerg, N.E., Trucil, D.E., Hammond, E.C. & Applegate, W.B. (2017). When it comes to older adults, language matters: Journal of the American Geriatrics Society adopts modified American Medical Association style. *Journal of the American Geriatrics Society*, 65 (7), 1386-1388. doi: 10.1111/jgs.14941
- Martin, W. (2012). Visualizing risk: Health, gender and the ageing body. *Critical Social Policy*, 32(1), 51-68. doi:10.1177/0261018311425980

- McPherson, B.D. & Wister, A. (Eds.). (2008). *Aging as a social process: Canadian perspectives*. Fifth edition. Don Mills, ON: Oxford University Press.
- Meisner, B. A. (2012). A meta-analysis of positive and negative age stereotype priming effects on behavior among older adults. *The Journals of Gerontology Series B: Psychological Sciences & Social Sciences*, 67B(1), 13-17.
- Meisner, B. A., & Levy, B. R. (2016). *Age stereotypes' influence on health: Stereotype Embodiment Theory*. In V. Bengtson & R. Settersten (Eds.), *Handbook of Theories of Aging* (3rd ed.). New York, NY: Springer Publishing Company.
- Mikkonen, J., & Raphael, D. (2010). *Social determinants of health: The Canadian facts*. Toronto: York University School of Health Policy and Management.
- Money, J. (1955). Hermaphroditism, gender and precocity in hyper-adrenocorticism: Psychologic findings. *Johns Hopkins Hospital. Bulletin*, 96(6 June 1955), 253-264.
- Munroe, J. & Meisner, B.A. (2016). *Younger adults' perceptions of aging: A quasi-experiment*. (Honours Thesis), School of Health and Human Performance, Dalhousie University. (Retrieved from author)
- Needham, B., & Hill, T. D. (2010). Do gender differences in mental health contribute to gender differences in physical health? *Social Science & Medicine*, 71(8), 1472-1479. doi: 10.1016/j.socscimed.2010.07.016
- Nova Scotia Department of Seniors. (2017). *Shift: Nova Scotia's Action Plan for an Aging Population*. Retrieved from <https://novascotia.ca/shift/shift-action-plan.pdf>
- Ory, M., Hoffman, M. K., Hawkins, M., Sanner, B., & Mockenhaupt, R. (2003). *Challenging aging stereotypes: Strategies for creating a more active society*.

American Journal of Preventive Medicine, 25(3,Suppl2), 164-171.

doi:10.1016/S0749-3797(03)00181-8

Partida, Y. (2012). Language and health care. *Diabetes Spectrum*, 25(1), 19-22.

doi:10.2337/diaspect.25.1.19

Pirkis, J., Spittal, M.J., Keogh, L., Mousaferiadis, T., & Currier, D. (2017). Masculinity and suicidal thinking. *Social Psychiatry & Psychiatric Epidemiology*, 52(3), 319-327. doi: 10.1007/s00127-016-1324-2

Popham, L., Kennison, S., & Bradley, K. (2011). Ageism, sensation-seeking, and risk-taking behavior in young adults. *Current Psychology*, 30(2), 184–193. <https://doi-org.ezproxy.library.dal.ca/10.1007/s12144-011-9107-0>

Potter, W.J. & Levine-Donnerstein, D. (1999). Rethinking validity and reliability in content analysis. *Journal of Applied Communication Research*, 12(3), 258-284. doi:10.1080/00909889909365539

Pride Education Network. (2018). *The Gender Spectrum. What educators need to know*. Pridenet.ca, Retrieved from: <http://pridenet.ca/wp-content/uploads/GenderSpectrum2018online.pdf>

Public Health Agency of Canada. (2010). *Questions & answers: Gender identity in schools*. Retrieved from: http://sieccan.org/pdf/phac_genderidentity_qa-eng.pdf

Public Health Agency of Canada. (2014). *Seniors falls in Canada. Second report*. Retrieved from: https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/seniors-aines/publications/public/injury-blessure/seniors_fallschutes_aines/assets/pdf/seniors_falls-chutes_aines-eng.pdf

- Rupp, D. E., Vodanovich, S. J., & Credé, M. (2005). The Multidimensional Nature of Ageism: Construct Validity and Group Differences. *Journal of Social Psychology, 145*(3), 335–362. <https://doi-org.ezproxy.library.dal.ca/10.3200/SOCP.145.3.335-362>.
- Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing and Health, 23*(4), 334-340. Doi: 10.1002/1098-240X(200008)23:4<334::AID-NUR>3.0.CO;2-G
- Schmidt, D. F., & Boland, S. M. (1986). Structure of perceptions of older adults: Evidence for multiple stereotypes. *Psychology and Aging, 1*(3), 255–260. <https://doi-org.ezproxy.library.dal.ca/10.1037/0882-7974.1.3.255>
- Senior moment (2018). In *Merriam-Webster Online Dictionary*. Retrieved September 15, 2018 from: <https://www.merriam-webster.com/dictionary/senior%20moment>
- Shields, S.A. (2008). Gender: An intersectionality Perspective. *Sex Roles, 59*, 301-311. <https://doi.org/10.1007/s11199-008-9501-8>
- Sontag, S. (1972). The double standard of aging. *The Saturday Review, 29-38*. Retrieved from: <https://www.unz.org/Pub/SaturdayRev-1972sep23-00029?View=PDF>
- Statistics Canada. (2015). *Canada's population estimates: Age and sex, July 1, 2015*. Retrieved from: <http://www.statcan.gc.ca/daily-quotidien/150929/dq150929b-eng.htm>
- Stone, T. McMinn, B. (2012). What's in a word? Ageism: “the bias against older people by the (temporarily) young?”. *Nursing and Health Sciences, 14*, 433-434, doi:10.1111/nhs.12019

- Thorpe, R., Fileborn, B., Hawkes, G., Pitts, M., & Minichiello, V. (2014). Old and desirable: Older women's accounts of ageing bodies in intimate relationships. *Sexual and Relationship Therapy, 30*(1), 156-166. doi: 10.1080/14681994.2014.959307
- Ussher, J. M., Perz, J., & Parton, C. (2015). Sex and the menopausal woman: A critical review and analysis. *Feminism & Psychology, 25*(4), 449-468. doi:10.1177/0959353515579735
- Vares, T. (2009). Reading the "Sexy oldie": Gender, age(ing) and embodiment. *Sexualities, 12*(4), 503–524. <https://doi.org/10.1177/1363460709105716>
- Walz, T. (2002). Crones, dirty old men, sexy seniors: Representations of sexuality of older persons. *Journal of Aging & Identity, 7*(2), 99-112. doi:10.1023/A:1015487101438
- Wong, Y.J., Ho, M.R., Wang, S., & Miller, I.S.K. (2017). Meta-analyses of the relationship between conformity to masculine norms and mental health-related outcomes. *Journal of Counseling Psychology, 64*(1), 80-93. doi: 10.1037.cou0000176
- World Health Organization. (1986). *The Ottawa Charter for Health Promotion*. Geneva, CH: Author
- World Health Organization. (2013). Global mortality trends and patterns in older women. Retrieved from: <http://www.who.int/bulletin/volumes/91/9/12-109710/en/>
- Zhu, L., Brescoll, V.L., Newman, G.E., Uhlmann, E.L. (2015). Macho Nachos. The implicit effects of gendered food packaging on preferences for healthy and

unhealthy food. *Social Psychology*, 45(4), 182-196. doi: 10.1027/1864-9335/a000226

Appendix B
Research Ethics Board Exemption

5/25/2018

Mail - S.Brushett@Dal.Ca

RE: REB Submission Brushett

Research Ethics Database

Tue 5/15/2018 8:49 AM

To: Sara Brushett <S.Brushett@Dal.Ca>;

Cc: Sara Kirk <Sara.Kirk@Dal.Ca>; Brad Meisner <meisnerb@yorku.ca>; Heather Neyedli <hneyedli@dal.ca>;

Dear Sara,

Thank you for your REB submission. However, because this study uses secondary data that was collected anonymously (that is, no identifiers were ever attached to the original data), the study is exempt from REB review per TCPS Article 2.4.

All the best with your research.

Sincerely,

Angela

Angela Hersey, BA, MES
Manager, Research Ethics
Dalhousie Research Services
Collaborative Health Education Building 5th Floor
5793 University Ave. | PO Box 15000
Halifax, NS B3H 4R2
902-494-3423
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Appendix C
All 'Senior' Stereotype Categories

Rank	Overall		Feminine Stereotypes		Masculine Stereotypes		Positive Stereotypes		Negative Stereotypes		Female Participants		Male Participants					
	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%			
1	Old	9	25%	Wise	6	40%	Old	8	38%	Old	7	29%	Wise	5	26%	Old	7	41%
2	Wise	7	19%	Grandma	2	13%	Grey Hair	5	24%	Old	3	13%	Grandma	2	11%	Grey Hair	3	18%
3	Grey Hair	5	14%	Alive	1	7%	Discount	1	5%	Grandma	2	8%	Grey	2	11%	Wise	2	12%
4	Grandma	2	6%	Disabled	1	7%	Kind	1	5%	Grey	2	8%	Old	2	11%	Older	1	6%
5	Sweet	2	6%	Old	1	7%	Older	1	5%	Sweet	2	8%	Sweet	2	11%	Retired	1	6%
6	Alive	1	3%	Polite	1	7%	Retired	1	5%	Alive	1	4%	Alive	1	5%	Slow	1	6%
7	Disabled	1	3%	Sweet	1	7%	Slow	1	5%	Discount	1	4%	Discount	1	5%	Solid	1	6%
8	Discount	1	3%	Thin	1	7%	Solid	1	5%	Kind	1	4%	Discount	1	5%	Thin	1	6%
9	Kind	1	3%	Travelling	1	7%	Sweet	1	5%	Polite	1	4%	Kind	1	5%			
10	Older	1	3%				Wise	1	5%	Retired	1	4%	Polite	1	5%			
11	Polite	1	3%					1	4%	Solid	1	4%	Travelling	1	5%			
12	Retired	1	3%					1	4%	Thin	1	4%						
13	Slow	1	3%					1	4%	Travelling	1	4%						
14	Solid	1	3%															
15	Thin	1	3%															
16	Travelling	1	3%															

Appendix D All 'Older' Stereotype Categories

Rank	Overall		Feminine Stereotypes		Masculine Stereotypes		Positive Stereotypes		Negative Stereotypes		Female Participants		Male Participants					
	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%			
1	Wise	8	15%	Wise	5	14%	Experienced	2	13%	Weak	5	28%	Wise	6	16%	Weak	2	13%
2	Weak	5	10%	Weak	4	11%	Weak	2	13%	Age	3	9%	Grandmother	4	11%	Wise	2	13%
3	Grandparent	4	8%	Grandparent	3	8%	Wise	2	13%	Grandparent	3	9%	Conservative	1	6%	Wrinkled	2	13%
4	Wrinkles	4	8%	Grey Hair	3	8%	Active	1	6%	Cute	2	6%	Decrepit	1	6%	Age	2	5%
5	Age	3	6%	Wrinkles	3	8%	Age	1	6%	Experienced	2	6%	Elderly	1	6%	Grey Hair	2	5%
6	Grey Hair	3	6%	Age	2	6%	Conservative	1	6%	Grey Hair	2	6%	Feisty	1	6%	Mature	2	5%
7	Cute	2	4%	Cute	2	6%	Grandfather	1	6%	Mature	2	6%	Grandmother	1	6%	Mom	2	5%
8	Experienced	2	4%	Mature	2	6%	Grouchy	1	6%	Mom	2	6%	Grey	1	6%	Wrinkles	2	5%
9	Mature	2	4%	Mom	2	6%	Him	1	6%	80 or older	1	3%	Grouchy	1	6%	80 or older	1	3%
10	Mom	2	4%	80 or older	1	3%	Kind	1	6%	Active	1	3%	Medical Issues	1	6%	Active	1	3%
11	80 or Older	1	2%	Adult	1	3%	Republican	1	6%	Adult	1	3%	Republican	1	6%	Adult	1	3%
12	Active	1	2%	Care	1	3%	Senior	1	6%	Care	1	3%	Care	1	3%	Care	1	3%
13	Adult	1	2%	Decrepit	1	3%	Wrinkle	1	6%	Freedom	1	3%	Cute	1	3%	Cute	1	3%
14	Care	1	2%	Elderly	1	3%			Him	1	3%			Decrepit	1	3%		
15	Conservative	1	2%	Feisty	1	3%			Kind	1	3%			Elderly	1	3%		
16	Decrepit	1	2%	Freedom	1	3%			Potential	1	3%			Experienced	1	3%		
17	Elderly	1	2%	Medical Issues	1	3%			Senior	1	3%			Feisty	1	3%		
18	Feisty	1	2%	Potential	1	3%			Sweet	1	3%			Freedom	1	3%		
19	Freedom	1	2%	Sweet	1	3%								Grouchy	1	3%		
20	Grouchy	1	2%											Potential	1	3%		
21	Him	1	2%											Senior	1	3%		
22	Kind	1	2%											Sweet	1	3%		
23	Medical Issues	1	2%															
24	Potential	1	2%															
25	Republican	1	2%															
26	Senior	1	2%															
27	Sweet	1	2%															

Appendix E

All Combined Stereotype Categories

Combined 'Senior' and 'Older' Stereotypes																					
Rank	Overall Stereotype		Feminine Stereotypes			Masculine Stereotypes			Positive Stereotypes			Negative Stereotypes			Female Participant		Male Participant				
	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%	Stereotype	Count	%			
1	Wise	15	17%	Wise	11	22%	Old	8	22%	Wise	15	26%	Old	6	20%	Wise	11	20%	Old	7	22%
2	Old	9	10%	Grandparent	5	10%	Grey hair	5	14%	Grandparent	5	9%	Weak	5	17%	Grandparent	6	11%	Grey hair	4	13%
3	Grey Hair	8	9%	Weak	4	8%	Wise	4	11%	Grey Hair	4	7%	Grey hair	4	13%	Grey Hair	4	7%	Wise	4	13%
4	Grandparent	6	7%	Grey Hair	3	6%	Experienced	2	5%	Age	3	5%	Wrinkles	4	13%	Sweet	3	5%	Weak	2	6%
5	Weak	5	6%	Wrinkles	3	6%	Kind	2	5%	Old	3	5%	Conservative	1	3%	Weak	3	5%	Wrinkle	2	6%
6	Wrinkles	4	5%	Age	2	4%	Active	1	3%	Sweet	3	5%	Decrepit	1	3%	Age	2	4%	Age	1	3%
7	Age	3	3%	Cute	2	4%	Age	1	3%	Cute	2	3%	Disabled	1	3%	Mature	2	4%	Conservative	1	3%
8	Sweet	3	3%	Mature	2	4%	Conservative	1	3%	Experienced	2	3%	Elderly	1	3%	Mom	2	4%	Cute	1	3%
9	Cute	2	2%	Mom	2	4%	Discount	1	3%	Kind	2	3%	Feisty	1	3%	Old	2	4%	Experienced	1	3%
10	Experienced	2	2%	Sweet	2	4%	Grandfather	1	3%	Mature	2	3%	Grandmother	1	3%	Wrinkles	2	4%	Him	1	3%
11	Kind	2	2%	80 or older	1	2%	Grouchy	1	3%	Mom	2	3%	Grouchy	1	3%	80 or older	1	2%	Kind	1	3%
12	Mature	2	2%	Adult	1	2%	Him	1	3%	80 or older	1	2%	Medical issues	1	3%	Active	1	2%	Medical issues	1	3%
13	Mom	2	2%	Alive	1	2%	Older	1	3%	Active	1	2%	Older	1	3%	Adult	1	2%	Older	1	3%
14	80 or older	1	1%	Care	1	2%	Republican	1	3%	Adult	1	2%	Republican	1	3%	Alive	1	2%	Republican	1	3%
15	Active	1	1%	Decrepit	1	2%	Retired	1	3%	Alive	1	2%	Slow	1	3%	Care	1	2%	Retired	1	3%
16	Adult	1	1%	Disabled	1	2%	Senior	1	3%	Care	1	2%				Cute	1	2%	Slow	1	3%
17	Alive	1	1%	Elderly	1	2%	Slow	1	3%	Discount	1	2%				Decrepit	1	2%	Solid	1	3%
18	Care	1	1%	Feisty	1	2%	Solid	1	3%	Freedom	1	2%				Disabled	1	2%	Thin	1	3%
19	Conservative	1	1%	freedom	1	2%	Sweet	1	3%	Him	1	2%				Discount	1	2%			
20	Decrepit	1	1%	Medical issues	1	2%	Weak	1	3%	Polite	1	2%				Elderly	1	2%			
21	Disabled	1	1%	Old	1	2%	Wrinkle	1	3%	Potential	1	2%				Experienced	1	2%			
22	Discount	1	1%	Polite	1	2%				Retired	1	2%				Feisty	1	2%			
23	Elderly	1	1%	Potential	1	2%				Senior	1	2%				Freedom	1	2%			
24	Feisty	1	1%	Thin	1	2%				Solid	1	2%				Grouchy	1	2%			
25	Freedom	1	1%	Travelling	1	2%				Thin	1	2%				Kind	1	2%			
26	Grouchy	1	1%							Travelling	1	2%				Polite	1	2%			
27	Him	1	1%												Potential	1	2%				
28	Medical Issues	1	1%												Senior	1	2%				
29	Older	1	1%												Travelling	1	2%				
30	Polite	1	1%																		
31	Potential	1	1%																		
32	Republican	1	1%																		
33	Retired	1	1%																		
34	Senior	1	1%																		
35	Slow	1	1%																		
36	Solid	1	1%																		
37	Thin	1	1%																		
38	Travelling	1	1%																		