

EXAMINING THE INTERSECTIONS OF AGE, RACE, AND MENTAL HEALTH
THROUGH LINGUISTIC ANALYSIS

A DISSERTATION

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BY

AMBER R. ROOK-PHENIS, B.A., M.A.

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DEDICATION

This dissertation is dedicated to my son, Zayden Christopher Phenis, who has spent the majority of his life so far, watching Mom work tirelessly, to attain her Ph.D. Remember son, you can do whatever you put your mind to at any stage of life. NEVER GIVE UP. I love you and promise we will go on vacation soon.

This dissertation is also dedicated to my husband, Rich Phenis, whose love and support continue to feed my spirit. You have been my anchor throughout this Ph.D. journey. Thank you for believing in and encouraging me along the way.

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For each of you, I am grateful.

ABSTRACT

AMBER R. ROOK-PHENIS

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The purpose of the current study was to examine patterns in the language used to describe individuals at different stages of the lifespan, and to determine through a framework of intersectionality, whether language use directed toward others differs in relation to perceived identity and social location. Researchers also sought to examine the ways in which study participants' own intersecting identities influence their use of language. A pilot study was conducted to obtain descriptive words associated with general and specific concepts of being elderly, mental illness, and race/ethnicity. Custom dictionaries were created and used for linguistic analysis of archival data from a previous study examining differences in language use to describe images of women at different life stages (Rook-Phenis & Scott, 2019). A theme analysis of the previous archival data was also undertaken. Results demonstrated differences in themes and stereotypical language between descriptions of the younger versus older woman based on age and other perceived intersectional identities. The analysis also found that participants' own unique intersecting identities influenced their use of stereotypical language.

Keywords: ageism, language, LIWC, stereotypes, intersectionality

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CHAPTER I

INTRODUCTION

Examining the Intersections of Ageism and Language

Within the United States (US) and around the world, the aging population continues to increase, with the number of individuals over the age of 65 years, in the US alone, currently estimated at 40 million (Ortman et al., 2014). Compared to other age groups, those who are 65 years and older made up the fastest rate of growth in the US between the years 2000–2010, with their population numbers projected to more than double by the year 2050 (Ortman et al., 2014). According to census report projections, this group of Americans will make up 24% of the U.S. population by 2060 (Colby & Ortman, 2015). As the population of older adults increases, so does the threat of a deeply embedded cultural pattern of age-based discrimination and prejudice directed toward members of these older generations; this concept is referred to as ageism.

To understand the impact of ageism, it is important to first understand its meaning. In Achenbaum's (2015) overview of the history of aging, the author notes that the term ageism has been credited to psychiatrist Robert N. Butler in 1969, and is the continued prejudice and discrimination based on a person's age. When it was first coined, the term *ageism* was used to describe what was the result of public outcry by community members regarding the National Capital Housing Authority's (NCHA) decision to create

public housing designed for elderly poor individuals (Achenbaum, 2015; Butler, 2005). Community residents were audibly resistant, citing concerns that the neighborhood would be negatively affected with the influx of older adults (Butler, 2005). Butler (2005), founder of the National Institute on Aging and member of the community, termed this irrational prejudice “ageism,” and likened the negative ramifications of ageism the same as racism and sexism.

Ageism is the only “ism” that all individuals may collectively experience and is felt throughout generations by both younger and older adults (Garstka et al., 2004; Palmore, 2003). Although it is prevalent throughout U.S. culture or broader society, most people have no idea what ageism is, how it affects them and their relationships with others, and their role in perpetuating the maintenance of a cycle that they are both a part of and affected by. Previous researchers have theorized that “...ageism is the only prejudice that can diminish *everyone’s* quality of life” (Achenbaum, 2015, p. 14). While age-based discrimination affects individuals of all ages throughout the lifespan negatively, this form of prejudice is felt differently among older adults for whom the experience is a more permanent stage of discrimination than that of younger generations who are in earlier transitional phases of life (Butler, 2005; Garstka et al., 2004). To understand the prevalence of age bias and ways in which this discrimination manifests, researchers may consider pervasive stereotypes of aging found throughout society, as well as internalized beliefs that may be associated with the aging process.

Prejudice and discrimination do not typically occur in isolation, and so it is important as researchers work to understand the far reach of ageism to consider the ways in which age discrimination relates to other social locations, identities, and structural forces. This is especially important when considering the diversity that exists within today's aging community. Today's older population within the US continues to become more diverse in terms of race and social location more than any previous time. In addition to the baby boomer generation, the first of whom among 18 million adults turned 65 in 2011, the number of older persons born outside of the US that call the US home, continues to increase (Colby & Ortman, 2015). Now totaling approximately six million individuals, foreign-born older adults are projected to increase by 300% to 25 million by 2050 (Colby & Ortman, 2015). As such, it is important that researchers consider the many ways in which ageism intersects with other identities and how negative beliefs about aging are communicated with others.

In recent years, researchers have begun to examine the complexities of age discrimination through everyday communication and have found that negative attitudes about ageism are often communicated through language choices (Gendron et al., 2016). Words associated with negative beliefs about aging often go unrecognized through the use of everyday descriptive discourse (Gendron et al., 2016). Additionally, what appears to have become socially acceptable forms of ageism can be seen during interactions with older adults through the use of elderspeak (O'Connor & St. Pierre, 2004). Elderspeak is the terminology used to describe language variance directed at older adults (O'Connor &

St. Pierre, 2004). Elderspeak involves changes in language, such as shifts in volume, content of speech, and infantilizing messages (Hummert & Ryan, 1996; O'Connor & St. Pierre, 2004). Use of elderspeak and ageist language varies across settings and may be impacted and even perceived differently based on a number of different variables such as relationship to the speaker (O'Connor & St. Pierre, 2004), cognitive ability or declines in ability due to neurodegenerative disease, and setting (Williams et al., 2009; Williams & Herman, 2011). What researchers have learned thus far about elderspeak and ageist language demonstrates that age discrimination conveyed through language is highly complex, suggesting the need for further study.

The ways in which age bias and beliefs about aging vary may be better understood by incorporating a framework of intersectionality (Cho et al., 2013; Cole, 2009), which views individuals contextually. Within this framework, older adults face exclusion due to age as a political location that is further compounded by membership in other groups or social locations where they have experienced inequality throughout the lifespan (Calasanti & Giles, 2017). When applied to age as an important identity variable, this framework may include among others, intersections of race (Intrieri & Kurth, 2018; Wilson & Roscigno, 2018), mental health (Han & Richardson, 2015; Luo et al., 2012), and even sexuality (Floyd & Weiss, 2001; Ouchide & Lachs, 2015; Wright & Canetto, 2009). Through this lens, researchers who study aging may better understand the ways in which perceptions of age influence individuals' unique phenomenological experiences.

Racial identity among older adults is an important variable, as members of different racial groups may experience age-based discrimination differently (Intrieri & Kurth, 2018; Wilson & Roscigno, 2018). In the workplace for instance, intersections of age and race leave older adults vulnerable to both age (North & Fiske, 2015; Roscigno et al., 2007; Shah & Kleiner, 2005) and race-related discrimination, both of which are associated with downward occupational mobility, especially among older minority individuals (Wilson & Roscigno, 2018). The intersectionality framework may also apply similarly to age and mental health given the complex interactions of age, and beliefs or attitudes toward older adults, resulting in fewer referrals for mental health treatment (Cole et al., 1999). For instance, among the millions of older adults in the U.S. with mental health concerns (Margrett et al., 2010; Substance Abuse and Mental Health Services Administration [SAMHSA], 2018), symptoms often go undetected and undertreated (Cole et al., 1999; Conwell et al., 2011; Han & Richardson, 2015) due to labor shortages (Kane & Kane, 2005) and a lack of training specific to older demographics (Institute of Medicine [IOM], 2012; Sorrell, 2016). This is particularly concerning when considering that in 2019, in the U.S. alone, an adult over the age of 65 years ended their life every 57.3 minutes (Drapeau & McIntosh, 2020). Clearly, the intersections of age, race, and mental health are complex and influenced by a system of inequality and marginalization experienced in different ways throughout the lifespan. Applying concepts of intersectionality to these and other social locations and identities to

beliefs about aging expressed through language, may provide researchers with additional information about the complexities of age bias and the ways in which ageism manifests.

Understanding the complexities of ageism and differences in communication related to beliefs about aging is what lead the current researchers to the purpose of the current study. The researchers sought to examine through linguistic analysis how written language conveys underlying beliefs and attitudes about aging and how these beliefs are influenced by the intersections of cultural and social variables. This topic and research are important for several reasons. While there have been at least two known studies that have used linguistic analysis to examine racism (Hagiwara et al., 2017) and sexism (Goh & Hall, 2015), this along with the author's previous research (Rook-Phenis & Scott, 2019) are the first known studies that have incorporated the use of language analysis to examine ageism through specific language patterns. In addition, by examining ageism through an intersectionality framework, researchers can better understand the ways in which social categories and structural locations may impact age discrimination among older adults. Together, this allows for researchers to explore and examine ageism from a new and truly unique and novel perspective. The current study endeavored to fill this gap in the existing literature and provided evidence to support the usefulness of language analysis to examine the intersections of ageism as well as stereotypes related to concepts of race/ethnicity and mental illness. Furthermore, the study was useful in beginning to examine ways in which participants' own unique identities and previous experiences intersect to influence beliefs and perceptions of women at different stages of the lifespan

as evidenced through the use of stereotypical language. Findings from the study have several practical applications and may be used to support psychoeducation, inform training and approaches to mental health care for an increasingly diverse aging population, and be used to inform educational practices.

CHAPTER II

LITERATURE REVIEW

Stereotypes and Attitudes Regarding Aging

Ageism Regarding Physical Characteristics

Examples of negative attitudes and discrimination based on age and referred to as ageism, can be found in several common misconceptions and stereotypes associated with aging and older adults centered around physical presentation, health, and ability. These messages are particularly salient around ideas of declines in physical attributes, and the belief that with age comes a nearly guaranteed diminished ability to care for oneself as well as an inability to function independently (Cuddy et al., 2005; Ouchide & Lachs, 2015; Wright & Canetto, 2009). Such beliefs manifest in stereotypical images of elderly persons resigned to the use of assistive devices, appearing hunched over, grayed, and living out the latter part of their lives in nursing facilities or relying on the care of others due to poor health (Barrett & Cantwell, 2007; Wright & Canetto, 2009). In reality, very few seniors live in or require extended nursing facility care; only a very small percentage of seniors live in nursing facilities, accounting for only 3.1% of older adults in 2010 (Werner, 2011).

These common ageist beliefs are often developed during youth, through the many messages received from various cultural and media outlets, among family members and larger communities, and even in children's story books (Cuddy et al., 2005; Gendron et

al., 2016; Hollis-Sawyer & Cuevas, 2013; Wright & Canetto, 2009). Learned and enforced throughout the lifespan, these biases may manifest differently during each developmental period resulting in ageist stereotypes directed toward others as well as self (Davis & Friedrich, 2010; Levy et al., 2006).

Consequences of these beliefs may be seen in the health and medical treatment received by older adults and may even impact decisions to work with older populations, an area already facing labor shortages (Aday & Campbell, 2006; Cuddy et al. 2005; Lookinland & Anson, 1995; Ouchide & Lachs, 2015). In hospitals, treatment rooms, and medical clinics, an individual providers' own thoughts and feelings regarding the aging process, as well as their own implicit bias toward older patients may affect treatment and diagnosis (Cuddy et al., 2005; Ouchide & Lachs, 2015). For instance, providers may attribute physical symptoms and medical conditions to what they believe is a normal part of the aging process versus something that may be treatable, and vice versa (Cuddy et al., 2005; Ouchide & Lachs, 2015).

These stereotypes may lead to the infantilization of older adults, which may be subtly evidenced through communication such as elderspeak or communication that is directed at others, often younger family members or companions, during medical appointments and interactions, instead of the older adult (Gendron et al., 2016; Kemper & Harden, 1999; Ouchide & Lachs, 2015). Older adults who utilize or depend on aging services may be viewed as passive consumers and at risk for additional mistreatment, which may manifest as activity and environmental infantilization (Salari, 2005; Salari &

Rich, 2001). Examples of this may be present in environments such as some adult day care settings, where older adults are stripped of their autonomy to choose age-appropriate activities and are discouraged from acting independently (Salari, 2005; Salari & Rich, 2001). In these environments they may also lack privacy for taking care of basic physical needs such as using the bathroom, even when they are mentally and physically able to perform these activities themselves (Salari, 2005; Salari & Rich, 2001).

Ageism Regarding Behavior

Several ageist stereotypes may also manifest in beliefs and attitudes associated with behavioral components of aging such as declines in cognition, social practices, and even sexuality. Negative stereotypes associated with memory loss and cognitive decline versus normative changes in cognition may present in the undertreatment or dismissal of symptoms in older adults, while self-stereotypes of older individuals associated with cognition and aging may result in self-fulfilling prophecies (Hess et al., 2004; Levy, 2001; Nelson, 2016). Social and structural practices of ageism may be seen in hiring processes and in rental markets, when hiring or apartment managers may not realize their implicit negative bias toward older adults influences their decisions to employ or rent to these individuals (Barrington, 2015; Cuddy et al., 2005; Gringart et al., 2013; Levy, 2001). In people's personal lives, they may neglect or avoid older loved ones by not visiting them because of implicit ageism (Levy, 2001). Not only do these avoidant behaviors perpetuate the cycle of ageism, but they also lead to missed opportunities to reduce ageism through meaningful intergenerational interactions. Intergenerational

interactions are important as they alter views on aging and counter ageist beliefs and practices (Brunton & Scott, 2015; Hagestad & Uhlenberg, 2005; Levy, 2001).

Stereotypes and misconceptions around sexuality, coined *sexual ageism*, manifest in negative attitudes toward the idea of sexuality in late life, and may often include the belief that older adults are asexual (Floyd & Weiss, 2001; Ouchide & Lachs, 2015).

Older adults who identify as sexual minorities, face the combination of stereotypes related to multiple identities in late life. The first study to investigate this examined the effects of gender and sexuality on ageist beliefs and found that sexual minorities experienced many of the same stereotypical beliefs associated with age such as fragility and weakness; however, stigma related to other aspects of identity and age continue to be influenced by implicit inversion theory (Wright & Canetto, 2009). Specifically, researchers found stereotypes that gay men possess more feminine traits and lesbians possess more masculine traits continue through old age (Wright & Canetto, 2009). Taken together, this information suggests that a combination of stereotypes and beliefs about aging, sexuality, gender trait expression, and sexual orientation intersect to inform ways in which some older adults are perceived.

Ageism Regarding Personality Characteristics

Several stereotypes abound in regard to personality characteristics associated with older adults. These are evident in phrases such as *grumpy old man*, perceptions of older persons as useless, and in exaggerated mannerisms portrayed in various media outlets such as older single women being viewed as an *old maid*. In a series of studies examining

stereotype content among several out-groups, elderly individuals were found to be perceived as possessing qualities associated with warmth such as trustworthiness and sincerity, while also being perceived as incompetent. Elderly individuals were often grouped with disabled persons and individuals with intellectual and developmental disabilities (Fiske et al., 2002).

Systematic differences in the attributes associated with images of younger and older adults have also been found in previous research (Ebner, 2008). In a study comparing faces, both younger (ages of 20–29) and older (ages of 71–85) adults evaluated 168 photographs from the CAL/PAL Face Database (Minear & Park, 2004), which depicted either young adults between the ages of 18 to 32 years or older adults, aged 64 and older (Ebner, 2008). Participants were required to rate the individual in the photo on attractiveness, likeability, distinctiveness, goal orientation, energy, mood, and age. Consistent with previous research, photographs of the younger age group were rated more positively on most measures, in comparison to the older adults. These results were fairly consistent across both ages of participants. Interestingly, researchers found that older adults generally rated all participants as more attractive than did younger study participants (Ebner, 2008). A similar study regarding perceptions of personality and attractiveness found that older adults who reported exercising were rated more attractive and were perceived to have greater positive personality characteristics than older adults who did not report exercising (Greenlees et al., 2007). Results of these studies demonstrate age bias exhibited in different situations and environments across

generations. These studies also demonstrate ways in which different variables including implicit beliefs about exercise (Greenlees et al., 2007) and age of the study participants (Ebner, 2008) influence the ways in which personality characteristics among older adults are perceived. Taken together, this suggests the need for further analysis of the ways in which different variables may intersect to influence beliefs about personality traits among older adults across settings and generations.

Additional Considerations

Beyond the consequences discussed above, older adults may hold their own self-stereotypes and implicit bias towards aging and elderly individuals (Achenbaum, 2015; Hagestad & Uhlenberg, 2005; Levy, 2001). Self-directed negative forms of ageism can be triggered in stressful situations and directly affect older adults even if unconscious (Levy, 2001; Levy et al., 2000). These implicit self-stereotypes of aging, when primed, activate a physiological response that can be altered depending on whether the self-stereotype is negative or positive (Levy et al., 2000). The impact of these effects can influence behavior, as well as cardiovascular and cognitive function, directly impacting health and wellness in older individuals (Levy, 2001; Levy et al., 2000). For example, researchers found that when subjected to subliminal messages of negative age stereotypes, older adults experienced a heightened cardiovascular stress response, compared to positive age stereotypes that demonstrated a protective effect (Levy et al., 2000). More recently, a longitudinal study examining the effects of age stereotypes and disability among older adults found that participants who possessed positive age

stereotypes demonstrated significantly higher recovery rates than from those who held negative age stereotypes, by as much as 44% (Levy et al., 2012). This research suggests that understanding the affect, presentation, and underlying mechanisms of implicit age biases and self-stereotypes may lead to better health outcomes and enhanced quality of life for individuals as they age.

Intersections of Ageism

Grounded in the Black Feminist movement and coined by feminist and legal scholar, Kimberlé Crenshaw, the theory of intersectionality began as an examination of discrimination and oppression directed toward Black women and has expanded to different fields of study and discourse (Cho et al., 2013; Cole, 2009). In the field of psychology and other social sciences, feminist scholars are using the intersectionality framework to examine ways in which oppression and privilege coalesce among members of different social categories and structural locations (Cho et al., 2013; Cole, 2009). From this framework, age constitutes a political location where older adults experience age-based exclusion and inequality that is further compounded by membership in other groups or social locations (Calasanti & Giles, 2017). Although typically qualitative in nature, the emphasis on the interconnectivity of social categories in recent years has prompted scholars to call for an intersectionality approach in quantitative research, citing the need for empirical research to support psychoeducation, mental health care, and to inform public policy (Else-Quest & Hyde, 2016a; Else-Quest & Hyde, 2016b). Together, this growing body of research and opportunities for future quantitative and mixed-method

studies contribute to discourse and theory that individuals cannot simply be understood in isolation, but rather in the context of all of their identities and social locations. This current study uses an intersectionality framework to examine the intersections of age, race, and mental health through linguistic analysis and to understand the ways in which participants' own age and identities may intersect to influence their use of language and beliefs or perceptions of the elderly.

Ageism and Race

Individuals of different racial groups may experience age-related discrimination differently (Intrieri & Kurth, 2018; Wilson & Roscigno, 2018). For instance, in today's multi-generational workplace, older adults already face attitudes and beliefs that they are not as capable as younger workers (North & Fiske, 2015; Roscigno et al., 2007; Shah & Kleiner, 2005). Minority individuals that are older face additional vulnerability due to race-related discrimination (Wilson & Roscigno, 2018). For example, in a study that examined income dynamics among adults over the age of 55, researchers found that Black workers experienced greater downward occupational mobility than White workers (Wilson & Roscigno, 2018). In addition to race and age, gender also appears to be a factor, with Black men experiencing the highest rates of downward mobility (Wilson & Roscigno, 2018). This trend is particularly true among those working in managerial and professional white-collar positions (Wilson & Roscigno, 2018). While downward mobility appears to be a concern for most aging workers, the intersections of minority vulnerability in the workplace as well as gender (Wilson & McBrier, 2005; Wilson &

Roscigno, 2018) add an additional layer of complexity to the experiences of older minority workers.

Other previous research examining social attitudes toward older adults and different racial groups has centered around in-group/out-group bias (Laditka et al., 2011). In a study examining attitudes toward older adults among college students, researchers found in-group favoritism among Black and White students who demonstrated more favorable attitudes toward older adults of the same ethnic group (Laditka et al., 2011). Similarly, a study examining attitudes toward individuals of different ages and ethnicities across the lifespan found that participants held different attitudes toward individuals when race and age were taken into consideration (Kang & Chasteen, 2009). Challenging the theory of double-jeopardy, the idea that older adults who are also minorities experience the compounding effects of marginalization and discrimination (Dowd & Bengston, 1978), Kang and Chasteen (2009) found that age served as a protective buffer against negative stereotypes among non-Black participants for older Black men. The opposite effect was true for older White men (Kang & Chasteen, 2009). This suggests that across racial groups, older Black men are perceived more positively with age, whereas older White men are perceived more negatively. Together, these studies demonstrate the complexity of age and race interactions and suggest the need for additional exploration of the ways in which age discrimination and race intersect.

Ageism and Mental Health

Many individuals experience mental health concerns over the course of their lifetime. In 2017, in the U.S. alone, an estimated 46.4 million individuals, accounting for 18.9% of adults, were diagnosed with some form of mental illness (National Institute of Mental Health [NIMH], 2019; SAMHSA, 2018). Statistically, women experience higher rates of mental illness than men with 22.3% of adult women reporting some type of mental illness in 2017 (NIMH, 2019). Race is also a factor, with the highest percentage of reported cases (28.6%) in 2017 found among bi-racial and multiracial adults (NIMH, 2019). This was followed by other racial groups, among them White (20.4%), Black (16.2%), those who identify as Hispanic, or more broadly as Latinx (15.2%), and lastly Asian (14.5%) adults (NIMH, 2019). Among these individuals, 11.2 million reported a serious mental illness (SMI) for which they received treatment that included some form of counseling in either inpatient or outpatient settings and/or medication (NIMH, 2019; SAMHSA, 2018). Women with SMI were more likely to receive treatment (71.5%) than men (57.7%). Due to disparities in access to mental health services for racial minorities, persons who are White are more likely to have access to mental health services (McGuire & Miranda, 2008). Age was also a factor, as adults over the age of 50 diagnosed with a SMI were more likely to receive some form of treatment than adults aged 18–25 (57.4%) and those aged 26–49 (66.2%; NIMH, 2019). Although additional exploration is needed, these statistics demonstrate the intersectionality of gender and race on mental illness as well as the intersections of gender, race, and age on treatment seeking behaviors.

While the statistics above encompass any form of mental illness, anxiety and depression account for a large proportion of mental health disorders (NIMH, 2019). Estimates of mental health concerns among U.S. adults predict that more than 30% of individuals will experience an anxiety disorder at some point in their life (NIMH, 2019). Rates of depression are also significant among adults in the U.S., with approximately 7.1% or 17.3 million, experiencing a major depressive episode in 2017 alone (NIMH, 2019). Together, these statistics demonstrate the prevalence and complexity of mental illness among adults in the U.S.

Among older adults in the U.S., approximately 20% over the age of 55 are estimated to have some form of mental health concern (Margrett et al., 2010; SAMHSA, 2018). Although experienced at lesser rates than younger adults (Wang et al., 2000), depression is the most prevalent of mental health disorders among individuals ages 65 and older (IOM, 2012), affecting approximately 6.5 million older adults (National Alliance on Mental Illness, 2009). Among adults ages 50 and older, approximately 4.5% or 5.1 million, experienced a major depressive episode (MDE) in 2018, with 2.9% or 3.2 million, reporting a MDE with severe impairment (SAMHSA, 2019). The same data analysis reported that among this age group, 16 million (14%) reported any mental illness in 2018, with 2.8 million (2.5%) reporting SMI (SAMHSA, 2019). In addition, 4.5 million adults over the age of 50 had a substance use disorder (SUD) with 0.5% (560,000) co-occurring with SMI. These statistics are particularly significant when considering that several studies have suggested that mental health concerns among older

adults often go undetected and undertreated (Cole et al., 1999; Han & Richardson, 2015). Failure to detect and treat mental health concerns among older adults may be for many reasons, including a lack of training among medical service providers of ways in which SMI's present among older adults (IOM, 2012). In addition, older adults may not seek or participate in mental health treatment due to stigmatization and persistent barriers including access to care (Bor, 2015). Those who do may not be seen by someone who is trained to recognize and treat their presenting concern (Bor, 2015; Sorrell, 2016).

Practical and clinical training to address the unique needs of older adults is further complicated by labor shortages, as there are not enough skilled workers who choose to work with older populations (Kane & Kane, 2005). Together, these statistics suggest there is a need to understand the unique contextual variables that impact mental health concerns among older adults and the ways in which they present across settings, and to develop policies to help identify and advocate for the treatment of mental health concerns among this age demographic.

This number of older adults with untreated depression and other mental health concerns is also particularly concerning, given the high numbers of suicide among this age group. In the U.S. in 2018 alone, approximately 2.1% or 2.4 million adults over the age of 50 thought about committing suicide over the last year, while 0.2% or 274,000 adults over the age of 50 made an attempt (SAMHSA, 2019). In 2019, adults ages 65 and older in the U.S. accounted for 19.3% of total suicides, averaging 25.1 suicidal deaths per day, or 1 death every 57.3 minutes (Drapeau & McIntosh, 2020). Like mental illness,

suicide among older adults is complex and rates differ between gender and racial groups (American Foundation for Suicide Prevention, 2019; Conwell et al., 2011). While rates of suicide decline for older women, they increase for men in old age (Conwell et al., 2011). In addition, researchers anticipate a notable increase in the rates of suicide among older adults as members of the baby boom generation, with statistically higher suicide rates than previous birth cohorts, move into stages of old age (Conwell et al., 2011). The current research and statistics suggest that mental health and suicide among older adults is quite complex, considering the intersections of mental illness, age, gender, race, and even generational cohort. Together, these complexities suggest the need for additional exploration of intersecting variables that influence depression among older adults, as well as the ability for mental health clinicians and other health care providers to accurately identify and treat mental health concerns among this age demographic.

In recent years, research has begun to examine the complexities that contribute to mental health concerns and treatment in older adults. Approximately 63% of older adults perceive daily discrimination (Conwell et al., 2011) associated with age (Ayalon & Gum, 2011) and/or other forms of discrimination (race, gender, class, etc.) that affect life satisfaction and contribute to symptoms of depression (Han & Richardson, 2015; Luo et al., 2012). Like other age demographics, social factors such as social connectedness have been found to reduce depression, risk of suicide, serve as a protective buffer, and increase overall quality of life for older adults (Conwell et al., 2011). Researchers have also found that cognitive processes, including negative self-perceptions of aging, appear to mediate

the influence of perceived ageism and increased symptoms of depression in later life (Han & Richardson, 2015). Such research suggests that one way to improve depression in older adults is to disrupt negative perceptions of aging at earlier stages in the lifespan. Together, these findings suggest that in order to prevent and treat mental health concerns in older adults, researchers must continue to work to identify and understand the underlying complexities associated with age discrimination and mental health. One way in which researchers can begin to understand some of the complexities associated with age discrimination and mental health is by considering ways in which messages about age and mental health are learned and subtly communicated through societal messages and everyday discourse.

Language

Why Language Matters

Ageism is so embedded within our culture that it is even perpetuated through the way we communicate and within the language we use every day (Gendron et al., 2016). For instance, the word *antiaging* perpetuates ageist attitudes both at the macro and micro levels within our culture. Descriptive words that we use in everyday discourse such as *new*, *old*, and *young* carry various meanings and indications, with *new* typically implying something is good, whereas *old* is most often associated with something that is bad or not as good or desirable as *new* or *young* (Gendron et al., 2016). Similar messages perpetuated through media marketing are those which offer and promote ways for individuals to *age gracefully*. Such sentiments and messages in the larger social fabric,

suggest to members of society that the normal aging process is undignified. Complicating matters is the fact that many people, regardless of age, likely do not realize the discrimination they are perpetuating through the use of age-related language (Gendron et al., 2016).

Elderspeak is the terminology used to describe language variance directed toward older persons (O'Connor & St. Pierre, 2004) and often conveys implicit messages that older adults are incompetent (Williams et al., 2017). Elderspeak may take on many forms, such as changing the rate, volume, and content of speech by simplifying conversations and using a demeaning emotional tone (Hummert & Ryan, 1996; O'Connor & St. Pierre, 2004). Well-intentioned words such as referring to people who are older as *sweetie* and *honey* may often be received as patronizing, condescending, and even infantilizing to older individuals (O'Connor & St. Pierre, 2004). Researchers examining the attitudes of older adults to experiences of elderspeak found that perceptions of warmth versus superiority vary with each recipient and appear to be impacted by relationships with the speaker (O'Connor & St. Pierre, 2004). To examine ways in which these differences present, O'Connor and St. Pierre (2004) examined the perception of elderspeak when received from different sources that included friends, family members, and service workers. Study participants included older adults living in the community ($N = 131$) and nursing facilities ($N = 28$) with a mean age of 69.3 years old ($SD = 5.2$) as well as an additional 28 participants residing in intermediate-care nursing facilities with a mean age of 83.3 ($SD = 8.14$). Perceptions of warmth versus

superiority varied based on several contextual factors including age of participant and speaker, relationship to speaker, and environment. In addition, across study participants, elderspeak was reported as a common weekly occurrence, with individuals who lived in nursing facilities experiencing elderspeak at twice the rate as those living in the community. Among persons with dementia, the use of elderspeak directed toward patients from nursing and care staff has been found to increase resistiveness to care, including increased aggression (Williams et al., 2009; Williams & Herman, 2011). This suggests that even subtle and unintentional communication through language may serve as microaggressions, which perpetuate ageist beliefs and, in some cases, may even cause harm.

Language Analysis

Beyond language that directly communicates beliefs about aging, language choice also provides a common and accessible way to communicate what individuals think and feel with others (Tausczik & Pennebaker, 2010). Although this may appear simple at first, researchers now know that language use is distinctly unique between persons (Pennebaker & King, 1999) and can offer information about an individual's mental state, providing some indication about implicit and explicit thought processes (Tausczik & Pennebaker, 2010). Compared to oral language, written language is more complex and has been found to convey more information (Mitzner & Kemper, 2003) by detecting meaning through word choice (Tausczik & Pennebaker, 2010). Previous research using word content analysis has found that an individual's word choice may be used to

understand, and in some cases even predict human behavior (Tausczik & Pennebaker, 2010). Through the use of word analysis often conducted with word processing software such as the Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2007), researchers are able to identify and examine content and style words to infer and make meaning of underlying thought processes related to categories such as attentional focus, emotionality, social relationships, status, social coordination and group processes, deception, relationships, and thinking styles (Tausczik & Pennebaker, 2010).

Although computer language analysis has been used in several studies to examine a range of subjects, there appear to be few studies that examine the manifestation of bias related to ageism and other “isms.” Recently, the first known study to use language analysis to examine racism among health care providers, using the LIWC, found that non-Black physicians with greater levels of implicit racial bias tended to use more words associated with anxiety (e.g., worry) and more first-person plural pronouns (e.g., we, us), when interacting with Black patients (Hagiwara et al., 2017). Physicians who demonstrated more explicit racial bias used more first-person singular pronouns (e.g., I, me) during these interactions (Hagiwara et al., 2017). Hagiwara et al. (2017) note the usefulness of these findings given that previous research of linguistics regarding pronouns has found the use of first-person plural pronouns as indicative of perceived higher status (Chung & Pennebaker, 2007; Sexton & Helmreich, 2000), whereas first-person singular pronouns typically convey the opposite (Kacewicz et al., 2014). A similar study using computerized language analysis to examine the presence of sexism in mixed-

gender interactions, found that men with more benevolently sexist ideals and behaviors incorporated more positive emotion words than did male participants who demonstrated more hostile sexism (Goh & Hall, 2015). Together, these studies demonstrate the power of language to communicate individual beliefs, including both implicit and explicit bias, in ways researchers are only beginning to understand.

While there are no known studies outside of this research that examine ageism through specific language patterns, a previous analysis using the LIWC (Pennebaker & Stone, 2003) has examined language changes over time and noted older adults appeared to use more insight words and future tense verbs compared to younger participants. Contrary to negative stereotypes of aging, older adults also appeared to use more positive versus negative emotion words at nearly twice the rate of younger participants studied. Furthermore, comparisons of individuals 25–35, 35–45, etc. revealed no significant changes in the use of cognitive words, suggesting the preservation of cognitive complexity over time. Based on age distribution, groups in this study included individuals between the ages of 8–14, 15–24, 25–39, 40–54, 55–69, and those age 70 and older (Pennebaker & Stone, 2003).

Given the prevalence of ageism throughout society, examining patterns in the language associated with age bias may provide useful information regarding different ways subtle age bias may manifest. To address this, Rook-Phenis and Scott (2019) conducted a study titled *Examining the Language of Ageism* (ELA) where linguistic patterns were analyzed in the descriptions of women at different stages of the lifespan.

Using two images selected from the CAL/PAL database (Minear & Park, 2004) matched on several variables from a previous pilot study (*Evaluation of Faces* [EOF]), researchers tasked 289 participants ranging in ages 18 to 90 ($M = 21$) to assume the role of a reporter and write about a day in the life of each image. Participants also completed ageism scales including the Consumption Scale of Prescriptive Ageism (SIC; North & Fiske, 2013) and the Fraboni Scale of Ageism (FSA; Fraboni et al., 1990), as well as a set of researcher-generated questions. Narrative responses were analyzed using the 2015 Linguistic Analysis and Word Count (LIWC2015) software, and demonstrated significant differences in the use of tone, personal pronouns, clout, core drives/needs, social, cognitive, personal concerns, and time orientation linguistic patterns. Analyses also revealed that participants with more intergenerational contact, as well as those who were older, endorsed less ageist attitudes on ageism measures. In addition, caregiving experience and number of generations currently living within the home predicted social words used to describe the older image. Caregiving experience also demonstrated some weight for predicting affiliation scores. Overall, the findings of the study suggested there are significant differences present within the language used to describe individuals at different life stages and offered a foundation for the current study upon which to continue to build and explore.

Rationale

Given the significance of the ELA study findings and previous research regarding the application and impact of intersectionality, the current researchers believed that the

data may also produce differences in language related to heuristics associated with the different social locations and categories of the women shown. The researchers also believed there would be unique differences present within the language associated with participants' own unique identities and demographic variables. To address this, the current researchers endeavored to examine participants' use of specific language associated with beliefs about aging, race, and mental health when writing about a day in the life of the younger versus older image used in the ELA study. Further, the researchers sought to understand whether themes present in the language varied between conditions.

Research Questions

To fill the gap in the current ageism, linguistic, and intersectionality literature, the following research questions were proposed:

1. Does language reflecting schemas or stereotypes of different concepts (elderly, race, mental illness) vary between participants of different racial groups?
2. Does participant age impact the amount of language used to express stereotypical beliefs about being elderly?
3. Does language used to express stereotypical beliefs about mental illness differ between image condition and age of participant?
4. Does the intersectionality of participant age and race impact the language one uses in response to younger and older image conditions?
5. What major themes are present and how do they differ between narratives when writing about an older versus younger woman?

Hypotheses

H1: It was hypothesized that language reflecting schemas or stereotypes about being elderly, race/ethnicity, and mental illness would vary between participants of different racial groups.

H1a: It was hypothesized that language reflecting schemas or stereotypes about being elderly would vary by participant race.

H1b: It was hypothesized that language reflecting schemas or stereotypes about race/ethnicity would vary by participant race.

H1c: It was hypothesized that language expressing schemas and stereotypical beliefs about mental illness would differ between participants of different racial groups.

H2: It was hypothesized that the amount of language used to express stereotypical beliefs about being elderly would vary between participants of different ages and racial groups.

H3: It was hypothesized that language used to express stereotypical beliefs about mental illness (overall concept, anxiety, and depression) would differ between image condition and would also vary between participants based on age and race.

H3a: Researchers hypothesized that descriptive language associated mental illness would differ between image conditions.

H3b: Researchers hypothesized that language associated with mental illness would vary by participant age.

H3c: Researchers hypothesized that language associated with mental illness would vary by participant race.

H3d: Researchers hypothesized that language associated with mental illness would vary based on image condition, participant age, and participant race.

H4: Researchers hypothesized that themes present in the older image condition would differ from themes present in the younger image condition.

CHAPTER III

METHODOLOGY

This investigation included a pilot study and main archival study. For the first part of the investigation, the researchers completed the pilot study. The results of the pilot study were utilized as part of the methodology for the main archival study. The data from the main archival study originated from the ELA study discussed in the introduction.

Pilot Study Methods

Pilot Study Participants

For the pilot study, the researchers gathered data from 116 total participants. Participants included undergraduate students enrolled in psychology courses at a southern mid-sized university in the United States. Students were recruited through the psychology research participation SONA system and received research credit for their participation. Participants were required to be at least 18 years of age and completed the study online through PsychData, a secure data collection platform.

Ages of participants ranged from 18 to 36, with an average age of 19.32. As shown in Table 1, participants were primarily female and identified as middle class. Racial/ethnic background of participants yielded diverse results with White/European American and Hispanic/Latin(x)/or Spanish origin making up the majority of participants, followed closely by participants who identified as Black/African/African American.

Participants were also asked to share their political and religious affiliations. Politically, the majority of participants at 51.7%, identified as Democrat. In regard to religion, 71.6% of participants identified as being a religious person; the largest number of whom were *Other Christian* followed by *Roman Catholic*.

Table 1

Descriptive Statistics for Pilot Study Participants

Variable	<i>n</i>	%
Gender		
Male	3	2.6
Female	107	92.2
No Answer Provided	6	5.2
Race		
White/European American	32	27.6
Black/African/African American	25	21.6
Hispanic/Latin(x)/or Spanish origin	32	27.6
Asian/Asian American	14	12.1
American Indian/Alaska Native/ Native Hawaiian/Other Pacific Islander	1	.9
Biracial or Multiracial	6	5.2
No Answer Provided	6	5.2
Highest Level of Education		
High School Graduate or Equivalent	31	26.7
Vocational/Technical School (2 year) or Equivalent	1	.9
Some College	76	65.5
Bachelor's Degree	2	1.7
No Answer Provided	6	5.2
Social Class Status		
Professional Middle Class/Upper Middle Class	12	10.3
Middle Class	70	60.3
Working Class	23	19.8
Poor/Invisible Class	1	.9

Other: Poor/Working Class	1	.9
No Answer Provided	7	6.0
Political Affiliation		
Republican	21	18.1
Democrat	60	51.7
Independent	19	16.4
Other	8	6.9
No Answer Provided	8	6.9
Identifies as Religious Person		
Yes	83	71.6
No	27	23.3
No Answer Provided	6	5.2
Religious Identity		
None	19	16.4
Protestant	10	8.6
Roman Catholic	27	23.3
Other Christian	44	37.9
Jewish	1	.9
Buddhist	3	2.6
Muslim	4	3.4
No Answer Provided	8	6.9

Note. $n = 116$.

Pilot Study Materials

Word List Writing Prompts

Language use is distinctly unique between individuals (Pennebaker & King, 1999) and offers information about implicit and explicit thought processes (Tausczik & Pennebaker, 2010). Written language is even more complex than spoken language (Mitzer & Kemper, 2003), and offers researchers opportunities to gather information about underlying thought processes through word choice selection. Unlike asking study participants to select from a set of words on questionnaires as many studies do, writing

prompts offer a way to capture the underlying meaning of word selection by using linguistic analysis software (Chung & Pennebaker, 2007). This method allows for words to be sorted into categories where they can then be analyzed and subsequently used to convey information about an individual's perception and underlying psychological processes (Tausczik & Pennebaker, 2010).

For the pilot study, participants were given a series of written prompts (see Appendix A) and asked to list the first 10 single words that came to mind. They were first asked to list words associated with an overall concept (e.g., “being elderly,” “mental illness,” and “race/ethnicity or race/identity”). The overall concept category was then followed by specific directive category prompts such as “physical characteristics and being elderly.” The elderly overall category prompt was followed by five (5) directive category prompts, and the mental health/illness overall category prompt was followed by two (2) directive category prompts. The race/ethnicity overall category prompt asked participants to respond about their own identity and was followed by three (3) directive category prompts.

Researcher-Generated Questions and Demographic Questionnaire

Pilot study participants were also asked to complete a brief researcher-generated questionnaire about their lived experience. This included information about participants' experiences with older adults, mental illness, and intersectional discrimination (see Appendix B). In addition, participants were provided a basic researcher-generated demographic questionnaire to complete (see Appendix C). This is a common technique

used in research studies that allows researchers to determine whether there is a sufficient sample of participants to draw generalizable conclusions (Ponto, 2015). Examples of questions that were included: What is your age? Have you or anyone close to you ever been diagnosed with a mental illness?

Pilot Study Procedure

Prior to participant recruitment for the pilot study, the research study was submitted for review to the Texas Woman's University (TWU) Institutional Review Board. Following ethical review and approval, participants from TWU were recruited through the SONA system (see Appendix D), a secure and anonymous interface for recruiting research participants. From the SONA system, participants were directed to PsychData to complete the study, wherein they were first required to complete informed consent (see Appendix E).

Once informed consent was complete, participants were immediately directed to the study where they were presented with either the elderly overall category word list prompt, the mental illness overall category prompt, or the race/ethnicity overall category prompt. The order of prompts was randomly assigned with 39.7% of participants prompted to respond to the elderly overall category prompt first, 31% prompted to respond to the mental illness overall category prompt, and 29.3% to respond to the race/ethnicity overall category prompt first. Participants received an initial overall category prompt, followed by directive word category prompts for each specific writing task. Participants were asked to work quickly, watch their time, and take two minutes to

write the first 10 single words that came to mind for each prompt. Once they completed all tasks for the first overall category prompt and associated directive prompts, they were randomly presented with the remaining two overall category prompts and repeated the same sequence of tasks. Following completion of the writing portion, participants were directed to complete the researcher-generated questionnaire and finally, the demographics form. Following completion of the study, participants were provided with a list of counseling resources to aid in minimizing any emotional distress experienced as a result of completing the study (see Appendix F) .

Main Archival Study Methods

For the main archival study, word lists generated from the pilot study were utilized to analyze archival data collected as part of the ELA study discussed in Chapter 1 (Rook-Phenis & Scott, 2019). The participants, materials, and procedure discussed below reflects the methodology used to originally collect the archival data.

Main Archival Study Participants

Participants for the main archival study were those that originally participated in the ELA study (Rook-Phenis & Scott, 2019). The previous ELA study included a total 289 undergraduate students enrolled in psychology courses at a southern mid-sized university in the United States and additional contributors recruited through email, listserv, and various social media sites (i.e., Facebook, Reddit, and Twitter). Like the pilot study, undergraduate students were recruited through the psychology research participation SONA system and received research credit in exchange for their

participation. Participants were required to be at least 18 years of age and completed the study online through PsychData.

Among the 289 participants, 23 (8%) were male, 260 (90%) were female, and 6 (2.1%) identified as other. Ages of participants ranged from 17 to 90. Average participant age was 21. As shown on Table 2, participants identified as 41.2% White, 14.2% Black or African American, 21.5% Hispanic, Latin(x), or of Spanish origin, 14.5% Native American or Alaska Native; Asian, 0.3% Native Hawaiian or Pacific Islander, and 8.3% identified as other.

Table 2

Descriptive Statistics for Archived ELA Study Participants

Variable	<i>n</i>	%
Gender		
Male	23	8.0
Female	260	90.0
Other	6	2.1
Race		
White/European American	119	41.2
Black/African American	41	14.2
Hispanic/Latin(x)/or Spanish origin	62	21.5
Native American or Alaska Native; Asian	42	14.5
Native Hawaiian or Pacific Islander	1	.3
Other	24	8.3

Note. $n = 289$.

Due to unequal sample sizes between genders in the previous ELA study, data from male participants ($n = 23$) and those who identified as other gender ($n = 6$) were removed prior to performing the current analysis. In addition, data from participants who

did not provide narratives for both younger and older image conditions ($n = 12$) in the archival study was also excluded, leaving a total of 248 participants (see Table 3) whose narratives were examined using the new LIWC dictionaries.

Table 3

Descriptive Statistics for Main Study Participants From Archived ELA Study

Race of Participant	Age 25 and Younger		Age 25 and Older		No Age Provided	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
White/European American	67	32.2	26	86.7	3	30
Black/African American	36	17.3			2	20
Hispanic/Latin(x), or Spanish origin	51	24.5	1	3.3	1	10
Asian; Native American or Alaska Native; Native Hawaiian or Pacific Islander	37	17.8	3	10	2	20
Other specified racial identity	17	8.2			2	20

Note. $n = 248$.

Main Archival Study Materials

The researchers selected images of two women at different stages of the lifespan from the CAL/PAL database (Minear & Park, 2004). The database, which may be accessed for research purposes (Ebner, 2008), holds more than 1,000 photos of individuals at varying ages across the lifespan (Minear & Park, 2004). The images, used with permission from the database, were selected by the current researchers after

matching on perceived similarity of different attributes such as attractiveness, perceived emotion, and masculine versus feminine qualities or features. The two images selected were those of an 87-year-old woman (referred to in this study as the older image condition) and a 27-year-old woman (referred to as younger image condition).

Writing Prompt

Participants were instructed to assume the role of a reporter and tasked to get the story of a day in the life of the individual in the image they were viewing. The specific prompt used for each image was as follows:

Assume that you are a reporter on a short deadline and have been tasked to get the story of a day in the life of this individual. You have 10 minutes to write a detailed description of this person's day. Include brief demographic information that is pertinent to your readers, including this person's age, race, and any other identity variables you think are important for your readers to know. Use all of the time allotted and include as many details as possible.

Ageism Scales and Researcher Generated Questions

As part of the ELA study, participants were directed to complete two brief assessments that included the 20-item SIC (North & Fiske, 2013), and the 29-item FSA (Fraboni et al., 1990). A brief researcher-generated questionnaire was also included in the study. The questionnaire included questions about participants' lived experience including whether they had played a caregiving role, the number of generations living in the home, intergenerational contact, and experience with ageism. In addition, basic demographic information was elicited from all study participants.

Main Archival Study Procedures

Participants of the ELA study were directed to PsychData where they first completed informed consent. Participants were then directed to the writing prompt and presented separately with one of the two image conditions, the order of which was randomly assigned. Participants were given 10 minutes to complete the writing task, after which they were presented with the second image and asked to complete the writing task again. After viewing and writing about both images, participants were directed to the ageism measures (SIC and FSA), followed by the brief researcher-generated questionnaire and demographics form. To examine the language narratives, researchers used the LIWC2015 (Pennebaker et al., 2015). The LIWC was developed to analyze and sort text by identifying target words that are cross-referenced and categorized using the LIWC dictionary database (Pennebaker et al., 2015). Developed in 1993, the current LIWC database holds approximately 6,400 words as well as word stems and a limited selection of emoticons (Pennebaker et al., 2015). The text is analyzed and target words sorted into one or more appropriate categories, generating an output consisting of approximately 90 different variables including different language variables such as clout and emotional tone, descriptor categories, linguistic dimensions such as pronouns, psychological constructs, personal concern categories, language markers, and punctuation (Pennebaker et al., 2015). In addition to several available dictionaries in the LIWC database, researchers have the ability to create and use their own custom dictionaries and categories (Pennebaker et al., 2015). The number of categories as well as the ability to

customize dictionaries and categories enables researchers to explore language and word categories in several different ways.

Open-ended responses to the writing prompts were edited for spelling errors before importing the data into the LIWC program (Pennebaker et al., 2015). The archived ELA study utilized the standard dictionaries associated with the program.

For the current study, the researchers used the results of the word lists generated from the pilot study to create new custom LIWC dictionaries with words from both the overall and directive category prompts. In addition to the adjectives and nouns generated by participants as overall and directive category prompts, the researchers incorporated related verbs (in different tenses) and adverbs (e.g., care, cared, caring). Overall, 56 words and/or word stems were generated for the LSS-E dictionary, 30 words and/or word stems for the LSS-MI dictionary, and 34 words and/or word stems for the LSS-R/E dictionary. For each dictionary, words and/or word stems were assigned to both the overall category and associated directive categories (see Appendix H). The dictionaries were uploaded to the LIWC database and then used to analyze each narrative from the archival ELA data. The use of the custom dictionaries resulted in three new main categories of LIWC scores: language reflecting schemas and stereotypes regarding being elderly (LSS-E), language reflecting schemas and stereotypes regarding mental illness (LSS-MI), and language reflecting schemas and stereotypes regarding race/ethnicity (LSS-R/E; see Appendix G).

In addition to main overall categories, scores from the LIWC were also generated for each descriptive subcategory. Subcategory scores generated for the main LSS-E category included: language reflecting schemas and stereotypes regarding physical characteristics of being elderly (LSS-E-Ph), cognitive/thinking processes of being elderly (LSS-E-C/T), personality characteristics of being elderly (LSS-E-Per), social practices of being elderly (LSS-E-SP), and sexuality and being elderly (LSS-E-Sex). Subcategory scores generated for LSS-MI included language reflecting schemas and stereotypes regarding depression (LSS-MI-D) and anxiety (LSS-MI-A). Subcategory scores generated for LSS-R/E included: language reflecting schemas and stereotypes regarding participant race/ethnicity (LSS-R/E-P), Black race/ethnicity (LSS-R/E-B), Latinx race/ethnicity (LSS-R/E-L), and White race/ethnicity (LSS-R/E-W). Results of the LIWC analysis were then uploaded to and examined using SPSS Statistics software.

CHAPTER IV

RESULTS

Pilot Study

For the pilot study, participants were asked to think of the first 10 words that came to mind associated with overall and directive concepts of being elderly, mental illness, and race/ethnicity. Participants were first prompted to list words using free association with the overall categories and then given more specific descriptive category prompts.

Pilot Study Analysis

The researchers utilized Excel software to count and sort words by the number of times each word was listed in response to overall and directive category prompts. The top 10 words (in some cases 11–12, as words were used the same number of times) for each category were then utilized in the main archival study to create custom LIWC dictionaries. Demographic and researcher-generated questionnaires were analyzed using SPSS.

Pilot Study Results

Word Generation for Being Elderly Overall and Directive Category Prompts

Analysis of the generated word lists demonstrated that for the overall concept of being elderly, participants generated 430 different words. The most listed descriptive

word in this category, demonstrated on Table 4, was *old*, which was used by 67 participants ($n = 116$, 57.76%). This was followed by the words *wise*, *slow*, and *death*; all of which were used by 27 (23.28%) participants. Together, the top responses (see Table 4) indicated that cognition, physical characteristics, and mortality were commonly held schemas or stereotypes among more than 20% of pilot study participants. Additional schemas and stereotypes listed among the top ten responses were those related to personality, social aspects, and emotions.

Table 4

Top 10 Words Generated in Response to the Being Elderly Overall Category Prompt

Word Category/Word	<i>n</i>	%
old	67	57.76
wise	27	23.28
slow	27	23.28
death	27	23.28
gray	23	19.83
weak	20	17.24
fragile	20	17.24
sweet	19	16.38
lonely	19	16.38
sad	14	12.07

Note. $n = 116$.

Results demonstrated that for the physical characteristics of being elderly directive category prompt, participants generated 359 different words. The most listed descriptive word in this category, shown below on Table 5, was *wrinkles*, used by 90 participants ($n = 116$, 77.57%). This was followed by the words *gray*, *weak*, *short*, and *slow*; all of which were used by more than 30% of study participants. Overall, the top

responses in this category (see Table 5) suggest the most commonly held schemas or stereotypes of physical characteristics of elderly individuals include those related to appearance, mobility, frailty, and ability.

Table 5

Top 10 Words Generated in Response to the Physical Characteristics of Being Elderly Directive Category Prompt

Word Category/Word	<i>n</i>	%
wrinkles	90	77.57
gray	54	46.55
weak	40	34.48
short	37	31.90
slow	36	31.03
fragile	33	28.45
hair	30	25.86
skin	27	23.28
white	25	21.55
glasses	22	18.97

Note. *n* = 116.

Participants generated 528 different words for cognitive/thinking processes of being elderly directive prompt. The most listed descriptive word used in this category, shown below in Table 6, was *slow*, or a derivative (*slowed*, *slower*, *slowing*), used by 85 participants (*n* = 116, 73.28%). Other words used by more than 20% of participants included *memory*, *wise*, and *forgetful*. Overall, the top 10 responses (see Table 6) indicated the most common schemas or stereotypes of cognitive/thinking processes of being elderly among pilot study participants are related to declines in processing speed

and cognitive abilities, memory, wisdom, neurocognitive disorders, age, time, and negative emotions.

Table 6

Top 10 Words Generated in Response to the Cognitive/Thinking Processes of Being Elderly Directive Category Prompt

Word Category/Word	<i>n</i>	%
slow (slowed, slower, slowing)	85	73.28
memory	34	29.31
wise	27	23.28
forgetful	26	22.41
dementia	23	19.83
Alzheimer's	17	14.66
thoughtful	11	9.48
confused	10	8.62
old	10	8.62
time	10	8.62
loss	10	8.62
sad	10	8.62

Note. *n* = 116

For language used in response to the personality characteristics of being elderly directive prompt, results generated 438 different words. *Wise* was generated by 39 participants (*n* = 116, 33.62%) as the most used descriptor (see Table 7), followed by *caring* and *loving*, which were generated by 38 participants (32.76%). In addition to words associated with positive schemas and stereotypes of personality characteristics in elderly people, negative or less positive words listed included *stubborn*, *grumpy*, and *mean*.

Table 7

Top 10 Words Generated in Response to the Personality Characteristics of Being Elderly Directive Category Prompt

Word Category/Word	<i>n</i>	%
wise	39	33.62
caring	38	32.76
kind	38	32.76
loving	32	27.59
sweet	30	25.86
funny	25	21.55
happy	23	19.83
stubborn	21	18.10
grumpy	18	15.52
mean	18	15.52

Note. *n* = 116.

Participants utilized 619 words in response to the social practices of being elderly directive prompt. More than 20% of participants generated *bingo* (*n* = 116, 25.86%) and *family* (20.69%) to the directive prompt (see Table 8). Overall, responses related to areas of recreation, faith, relationships, speech patterns, pace, hobbies, and personality.

Table 8

Top 10 Words Generated in Response to the Social Practices of Being Elderly Directive Category Prompt

Word Category/Word	<i>n</i>	%
bingo	30	25.86
family	24	20.69
church	15	12.93
friends	13	11.21
talkative	13	11.21

reading	13	11.21
walking	13	11.21
slow	10	8.62
knitting	10	8.62
gatherings	9	7.76
shopping	9	7.76
friendly	9	7.76

Note. $n = 116$.

Participants generated 580 different words in response to the sexuality and being elderly directive category prompt. The most generated word, shown on Table 9, was *slow* ($N = 19$; 16.38%) followed by *straight* ($N = 17$; 14.66%). The most frequently generated words to the sexuality and being elderly directive prompt reflected beliefs that older individuals are more likely to be slow, straight, and more traditional or conservative when it comes to love, sex, and/or sexuality. Interestingly participants generated both active and inactive words in response to the directive response and more than 10% of participants generated the words *old* and *gross*, indicating that sexuality may be viewed differently for elderly adults compared to younger age groups.

Table 9

Top 10 Words Generated in Response to the Sexuality and Being Elderly Directive Category Prompt

Word Category/Word	n	%
slow	19	16.38
straight	17	14.66
heterosexual	13	11.21
traditional	13	11.21
old	12	10.34
gross	12	10.34
love	11	9.48

active	10	8.62
inactive	10	8.62
loving	10	8.62
conservative	10	8.62

Note. $n = 116$.

Word Generation for Mental Illness Overall and Directive Category Prompts

Participants generated 485 different words to the mental illness overall category prompt. The most listed descriptive word in this category, noted in Table 10, was *depression*, which was generated by 59 participants ($n = 116$, 50.86%). The second most used word ($N = 39$, 33.2%) was *anxiety*. The third most generated word was *sad* ($N = 26$, 22.41%). Overall, the generated words related to specific disorders, mood, treatment, sickness, and stigma (see Table 10).

Table 10

Top 10 Words Generated in Response to the Mental Illness Overall Category Prompt

Word Category/Word	<i>n</i>	%
depression	59	50.86
anxiety	39	33.62
sad	26	22.41
therapy	22	18.97
help	21	18.10
crazy	20	17.24
bipolar	20	17.24
sick	16	13.79
disorder	14	12.07
psychology	13	11.21

Note. $n = 116$.

Following the overall category prompt, participants were provided a directive category prompt and instructed to generate words associated with the concept of

depression. Participants generated 475 different words for the depression prompt. The most used descriptor (see Table 11) and listed by 89 participants ($n = 116$, 76.72%) was *sad (sadness)*, followed by *suicide*, and *alone*, which were listed 28 times (24.14%). Additional descriptors, used by more than 20% of study participants included *alone*, *lonely*, and *dark*. Overall, top results demonstrated that the most common schemas and stereotypes regarding depression shared among participants related to mood, suicide, affect, loneliness, and treatment. See Table 11 for a list of the top 10 most used words to describe the concept of depression.

Table 11

Top 10 Words Generated in Response to the Depression Directive Category Prompt

Word Category/Word	<i>n</i>	%
sad (sadness)	89	76.72
suicide	28	24.14
alone	28	24.14
lonely	27	23.28
dark	26	22.41
crying	21	18.10
therapy	17	14.66
anxiety	14	12.07
help	13	11.21
isolation	11	9.48
tired	11	9.48

Note. $n = 116$.

For the directive category prompt of anxiety, 472 different words were generated. The most generated word *panic*, shown in Table 12, was used by 40 participants ($n = 116$, 34.48%). The second most used descriptor was *worry (worried)*, listed by 37

participants (31.90%). Additional words used by more than 20% of participants included *fear*, *nervous*, *stress*, and *scared*. Overall, results suggest that among study participants, schemas and stereotypes regarding anxiety related most to emotion, affect, school, and safety. See Table 12 for a list of the top 10 most used words to describe the concept of anxiety.

Table 12

Top 10 Words Generated in Response to the Anxiety Directive Category Prompt

Word Category/Word	<i>n</i>	%
panic	40	34.48
worry (worried)	37	31.90
fear	34	29.31
nervous	34	29.31
stress	27	23.28
scared	24	20.69
shaking	15	12.93
anxious	15	12.93
school	14	12.07
concern	13	11.21
attack	13	11.21

Note. *n* = 116.

Word Generation for Race/Ethnicity Overall and Directive Category Prompts

For the overall category prompt of race/ethnicity, participants generated 446 different words. The most common descriptor, used by 51 participants (*n* = 116, 43.10%) was *culture*, followed by *White* which was listed 36 times (31.03%) and *Black*, *racism*, and *Hispanic*, which were used by more than 20% of participants. Top results, listed on Table 13, suggest that among study participants, commonly shared schemas and

stereotypes regarding race/ethnicity center around culture, specific racial/ethnic group, discrimination, family, and differences.

Table 13

Top 10 Words Generated in Response to the Race/Ethnicity Overall Category Prompt

Word Category/Word	<i>n</i>	%
culture	51	43.10
White	36	31.03
Black	32	27.59
racism	31	26.72
Hispanic	25	21.55
color	22	18.96
discrimination	20	17.24
Asian	19	16.38
different	18	15.51
family	14	12.07

Note. *n* = 116.

When provided with the directive category prompt to describe words associated with their own race/ethnicity (participants' race/ethnicity), the most commonly used word among participants, shown in Table 14 below, was *family*, which was listed 25 times (*n* = 116, 21.55%). The second most listed descriptor, used by 36 participants (31.03%), was *White*, followed by *culture*, which was used 21 times (18.10%). Overall, responses indicated that common schemas and stereotypes associated with participants own unique race/ethnicity were related to family, skin color, culture, specific racial/ethnic group, differences, and privilege/oppression.

Table 14

Top 10 Words Generated in Response to the Participant Race/Ethnicity Directive Category Prompt

Word Category/Word	<i>n</i>	%
family	25	21.55
White	23	19.83
culture	21	18.10
food	20	17.24
Black	18	15.51
Hispanic	17	14.66
American	13	11.21
Asian	12	10.34
different	11	9.48
music	10	8.62
Mexican	10	8.62
privileged	10	8.62
racism	10	8.62

Note. *n* = 116.

Results of words generated for the Black race/ethnicity directive category prompt revealed the most commonly listed word was *strong* (see Table 15), which was used by 25 participants (*n* = 116, 21.55%). The second most commonly used word was *slavery*, used by 18 participants (15.51%), followed by the words *loud* and *culture*, both of which were used by 16 participants (13.79%). Overall, the top results shown on Table 15, indicate the most commonly held schemas and stereotypes regarding Black race/ethnicity related to physical attributes/descriptors, slavery, Africa, culture, and discrimination.

Table 15

Top 10 Words Generated in Response to the Black Race/Ethnicity Directive Category Prompt

Word Category/Word	<i>n</i>	%
strong	23	19.83
slavery	18	15.51
loud	16	13.79
culture	16	13.79
discrimination	15	12.93
food	14	12.07
racism	14	12.07
Africa	13	11.21
hair	13	11.21
police	12	10.34
beautiful	12	10.34

Note. *n* = 116.

For the directive category prompt of Latinx race/ethnicity, results generated found that participants most commonly thought of the word *food* (see Table 16), which was listed by 43 participants (*n* = 116, 37.07). The second most commonly used descriptor was *family*, which was used 38 times (32.76%). Additional responses used by more than 20% of study participants included the words *Spanish*, *culture*, and *music*. Top results listed in Table 16, demonstrated the most commonly held schemas and stereotypes regarding Latinx race/ethnicity related to food, family, ethnicity, culture, appearance, behavior, and Mexico.

Table 16

Top 10 Words Generated in Response to the Latinx Race/Ethnicity Directive Category Prompt

Word Category/Word	<i>n</i>	%
food	43	37.07
family	38	32.76
Spanish	33	28.45
culture	29	25.00
music	28	24.14
dancing	17	14.66
Brown	12	10.34
Hispanic	11	9.48
loud	11	9.48
Mexico	11	9.48

Note. *n* = 116.

Results of the analysis found that for the White race/ethnicity directive category prompt, the most commonly generated word, shown on Table 17, was *privilege*, which was listed by 50 participants (*n* = 116, 43.10%). The second and third most commonly generated words included *rich* and *racist*, both of which were listed by more than 20% of participants. Top results of words generated to describe White race/ethnicity, listed in Table 17, suggest commonly held schemas and stereotypes related to privilege, resources, discrimination, appearance, status, and lack of culture.

Table 17

Top 10 Words Generated in Response to the White Race/Ethnicity Directive Category Prompt

Word Category/Word	<i>n</i>	%
privilege	50	43.10

rich	27	23.28
racist	24	20.69
money	14	12.07
blonde	12	10.34
majority	12	10.34
racism	12	10.34
uncultured	11	9.48
superior	11	9.48
blue	10	8.62

Note. $n = 116$.

Based on the findings of the overall and directive category prompts, word lists were used to generate custom LIWC dictionaries (see Appendix H) for the Main Archival Study.

Main Archival Study Overview

Data from the ELA study (Rook-Phenis & Scott, 2019) was analyzed in the main study through both qualitative and quantitative methods, which are presented separately in this chapter.

Main Archival Study Quantitative Data Analysis

With the use of the LIWC custom dictionaries, each narrative was coded on LSS-E, LSS-MI, and LSS-R/E. A higher number on each of these reflects greater proportions of words on the custom dictionary used. Descriptive analyses (i.e., means and standard deviations) were first completed to determine distributions of dependent variables (e.g., LIWC scores). Skewness and Kurtosis were examined, and parametric analyses were used to confirm results for variables with non-normal distribution. An alpha level of 0.05 was used for all statistical analyses. A series of three-way repeated-measures ANOVAs

were initially planned to test for interactions between condition (younger versus older image condition), participant race, and participant age (participants under the age of 25 and participants ages 25 and older) on descriptive language use. However, initial evaluation of the data revealed that there were not sufficient sample sizes in the over 25 age conditions (see Table 4). Based on the failure of the archival data to meet the assumptions of the originally planned repeated-measures ANOVA, only the main effects of the condition and race variables and the interaction of condition and race were examined using a repeated measures ANOVA; only data from participants who identified as White, Black, or Latinx was used for the ANOVA analyses. As examining intersectionality was a central tenet of the study, three post-hoc regression analyses were conducted to determine whether identity and experiences predicted language usage. First, difference scores were created by subtracting the three LSS scores (elderly, mental illness, race/ethnicity) for the younger condition narrative from the corresponding LSS score for the older condition narrative, resulting in three new criterion scores (LSS-E-Diff, LSS-MI-Diff. and LSS-R/E-Diff). Therefore, higher LSS difference scores indicated more stereotypical language use in the descriptions of the older image. Race/ethnicity was dummy coded into White, Black, and Latinx predictor variables; data from participants who did not identify as White, Black or Latinx were deleted from the regression analyses. Intergenerational contact was also dummy coded into Minimal-IGC, Some-IGC, and Regular-IGC.

Three separate regression analyses were conducted with the following predictor variables: age, White, Black, Latinx, Minimal-IGC, Some-IGC, Regular-IGC, experienced ageism, witnessed ageism, and caregiving role. Based on the necessity of altering the analyses due to the nature of the archival data, the hypotheses were updated. Updated hypotheses with corresponding statistical analyses, listed in Table 18, are as follows:

H1: It was hypothesized that language reflecting schemas or stereotypes about being elderly, race/ethnicity, and mental illness would vary between participants of different racial groups.

H1a: It was hypothesized that language reflecting schemas or stereotypes about being elderly would vary by participant race.

H1b: It was hypothesized that language reflecting schemas or stereotypes about race/ethnicity would vary by participant race.

H1c: It was hypothesized that language expressing schemas and stereotypical beliefs about mental illness would differ between participants of different racial groups. H1 was evaluated by the interaction effect of race/ethnicity on LSS-MI, LSS-R/E, and LSS-E using a series of 2 (image condition) X 3 (race/ethnicity) repeated measures ANOVAs.

H2: It was hypothesized that language used to express stereotypical beliefs about mental illness (overall concept, anxiety, and depression) would differ between image condition and race.

H2a: Researchers hypothesized that descriptive language associated mental illness would differ between image conditions.

H2b: Researchers hypothesized that language associated with mental illness would vary by image condition and participant race.

H2a was evaluated by the main effect of image condition on LSS-MI and LSS-MI-D and LSS-MI-A. H2b was evaluated by the interaction of image condition and race using a series of 2 (image condition) X 3 (race/ethnicity) repeated-measures ANOVAs.

H3: It was hypothesized that language reflecting schemas or stereotypes about being elderly, race/ethnicity, and mental illness in response to the older condition image as compared to the younger condition image would be predicted by participant race/ethnicity (White, Latinx, Black), participant age, participant experience with intergenerational contact (minimal, some, regular), and participant experience with ageism (experienced and/or witnessed). H3 was examined using a series of three post-hoc regression analyses on LSS-E-Diff, LSS-MI-Diff, and LSS-R/E-Diff.

H4: Researchers hypothesized that themes present in the older image condition would differ from themes present in the younger image condition. A theme analysis was utilized to examine H4. McNemar tests were incorporated to determine statistical significance of researcher-identified themes that were present in the narratives of both image conditions.

Table 18*Hypotheses and Corresponding Statistical Analyses*

Hypothesis	Analysis
Language reflecting schemas or stereotypes about being elderly, race/ethnicity, and mental illness (DV) will vary between participants of different racial groups (IV).	Two-way repeated-measures ANOVAs (2 age image conditions X 3 race/ethnicity)
Language reflecting schemas or stereotypes about mental illness (DV; overall concept, anxiety, and depression) would differ between image condition (IV) and race (IV).	Two-way repeated-measures ANOVAs (2 age image conditions X 3 race/ethnicity)
Language reflecting schemas or stereotypes about being elderly, race/ethnicity, and mental illness (DV) in the older versus younger image condition will differ between condition (IV) and will be predicted by participant race/ethnicity (White, Latinx, Black), participant age, intergenerational contact, and participant experience with ageism (IV).	Series of three post-hoc regression analyses on LSS-E-Diff, LSS-MI-Diff, and LSS-R/E-Diff
Themes present in the older image condition will differ from themes present in the younger image condition.	Theme analysis, McNemar Tests

Main Archival Study Quantitative Results**Language Usage Differences: Main Effect of Image Condition**

Although not part of the initial hypotheses, results of the repeated-measures ANOVAs demonstrated a significant main effect of image condition (younger image versus older image) on LSS-E, $F(1, 184) = 32.98, p < 0.001$. Participants utilized less

LSS-E in the younger image condition narratives ($M = 2.92$, $SD = 1.85$) than in the older image condition ($M = 3.93$, $SD = 2.11$). As shown in Table 19, a significant main effect of image condition was also found in all but two of the descriptive LSS-E sub-categories including: LSS-E-Per, $F(1, 184) = 10.82$, $p = 0.001$; LSS-E-SP, $F(1.00, 184) = 22.59$, $p < 0.001$; and LSS-E-Sex, $F(1, 184) = 9.74$, $p = 0.002$. Similar to the overall LSS-E category, participants used fewer LSS-E descriptive subcategory words when describing a day in the life of the younger image condition, as compared to the older image condition.

Table 19

Means and Standard Deviations for LSS-E Overall and Directive Prompts, Examined Using Originally Planned Repeated-Measures ANOVA

Variable	Younger Image Condition		Older Image Condition	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
LSS-E*	2.92	1.85	3.93	2.11
LSS-E-Ph	0.52	0.84	0.47	0.87
LSS-E-C/T	1.12	1.08	1.22	1.10
LSS-E-Per*	0.35	0.58	0.63	0.96
LSS-E-SP*	0.88	1.02	1.42	1.29
LSS-E-Sex*	0.80	0.81	1.10	1.12

Note. $n = 187$. Repeated-Measures ANOVAs tested for interactions between condition and participant race.

*Indicates a significant difference/main effect between image conditions. $p < 0.05$.

As shown in Table 20, a significant main effect of image condition was not present for the overall LSS-R/E category; however, an effect was found within the LSS-

R/E-W directive subcategory. The repeated measures demonstrated a significant main effect of image condition on LSS-R/E-W, $F(1, 184) = 8.09, p = 0.005$, with results indicating that participants used more LSS-R/E-W words when describing a day in the life of the younger image condition ($M = 0.23, SD = 0.80$) than when writing about the older image condition ($M = 0.07, SD = 0.34$).

Table 20

Means and Standard Deviations for LSS-R/E Overall and Directive Prompts, Examined Using Originally Planned Repeated-Measures ANOVA

Variable	Younger Image Condition		Older Image Condition	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
LSS-R/E	1.40	2.03	1.16	1.29
LSS-R/E-W*	0.23	0.80	0.07	0.34

Note. $n = 187$. Repeated-Measures ANOVAs tested for interactions between condition and participant race.

*Indicates a significant difference/main effect between image conditions. $p < 0.05$.

Main Effect of Image Condition Summary

Together, results of the repeated-measures ANOVAs demonstrated several significant differences in language use between image conditions. For LSS-E overall and directive word categories, results of the ANOVAs demonstrated that participants used fewer LSS-E, LSS-E-Per, LSS-E-SP, and LSS-E-Sex words when writing about the younger image condition, as compared to the older image condition. For the directive LSS-R/E-W category, participants used more LSS-R/E-W words when writing about the

younger image. The analysis demonstrated no significant difference between image conditions for LSS-E-Ph, LSS-E-C/T, and LSS-R/E (all $ps > 0.05$).

Language Usage Differences: Participant Race

It was hypothesized that descriptive language reflecting schemas or stereotypes of different LSS-E concepts would vary between participants of different racial groups (H1).

Researchers hypothesized (H1a) LSS-E would vary by participant race. The analysis demonstrated no significant effect of participant race on LSS-E, or any of the elderly directive prompts all $ps > 0.05$. Descriptive statistics can be found in Table 21.

Table 21*Means and Standard Deviations for Race and LSS-E Scores*

Race of Participant	LIWC Category	Younger Image Condition		Older Image Condition	
		<i>M</i>	SD	<i>M</i>	SD
White	LSS-E	2.95	1.82	3.74	2.10
	LSS-E-Ph	0.50	0.79	0.40	0.76
	LSS-E-C/T	1.02	1.06	1.07	0.95
	LSS-E-Per	0.36	0.53	0.58	1.04
	LSS-E-SP	1.02	1.00	1.48	1.27
	LSS-E-Sex	0.71	0.80	0.97	1.03
Black or African American	LSS-E	2.99	2.06	3.87	2.12
	LSS-E-Ph	0.77	1.16	0.72	1.32
	LSS-E-C/T	1.10	1.00	1.21	1.06
	LSS-E-Pers	0.34	0.68	0.57	0.81
	LSS-E-SP	0.72	0.96	1.10	1.30
	LSS-E-Sex	0.78	0.72	1.15	1.39
Hispanic, Latinx, or Spanish Origin	LSS-E	2.82	1.77	4.31	2.10

LSS-E-Ph	0.37	0.60	0.40	0.59
LSS-E-C/T	1.31	1.18	1.48	1.32
LSS-E-Pers	0.35	0.62	0.75	0.94
LSS-E-SP	0.74	1.10	1.53	1.32
LSS-E-Sex	0.98	0.88	1.28	1.04

Note. $n = 187$.

It was hypothesized (H1b) that language reflecting schemas or stereotypes about race would vary by participant race. Results of the repeated measures ANOVAs demonstrated partial support for the hypothesis. The analysis demonstrated a significant main effect of participant race on LSS-R/E, $F(2, 184) = 4.19$, $p = 0.02$, with results indicating that Black/African American participants used more LSS-R/E words than participants from other racial/ethnic groups. Pairwise comparisons revealed that Black/African American participant identity was associated with statistically significant higher LSS-R/E scores when describing the younger image condition ($M = 2.22$, $SD = 3.09$) than White participants ($M = 1.24$, $SD = 1.84$) and Latinx participants, ($M = 1.08$, $SD = 1.04$), all $ps < 0.01$. In addition, results of the repeated measures ANOVAs demonstrated a significant two-way interaction between effect of participant race on LSS-R/E-W, $F(2, 184) = 3.40$, $p = 0.04$, with results indicating that Black/African American study participants used more LSS-R/E-W words to describe a day in the life of the younger image condition ($M = 0.53$, $SD = 1.28$) than did White and Latinx participants. See Table 22 for means and standard deviations.

Table 22*Means and Standard Deviations for Race and LSS-R/E Scores*

Race of Participant	LIWC Category	Younger Image Condition		Older Image Condition	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
White	LSS-R/E	1.24	1.84	1.03	0.98
	LSS-R/E-W	0.20	0.74	0.06	0.22
Black or African American	LSS-R/E*	2.22	3.09	1.46	1.64
	LSS-R/E-W**	0.53	1.28	0.07	0.25
Hispanic, Latinx, or Spanish Origin	LSS-R/E	1.08	1.04	1.19	1.48
	LSS-R/E-W	0.08	0.21	0.09	0.54

Note. $n = 187$. *Indicates a significant difference/main effect of participant race/ethnicity. $p < 0.05$. **Indicates a significant interaction effect of participant race on LSS-R/E score. $p < 0.05$.

It was hypothesized (H1c) that language expressing schemas and stereotypical beliefs about mental illness would differ between participants of different racial groups. Results of the repeated-measures ANOVAs demonstrated partial support for the hypothesis. The analysis demonstrated a significant main effect of participant race on LSS-MI-A, $F(2, 184) = 3.2$, $p = 0.04$, with results indicating that Black/African American participants used more LSS-MI-A words than did White participants. Pairwise comparisons revealed that when describing a day in the life of the older image condition, Black/African American participant identity was associated with statistically significant higher LSS-MI-A scores ($M = 0.87$, $SD = 0.94$) as compared to scores of White participants ($M = 0.61$, $SD = 0.76$), $p = 0.01$. See Table 23 for means and standard deviations.

Table 23*Means and Standard Deviations for Race and LSS-MI Scores*

Race of Participant	LIWC Category	Younger Image Condition		Older Image Condition	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
White	LSS-MI	0.95	1.05	0.60	0.82
	LSS-MI-D	0.30	0.54	0.39	0.57
	LSS-MI-A	0.61	0.76	0.20	0.56
Black or African American	LSS-MI	1.26	1.12	0.65	0.90
	LSS-MI-D	0.29	0.49	0.18	0.33
	LSS-MI-A*	0.87	0.94	0.44	0.92
Hispanic, Latinx, or Spanish Origin	LSS-MI	1.25	1.23	0.53	0.69
	LSS-MI-D	0.38	0.69	0.29	0.53
	LSS-MI-A	0.83	1.10	0.21	0.45

Note. $n = 187$. *Indicates a significant difference of participant race/ethnicity. $p < 0.05$. *

Language Usage Differences: LSS-MI and Participant Race/Image Condition

Interactions

H2: It was hypothesized that LSS-MI (overall concept, anxiety, and depression) would differ between image condition and race.

Researchers hypothesized that descriptive language associated with LSS-MI would differ between image conditions (H2a). Results of the repeated-measures ANOVAs demonstrated partial support for the hypothesis. The analysis demonstrated a significant main effect of image condition on LSS-MI, $F(1, 184) = 26.51, p < 0.001$. As shown in Table 24, results indicated that participants used more LSS-MI when writing about the younger image ($M = 1.10, SD = 1.12$) than when writing about the older image condition ($M = 0.59, SD = 0.80$). A significant main effect of image condition was also present for LSS-MI-A, $F(1, 184) = 30.6, p < 0.001$. Participants used more LSS-MI-A when writing about the younger image condition ($M = 0.72, SD = 0.91$) than when writing about the older image condition ($M = 0.25, SD = 0.63$). The analysis demonstrated no significant difference between image conditions for LSS-MI-D, $p > 0.05$.

Table 24

Means and Standard Deviations for LSS-M/I Overall and Directive Prompts, Examined Using Originally Planned Repeated-Measures ANOVA

Variable	Younger Image Condition		Older Image Condition	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
LSS-M/I*	1.10	1.12	0.59	0.80
LSS-M/I-D	0.32	0.58	0.32	0.52
LSS-M/I-A*	0.72	0.91	0.25	0.63

Note. $n = 187$. Repeated-Measures ANOVAs tested for interactions between condition and participant race.

*Indicates a significant difference/main effect between image conditions. $p < 0.05$

It was hypothesized (H2b) that language reflecting schemas or stereotypes about mental illness would vary by image condition and participant race. Results of the analysis demonstrated no significant interaction effect of image condition and race on LSS-M/I, all $ps > 0.05$. Refer to Table 23 for means and standard deviations.

Language Usage Differences: Intersectional Differences

H3: It was hypothesized that language reflecting schemas or stereotypes about being elderly, race/ethnicity, and mental illness in response to the older condition image as compared to the younger condition image would be predicted by participant race/ethnicity, participant age, intergenerational contact, and experience with ageism. H3 was examined using a series of three post-hoc regression analyses on LSS-E-Diff, LSS-MI-Diff, and LSS-R/E-Diff.

Predictors of Language Related to Aging Schemas

The researchers conducted a multiple regression to examine whether participant age, race, intergenerational contact, experience with caregiving, and experiences with ageism significantly predicted differences in LSS-E between image conditions. The prediction model analysis for differences in LSS-E words between conditions was found to be statistically significant in predicting 9.0% of the variance in LSS-E between image conditions, $R^2 = .090$, $F(8, 178) = 2.20$, $p < 0.05$. Two variables, associated with experiences with ageism, added significantly to the prediction. Results of the analysis demonstrated that participants who carried the weight of the model included those who reported they had witnessed ageism ($\beta = 0.20$, $p < 0.05$) and those who had previously experienced ageism ($\beta = -0.19$, $p < 0.05$). Participants who reported having witnessed ageism used more LSS-E words in response to the older condition image as compared to the younger condition image. Participants who reported having experienced ageism used fewer LSS-E words to describe the older image condition as compared to the younger condition. Regression coefficients and standard errors can be found in Table 25.

Table 25

Summary of Multiple Regression Analysis Used to Examine Participant Predictors of Differences in LSS-E Between Image Conditions

Variable	<i>B</i>	<i>SE_B</i>	$\hat{\epsilon}$
Has Played a Caregiving Role	-0.370	0.361	-0.074
Age of Participant	-0.026	0.021	-0.096
Latinx (Participant Race)	0.344	0.418	0.066
Black (Participant Race)	-0.060	0.458	-0.010
Minimal Intergenerational Contact	1.247	0.766	0.120

Some Intergenerational Contact	-0.529	0.374	-0.105
Has Experienced Ageism	-0.907	0.386	-0.186*
Has Witnessed Ageism	1.423	0.579	0.197*

Note. The dependent variable was LSS-E-Diff.

* $p < 0.05$; B = unstandardized regression coefficient; SEB = Standard error of the coefficient;

β = standardized coefficient

Predictors of Language Related to Race/Ethnicity Schemas

Multiple regression was used to examine whether participant age, race, intergenerational contact, experience with caregiving, and experiences with ageism were significant predictors of differences in LSS-R/E between image conditions. The prediction model analysis for differences in LSS-R/E words between conditions was not found to be statistically significant, $p > 0.05$.

Predictors of Language Related to Mental Illness Schemas

Multiple regression was used to examine whether participant age, race, intergenerational contact, experience with caregiving, and experiences with ageism were significant predictors of differences in LSS-MI between image conditions. The prediction model analysis for differences in LSS-MI words between conditions was not found to be statistically significant in predicting differences in LSS-MI between image conditions, $p > 0.05$.

Main Archival Study Qualitative Data Analysis

Finally, the researchers analyzed narratives of the older and younger image conditions in the previous ELA study by conducting a theme analysis of narratives from

the archival data. The analysis provided researchers a way to examine emergent themes from the archival data, and to examine differences in themes between conditions.

A theme-analysis is a mixed-method research tool that combines dimensions of both qualitative and quantitative analysis (Meier et al., 2008) to analyze textual data by creating or organizing the information into thematic networks (Attride-Stirling, 2001). These networks are classified and systematically categorized by basic, organizing, and global themes which are then used to illustrate a thematic network (Attride-Stirling, 2001). This is a useful way to uncover textual themes as well as a way to understand the interconnectivity between different themes that emerge.

To begin the theme analysis, each narrative associated with both the younger and older image conditions, was individually examined for the presence of textual themes by two independent raters. The first independent rater included the current study's author, a White, female, 40-year-old, middle class, doctoral candidate in the field of counseling psychology. The second independent rater was a 46-year-old, White, male, middle class, licensed psychologist with expertise in the field of aging, cognition, and assessment. Raters independently read each narrative and identified emerging themes that were then extracted and coded.

Following the initial coding, themes used most often between narratives and raters were identified. Themes present in at least 5% of individual condition narratives (younger versus older) for both independent raters were considered relevant and classified as major themes. Themes that were found to be present in both image conditions were compared to

examine differences between the number of times in which they were used. Major themes were then coded and examined for inter-rater reliability. To examine inter-rater reliability, intraclass correlation coefficient (ICC) estimates and their 95% confidence intervals were calculated using SPSS, based on a mean-rating ($k = 2$), absolute-agreement, 2-way mixed effects model. ICC estimates for average measures with an intraclass correlation > 0.7 were considered to have acceptable (moderate or greater) inter-rater reliability between the two independent raters. Where inter-rater reliability fell below acceptable levels, the data was examined again by the main researcher for rater identified subthemes and similarly related themes, in an attempt to resolve differences before presenting final results of the analysis below. Finally, if a theme was present in more than 5% of the older and younger image condition narrative, McNemar tests were conducted in SPSS to verify that the frequency was significantly different.

Similarities and Differences in Themes Between Conditions

The researchers hypothesized (H4) that themes present in the older image condition would differ from themes present in the younger condition.

As hypothesized, results of the theme analysis demonstrated some difference in themes between conditions. Specific major themes that emerged associated with only the older condition was related to *death*, *faith*, *health*, and *residence*. Participants used themes of *death* in 61 different narratives (24.60%) to describe a day in the life of the older woman, $\chi^2 (245) = 54.02, p < 0.001$. *Faith* was found as a theme in 25 different narratives (10.08%; $\chi^2 (245) = 25.04, p < 0.001$). A major theme of *health* was also found

only in the older image condition and was present in 26 narratives (10.48%; $\chi^2 (245), p < 0.001$). The major theme of *residence* was present in 66 different narratives (26.61%) to describe the older condition, $\chi^2 (245) = 61.02, p < 0.001$. Inter-rater reliability demonstrated moderate or greater consistency across themes and is shown in Table 26, along with theme examples.

Table 26*Major Themes Present in Only Older Condition Image Narrative*

Major Theme	Example	<i>n</i>	%	ICC
Death	<i>“A retired nurse, Susan spends her days volunteering in hospitals by bringing food to patients and sitting with them...On Sundays, she goes to the graveyard with lilies for her love who died 4 years prior, and Susan will sit there and talk about her day...”</i>	61	24.6	1.00
Faith	<i>“ This is a 74-year-old female Caucasian...After eating she gets ready for the day and goes to volunteer at her local church that she also attends every Sunday...”</i>	25	10.8	0.92
Health	<i>“Hello , I went to my PT today to get some help with my range of motion, he said being Italian and 89 had a lot to do with my bone health.”</i>	26	10.48	0.88
Residence	<i>“She is recently widowed, and lives in Florida in her and her late husband’s home. She has 8 children and 20 grandchildren that all live in Florida, so she keeps herself plenty busy visiting her family. She also lives in a retirement community, so all of her friends are about her same age and retired as well.”</i>	66	26.61	0.79

Note. *n* = 248. Intraclass Correlation (ICC) = Average Measures Inter-Rater Reliability.

Major themes that appeared in both conditions, but were present more in the younger image condition, included *caregiving*, *emotions*, *quality of life*, and *work*. *Caregiving* was a major theme found in 62 (25%) of younger image narratives and 32 (12.90%) older image narratives, $\chi^2 (245) = 11.36, p = 0.001$. *Quality of life* themes were found in 119 (47.98%) descriptions of a day in the life of the younger image, compared to 100 times (40.32%) in the older image narratives, $\chi^2 (245) = 13.25, p < 0.001$. *Work* was present in 186 (75%) younger image narratives and 100 (41.53%) of older image narratives, $\chi^2 (245) = 58.27, p < 0.001$. Inter-rater reliability, shown in Table 28 below, demonstrated moderate or greater consistency for themes of *caregiving*, *emotions*, and *work*. For the theme of *quality of life*, inter-rater reliability demonstrated acceptable consistency for themes identified in the younger condition narrative. *Quality of life* was an identified theme among both raters for more than 5% of older condition narratives; however, the theme demonstrated weak overall inter-rater reliability. While not significantly different, narratives including themes of *emotions* were present in 39 (15.73%) of younger image samples and in 34 (13.71%) older image descriptions, $\chi^2 (245) = .291, p > 0.05$. Examples for themes of *caregiving*, *emotions*, *quality of life*, and *work* are shown in Table 27, as are related inter-rater reliability correlations for each theme.

Table 27*Major Themes Present in Both Conditions Used More in Younger Narrative*

Major Theme	Example	<i>n</i>	%	ICC
<i>Younger Condition</i>				
Caregiving	<i>"...She cooks breakfast for her kids and her husband. As she finishes cooking for them, she calls all of them down. As they come down, she gets their backpacks ready for school and then when they are finished, she sends them off to school...When she gets off of work, she picks up the kids and cooks dinner for them."</i>	62	25.00	0.89
Emotions	<i>"This woman looks like she has had a long, tiring, exhausting day and is ready to take some time for herself and relax. She also looks like she may be tired due to the fact that she has been drinking or smoking. She looks like a tragic event has taken part in her life and she's sobbing over it."</i>	25	15.73	0.99
Quality of Life	<i>"Most days she barely has time to fix her own lunch. She hurriedly throws on a sweater, brushes her teeth, throws her hair up, and puts some earrings on. Her work is fairly understanding of her situation and doesn't make much conversation with her. She's lonely. She longs for the day when she can have her own life again without the consistent routines of taking care of others. She's exhausted, but being a single mother means she must keep pressing on. She has mouths to feed."</i>	26	0.78	0.88
Work	<i>"She is White female in her thirties, and she is working hard in her career to be considered a middle-class person. She seemed to have a tiring day working a 8-hour shift but she does have a career. She will go home and relax to reward herself."</i>	66	75.00	0.83

Older Condition

Caregiving	<i>“This person is 78. She is white and loves to knit. She has five children: one son and four daughters. She loves her son dearly as he still lives with her to take care of her.”</i>	32	12.90	0.86
Emotions	<i>“Late 60s white female. Adheres to generational expectations to express nothing that is highly emotional or personal. Wants to appear to maintain as everything is okay. However, her eyes tell a different story. She is widower, who goes about her day keeping an appearance, but grieves alone. This person continues to struggle with the demands of life (maintaining her house, etc.). This person has a small group of other women in which she socializes with, and may express some of her struggles with loneliness, but often references religion and how life will work at as it is supposed to. Overall, the person is scared to reveal her true current lived experience to herself, or to those around her. This person has anxiety about her future, but again, it is not something she is willing to discuss, and if someone is to mention it to her, she is quick to dismiss it, almost in a defensive attitude....Overall, pride blocks the emotional connection that she is missing. Overall, struggling with life role transition.”</i>	34	13.71	0.79
Quality of Life	<i>“This person is having an amazing day. She is a 77-year-old woman that loves her life.”</i>	100	40.32	0.53
Work	<i>“Her name is Grace, and she is an 80-year-old white female...She didn't go to college or have a job because she wanted to stay at home and with her four children. Her husband worked.”</i>	100	40.32	0.95

Note. $n = 248$. Intraclass Correlation (ICC) = Average Measures Inter-Rater Reliability.

Major themes found between images that were most prevalent in descriptions of the older image condition narratives included *family/relationships*, *interests*, and *pets*. The major theme of *family/relationships* was present in 188 older condition narratives (75.81%) and 122 (49.19%) of younger condition narrative descriptions $\chi^2 (245) = 39.12$, $p < 0.001$. Among older image narratives, *interests* were identified as a major theme that was used in 155 (62.50%) different descriptions of a day in the life of the older woman compared to 81 (32.66%) of the younger image descriptions $\chi^2 (245) = 45.01$, $p < 0.001$. Although not significantly different, the major theme of *pets* was present in 42 (16.94%) older and 37 (14.92%) younger image descriptions $\chi^2 (245) = 0.29$, $p > 0.05$. Inter-rater reliability demonstrated moderate or greater consistency across themes. Examples of ways in which major themes of *family/relationships*, *interests*, and *pets* presented in both image conditions, as well as inter-rater reliability correlations are shown below in Table 28.

Table 28*Major Themes Present in Both Conditions Used More in Older Narrative*

Major Theme	Example	<i>n</i>	%	ICC
<i>Older Condition</i>				
Family/Relationships	<p><i>“She is involved in many groups within her community, most being at the senior center. She is widowed but was happily married to her wonderful husband. She talks constantly about the letters they wrote back and forth while he was deployed overseas with the military. She is very proud of what he did for our country and is very proud to be called his wife, his sweetheart. She is not one to sit at home and do nothing, she likes to be out and talking to people. She loves to talk to people. She enjoys spending time with her kids and her great grandkids. When she is not with them, she is at the senior conversing with the other folks around.”</i></p>	188	75.81	0.98
Interests	<p><i>“This woman's name is Hellen she is a White occasion 82 years old woman living in an assisted living facility....After breakfast she goes to play bridge with her three friends that she made while staying there. Helen is very good at bridge and seems to beat everyone she plays against that day. After playing about 3 hours of bridge she goes to watch tv for an hour before lunch. She loves to watch wheel of fortune because it helps keep her mind sharp... After lunch she went back up to her room and read her favorite mystery book by James Patterson. She spent about 2 hours reading the book. She then went down to play Rummikub which is a mind game.”</i></p>	155	62.50	0.83

Pets	<i>“Sylvia is a Spanish woman who just turned 86 and lives alone with her dog...Sylvia feeds her dog while the coffee brews and turns on the morning news...After she has her daily breakfast of two eggs, beans, and toast, she takes her dog for a walk around her neighborhood. She believes that movement will keep her young...When she gets home, she feeds her dog, lets him out, and eats dinner for herself...”</i>	42	16.94	0.95
<i>Younger Condition</i>				
Family/Relationships	<i>“On weekends she (younger image) drinks with her friends she knew from college. She is also unmarried. She does not look for marriage even though her friends and parents tell her she should.”</i>	122	49.19	0.93
Interests	<i>“This is Susan, she is a 30-year-old White woman. She lives in Texas and works at a store that sells rustic jewelry and clothing. She enjoys riding horses and going to rodeos. She prefers white wine over other drinks....”</i>	81	32.66	0.82
Pets	<i>“This person is a citizen of the U.S. She is college student and 22 years old trying to get a degree in Biology and a minor in biology...During her free time, she likes to go for a walk with her white toy poodle dog.”</i>	37	14.92	0.99

Note. $n = 248$. Intraclass Correlation (ICC) = Average Measures Inter-Rater Reliability.

As hypothesized, results of the theme analysis demonstrated differences in themes used to describe a day in the life of the younger and older image conditions. Major themes present in only the older image condition included *death*, *faith*, *health*, and *residence*. Major themes present in both image conditions that were used more to describe a day in the life of the younger image condition included *caregiving*, *quality of life*, and *work*. Major themes present in both conditions used more in the older condition narrative included *family/relationships* and *interests*. Major themes including *emotions* and *pets* were also found in more than 5% of narratives across image conditions; however, neither theme was statistically different between image conditions.

CHAPTER V

DISCUSSION

Findings and Implications

The aim of the present study was to examine patterns in the language used to describe individuals at different stages of the lifespan, and to determine through a framework of intersectionality, ways in which language use directed toward others differs in relation to perceived identity and social location. Researchers also sought to examine ways in which study participants' own unique identities may have influenced their use of language and perceptions of aging. To the authors' knowledge, aside from the previous ELA study (Rook-Phenis & Scott, 2019) from which archival data for this study was used, no previous studies have examined associations between beliefs about aging/being elderly and language patterns using the LIWC or other means. The researchers believe this is also the first known study to begin to examine these associations through an intersectionality framework/lens, and further, to examine whether there were differences present within the language associated with participants' own unique intersecting identities and experiences (race/ethnicity, age, intergenerational contact, and previous experience with ageism).

Stereotypes of Being Elderly and Race/Ethnicity Between Image Conditions

Although not part of the research questions and/or stated hypotheses, results of the data analysis found several significant differences in language use between image conditions across language categories. In regard to stereotypical language usage associated with being elderly, the analysis demonstrated a significant main effect of image condition on LSS-E. While not surprising, the findings demonstrated that participants used significantly more descriptive words associated with stereotypes of being elderly related to concepts such as appearance (e.g., wrinkles, gray, short), mobility (e.g., slow), and frailty (e.g., fragile, weak), when describing a day in the life of the older woman as compared to that of the younger woman. A similar increase in stereotypical words used to describe a day in the life of the older woman was also found in all but two LSS-E descriptive subcategories including those related to personality characteristics, social practices, and sexuality associated with being elderly. Together, the findings suggest that participants in both the previous ELA study (Rook-Phenis & Scott, 2019) and the current pilot study hold similar stereotypical beliefs about being elderly as evidenced by their shared use of stereotypical language. This finding is particularly interesting as it demonstrates how people view and talk about older women at the intersection and convergence of being both of older age and a woman, as well as ways in which shared stereotypical beliefs about being elderly/aging, and associated microaggressions, are conveyed through stereotypical language across different studies and study participants.

Although a significant main effect between image conditions was not found for the overall LSS-R/E category, results of the analysis demonstrated significant differences in language associated with LSS-R/E-W. In regard to differences in stereotypical language associated with White race/ethnicity between image conditions, participants used more stereotypical language associated with White race/ethnicity when describing a day in the life of the younger woman/image condition, as compared to the older woman/image condition. The most commonly generated words making up the category and listed in the results of the pilot study, were found to relate to schemas and stereotypes related to privilege, resources, discrimination, appearance, status, and lack of culture. The findings suggest that at the intersection of both age and of being a woman, study participants drew more from similar schemas and stereotypes associated with concepts of White race/ethnicity when viewing images of the younger White woman/image condition as compared to when they viewed/described the older White woman/image condition. Together, the findings indicate that women are perceived differently at different stages of the lifespan and that said differences are due at least in part, to the convergence of schemas and stereotypes associated with their varying identities.

Participant Race and Stereotypical Language

Based on studies demonstrating the favorable impact of in-group favoritism toward older adults of the same ethnic group (Laditka et al., 2011), it was hypothesized that LSS-E (H1a) and LSS-R/E (H1b) would vary between participants of different racial groups. In addition, due to differences in rates of mental illness (NIMH, 2019) and

disparities in access to mental health services between individuals of different racial identities (McGuire & Miranda, 2008), the researchers expected varying exposure to descriptive language associated with mental illness/health would result in differences between LSS-MI used by participants of different races (H1c). As noted previously, hypotheses were tested by an interaction effect of race/ethnicity on LSS-E, LSS-R/E, and LSS-MI categories using a series of 2 (image condition) X 3 (race/ethnicity) repeated measures ANOVAs. Results of the analyses did not find evidence to support the hypothesis that language use associated with schemas or stereotypes linked with beliefs about being elderly varied by participant race; however, the findings did demonstrate partial support for the hypotheses regarding differences in stereotypical language associated with race/ethnicity and mental illness among participants of different racial/ethnic groups.

Participant Race and Stereotypes of Being Elderly

The results regarding stereotypical language associated with the concept of being elderly were interesting. Based on the aforementioned studies examining in-group/out-group bias toward older adults among college students (Laditka et al., 2011) as well as those that examined differences in attitudes directed toward older adults when taking age and race into consideration (Kang & Chasteen, 2009), the researchers were somewhat surprised to find that stereotypes associated with being elderly did not differ between participants of different races. One possible interpretation for this outcome may be that schemas and/or stereotypes of aging may be so engrained in U.S. culture, that they are

part of the normal discourse, as suggested by previous research examining words associated with negative beliefs about aging (Gendron et al., 2016) and as such, are shared similarly among individuals with different intersecting identities. This interpretation may also explain the differences found in stereotypical language associated with the concept of being elderly between image conditions, which were present more in narratives describing the older image condition. Together, the findings suggest that individuals hold similar stereotypes regarding concepts of being elderly, regardless of racial/ethnic background.

Participant Race and Stereotypes Associated With Race/Ethnicity

In regard to stereotypical language associated with race/ethnicity, the researchers found partial evidence to support the hypothesis that language reflecting schemas or stereotypes about race would vary by participant race. A main effect of participant race on LSS-R/E demonstrated that among participants of different racial/ethnic groups, Black/African American participants used significantly more stereotypical words associated with concepts of race/ethnicity when describing a day in the life of the younger woman/image condition, as compared to Latinx and White participants. Based on the results of the pilot study, this suggests that Black/African American participants used more descriptive language related to culture, specific racial/ethnic group, discrimination, family, and differences when writing about a day in the life of the younger woman. In addition to increased stereotypical language associated with overall concepts of race/ethnicity when writing about the younger image condition, ANOVA

results demonstrated a significant interaction of participant race on LSS-R/E-W. Results indicated that Black/African American participants used more stereotypical language associated with White race/ethnicity when describing a day in the life of the younger woman/image condition, as compared to Latinx and White study participants. Findings suggest that when prompted to report on a day in the life of the younger woman/image condition, Black/African American participants used more descriptive language related to concepts of privilege, resources, discrimination, appearance, status, and lack of culture, as compared to Latinx and White participants.

Although additional study is needed, the increase in stereotypical language associated with overall concepts of race/ethnicity and White race/ethnicity used by Black/African American participants, indicates the presence of a relationship between language use and participant race/ethnicity. Based on previous research regarding ways in which language choice communicates what individuals think and feel (Tausczik & Pennebaker, 2010), the current results provide some information about implicit and explicit thought processes associated with concepts of race/ethnicity, among individuals of different racial/ethnic groups. Interestingly, since differences were only found in narratives describing the younger image, researchers suspect that consistent with previous research regarding stereotypes directed toward older adults (Kang & Chasteen, 2009), the activation of elderly stereotypes when viewing the older woman may have overridden those associated with race/ethnicity. Similarly, given the overall young age of the participants, the younger image prompt may have activated more schemas related to in-

group and out-group categorization, resulting in differences in stereotypical language associated with race among participants of different racial groups. Based on these findings, as well as an interest in understanding ways in which stereotypical language use may vary in relation to intersectionality, researchers recommend that future studies incorporate greater racial diversity among image conditions as well as more participants of different ages and genders across the lifespan. Overall, the findings indicate that at the intersection of age and of being a woman, language reflecting schemas or stereotypes about race do in fact vary between participants of different racial/ethnic backgrounds and also suggest that age may in some cases be associated with less stereotypical language/bias.

Participant Race and Stereotypes Associated With Mental Illness

In regard to stereotypical language associated with the concept of mental illness present within the ELA study narratives, the researchers' belief that race would be associated with use of LSS-MI was partially supported by the finding of a main effect of race on LSS-MI-A. Results of the analysis indicated that Black/African American participant race was associated with statistically more use of stereotypical language related to concepts of anxiety when describing a day in the life of the older woman, as compared to White participants. Results indicate that as compared to Latinx and White participants, Black/African American participants used more language related to themes of negative emotion (e.g., panic, worry, stress), affect (e.g., shaking), and safety (e.g., fear, attack) when writing about a day in the life of the older woman/image condition.

Although additional study is warranted, the results imply a relationship between participant race and views of mental health/illness associated with combined schemas and stereotypes at the intersection of being both of older age and a woman. One possible interpretation of the findings is that Black/African American participants' views and/or schemas of mental illness/health in old age may be influenced by exposure to older adults within Black and African American communities. Participants may have witnessed among older Black and African American elders, the cumulative effects of race-related stress over the lifetime, which have been found to result in increased anxiety and other emotional responses (Carter, 2007), and who are less likely to have access to mental health services as compared to White adults (McGuire & Miranda, 2008). Results of the analysis may have also been influenced by other variables related to participant demographics as well as perceived image condition identities. For instance, in-group similarities in gender between image conditions and participants may have influenced the use of schemas or stereotypes used to describe the younger and older woman in the ELA study. Likewise, the possible convergence of stereotypes related to perceptions of the women that were not assessed for, such as social class, could have contributed to language usage. While additional study is needed, the results overall, indicate that as compared to White study participants, women at later stages of the lifespan are perceived as experiencing more anxiety within their daily lives by Black/African American participants. As hoped, the findings demonstrate differences in language usage related to participants' unique identities.

Ageism and Mental Illness Stereotypes

The hypotheses that language use associated with stereotypical beliefs about mental illness (LSS-MI) would differ between image conditions and participants of different races (H2) was partially supported. As expected, researchers found some support for differences in stereotypical language associated with mental illness between the two women/image conditions (H2a) for LSS-MI overall and LSS-MI-A. For both categories, participants overall, used more stereotypical descriptive language when describing a day in the life of the younger woman/image condition, as compared to the older woman/image condition. No differences were found between images for the number of words associated with LSS-MI-D. As mentioned in the previous section, no evidence to support the hypothesis (H2b) that participant race would interact with image condition to influence participants' use of stereotypical language associated with mental illness was found.

Results suggest that participants associated a day in the life of the younger woman/image condition as filled with more concerns related to overall mental illness/health. As reported in the results of the pilot study, descriptive words in this category related to specific mental health disorders, including depression, anxiety, and bipolar disorder. Additional words in the overall mental illness category related to descriptors of mood (e.g., sad), treatment (e.g., therapy, help), sickness, and stigma (e.g., crazy). Similarly, the increased use of words associated with anxiety in the younger condition, as compared to the older image condition, suggest that participants viewed the

younger woman/image condition as having experienced more anxiety during her day than the older woman/image condition, using descriptive words such as panic, worry, fear, nervous, stress, and scared. Together, results indicate that at least among the current study population, when drawing from combined schemas and stereotypes at the intersection of age and of being a woman, older adults/women are perceived as experiencing fewer mental health concerns, as compared to younger adults/women. The significance of these findings is quite interesting given the prevalence of mental health concerns among women across the lifespan, particularly among older cohorts where mental health concerns have been found to go undetected and undertreated (Cole et al., 1999; Han & Richardson, 2015).

As noted, the researchers did not find evidence to suggest differences in the use of stereotypical language associated with concepts of depression between conditions. Since the majority of ELA participants attended psychology courses, one reason for this may be that they were more aware of depression in the elderly and as such, viewed the mental health condition as being experienced throughout life. To address this, future studies may consider incorporating questions regarding participants' views of mental illness/health among individuals across the lifespan.

Overall, the researchers believe the current results should be interpreted with caution, as there may be several limitations/reasons to consider. Of note, the majority of study participants were under the age of 25, which along with other intersecting identity variables, may have impacted their views of mental health/illness and the overall results.

Another consideration may be that although the images used in the ELA study were matched in a previous study based on perceived similarity of attributes, including perceived emotion, participants impressions of the women shown, may have been impacted due to unforeseen non-age characteristics that were present in the images. In addition, although the initial writing prompt from the ELA study asked participants to describe a day in the life of the image condition, there was no prompt to discuss mental illness/health. The researchers were interested in and assumed mental health language would be present as a descriptor used to describe a day in the life of the women shown; however, unlike demographic information including race and age, the researchers did not provide a specific prompt for this concept. This limitation could easily be addressed by including a prompt to discuss any mental illness/health concerns when describing a day in the life of the image in similar future studies. To address the possible limitations of participant age in the current study, as noted previously, the researchers suggest future studies draw from greater samples sizes of participants that include different age cohorts across the lifespan.

Predictors of Language Reflecting Stereotypical Beliefs

The researchers predicted (H3) that stereotypical language would vary in response to the older condition as compared to the younger condition and would be predicted by participant race/ethnicity, participant age, intergenerational contact, and experience with ageism. The researchers did not find that variables examined related to participants' own unique identity and/or experiences was predictive of significant differences in language

use associated with LSS-R/E or LSS-MI; however, as expected, the researchers found some evidence for participant experience on predicting LSS-E between image conditions.

Predictors of Ageist Language

In regard to the use of differences in stereotypical language associated with concepts of being elderly between image conditions, participants who reported having witnessed ageism demonstrated increased stereotypical elderly language to the older image condition as compared to the younger image condition. Whereas participants who reported having experienced ageism had the opposite effect, predictive of decreased stereotypical elderly language toward the older woman/image condition as compared to the younger woman/image condition. As noted in the results of the pilot study, words comprising the LSS-E dictionary related to schemas or stereotypes associated with cognition (e.g., wise), physical characteristics (e.g., gray, slow), mortality (e.g., death), personality (e.g., sweet), social aspects (e.g., lonely), and emotions (e.g., sad). Results of the prediction model suggest that participants who reported having witnessed ageism may have held similar stereotypical beliefs, as evidenced by the increased stereotypical language. Likewise, experiences with ageism appeared to counter negative aging stereotypes among study participants. Although additional study is needed, results demonstrate the potential for experiences with ageism, having witnessed and/or experienced ageism, to implicitly impact the formation of schemas and stereotypes associated with old age. Given the relatively young sample size, the results are consistent with previous research, suggesting that common ageist beliefs are developed during

youth from cultural messages derived through multiple outlets (Cuddy et al., 2005; Gendron et al., 2016; Hollis-Sawyer & Cuevas, 2013; Wright & Canetto, 2009). In considering ways in which older adults face exclusion due to age as a political location (Calasanti & Giles, 2017), the finding is significant, as it demonstrates ways in which schemas and stereotypes associated with negative beliefs about aging may be subtly formed and expressed, in this case through writing, particularly within earlier life stages.

Themes in Older and Younger Image Conditions

As predicted, results of the theme analysis found there were different major themes that emerged in the older image condition as compared to those present in the younger image condition. Themes specific to the older image condition included that of *death, faith, health, and residence*. Themes that were present in narratives for both image conditions, although used more often in describing a day in the life of the older woman, included *family/relationships* and *interests*. Additional themes shared between images/conditions that were used more to describe a day in the life of the younger woman included *caregiving, quality of life, and work*. Major themes found in more than 5% of narratives for both women/image conditions, although not statistically different between the two, included *emotions* and *pets*. Themes appeared to cluster in five different categories, including those related to relations with others, beliefs/emotions, activities, health, and residence.

Themes Related to Relations With Others

Themes related to relations with others found in narrative descriptions of both the younger and older woman included *caregiving*, *family/relationships*, and *pets*. The theme of *caregiving* was used as a descriptive theme in some instances related to the care of an adult in need of assistance due to physical health and/or neurological condition, although overall, was largely used to describe childcare responsibilities for both the younger and older woman pictured. Researchers suspect that the use of caregiving themes was likely influenced by gender role expectations and stereotypes related to women as primary caregivers (Craig & Mullan, 2010; Hentschel et al., 2019) as well as overall caregiving experiences reported by ELA study participants, the majority of whom (67.1%) identified as having been a caregiver at some point in life, although most participants reported they were caregivers to persons over the age of 65 (41.9%; Rook-Phenis & Scott, 2019). Overall, the current results suggest that caregiving, particularly childcare, was considered an important detail to include when describing a day in the life of both the younger and older woman and is perceived as a major part of life and responsibility for women across the lifespan, especially for younger women.

Themes of *family/relationships* found among both condition narratives demonstrate the belief among participants that family and social relationships are important to women across the lifespan. This belief was also demonstrated in the pilot study where participants used words such as *family* and *friends* to describe social practices of being elderly. The greater prevalence of the theme found in narratives

describing the older image condition was also consistent with results of the previous ELA study which found that participants used more affiliation words such as “ally, friend, social” (Pennebaker et al., 2014, p. 4), and social words (“mate, talk, they;” Pennebaker et al., 2015, p. 3) to describe the older woman compared to words used to describe a day in the life of the younger woman. The findings build on the previous ELA study (Rook-Phenis & Scott, 2019), by suggesting that while important to women across the lifespan, older women are perceived to engage in more social processes and place greater importance on relationships with family and others than do younger women. Although additional study is needed, an alternative explanation, similarly presented in the previous ELA study (Rook-Phenis & Scott, 2019), is that younger women are perceived as being more focused on career and have other responsibilities that impede their ability to devote more attention to social relationships compared to older women. This explanation is also consistent given that the theme of *work*, discussed in greater detail below, was used most often to describe a day in the life of the younger woman as compared to the older woman.

The theme of *pets* was thought-provoking and unexpected. Among others, subthemes used with *pets* related to specific type of animal, specific breed (dog), color, specific name of pet(s), and taking walks with pets (dogs). One possible explanation for the theme that could easily be explored in future studies is whether pet ownership among participants influenced the use of pets in descriptive narratives. Interestingly, previous research has demonstrated psychological benefits of pet ownership (McConnell et al., 2011), which study participants may or may not have experienced and/or been aware of.

Regardless, descriptions of pets and pet-related activities were present in narratives for both the younger and older woman, and suggest participants viewed them as having an integral role in the daily life of women across the lifespan.

Themes Related to Beliefs/Emotions

Several participants perceived the major theme of *faith* as being an important descriptive component when describing a day in the life of the older woman. This finding was congruous with that of the previous ELA study, which found an increase in *religion* words used to describe the older image condition (Rook-Phenis & Scott, 2019). The finding was also consistent with results of the current pilot study, in which *faith* was noted to be one of the most commonly held schemas or stereotypes related to social practices of being elderly. Of significance, beliefs regarding the importance of faith/religion among older adults in the current and preceding studies are consistent with previous research findings suggesting that adults become more religious with age in Western cultures (Hayward & Krause, 2015). Together, the current study, along with the results of the ELA study, provide further implication that older adults are perceived to value and/or focus more on religion/faith as compared to younger adults (Rook-Phenis & Scott, 2019).

The presence of *emotions* across image condition narratives suggests that women across the lifespan are viewed as experiencing and/or expressing a variety of emotions throughout their day. Although additional exploration is warranted, one possible explanation for this finding is that participants drew from and applied learned gender

stereotypes that suggest, as compared to men, women typically experience and express emotions more often (Plant et al., 2000). Alternatively, as images of men were not shown for comparison, language descriptions of emotions used amongst participants for both the younger and older woman may simply indicate the presence of shared cultural beliefs about women (Shields, 2013) across the lifespan.

Themes Related to Activities

Major themes present in the narratives related to activities included *work*, *quality of life*, and *interests*. Used most often in descriptions of the younger woman, subthemes of *work* included among others, occupation, career, job, and volunteer. The finding is consistent with that of the earlier ELA study and supports the idea that study participants associated the age of the younger woman pictured with more career building activities than the older woman (Rook-Phenis & Scott, 2019). Findings should be interpreted with caution, as they may have been influenced by the overall younger sample size of study participants, the majority of whom were college students and likely focused on their own career building activities. As such, it would be interesting to examine the prevalence of this theme more in future studies with a larger number of participants from different age cohorts.

Words and or descriptions associated with the overall theme of *quality of life* included subthemes such as struggle, hardship, stress, quality of day, financial struggle/hardship, and distress, among others. The results and associated subthemes suggest that participants considered concepts associated with quality of life as an

important descriptor to include when describing the lives of the women pictured. Overall, participants used more descriptive language associated with quality of life when describing the younger woman which may suggest that younger women in general, are perceived as experiencing greater hardship and struggle than are older women. Alternatively, results may also suggest that younger stages of the lifespan are associated with struggle and overall poorer life quality than are older stages of the lifespan. Although more study is needed to tease this apart, results may be influenced by the relatively young sample size as well as the intersecting identities and lived experiences of the participants. One possible interpretation/future area of study may be to determine in similar studies the ways in which younger women are influenced by their own experiences of struggle and hardship at similar stages of the lifespan and how this influences their views of others. Building on the current pilot study, researchers could also include a prompt for participants to provide descriptive words that come to mind for *quality of life* among individuals at different stages of the lifespan.

Subthemes of *interest* identified in narratives for both image conditions included among others, hobbies, recreation, gardening, volunteering, and social activities. The presence of *interests* for both condition narratives suggests that individuals place importance on the pursuit of and engagement in pleasurable and/or fulfilling daily activities across the lifespan. Although more study is needed, the greater prevalence of the theme found when writing about the older woman is consistent with the use of more leisure words (Pennebaker et al., 2015) found in the ELA study (Rook-Phenis & Scott,

2019) and suggests that older women are believed to have more time to pursue and/or engage in interests than do women in younger age cohorts and/or that older life stages are associated more with the pursuit of enjoyable activities. Another possibility could be that beliefs about opportunities to engage in leisure and enjoyable activities may be consistent with idealized views and beliefs about retirement for some older adults and may be influenced by the demographic makeup and experiences of the participants sampled, for instance, cultural background and socioeconomic status.

Themes Related to Health

Major themes related to *health* and *death* in descriptions of the older woman were not surprising, given previous research examining ageism directed toward older adults associated with health, ability, and declines in physical attributes and function (Cuddy et al., 2005; Ouchide & Lachs, 2015; Wright & Canetto, 2009). Several subthemes of health emerged within the descriptive narratives, including those related to physical ability or inability to take care of oneself, assistive devices, declines in mobility due to health/medical conditions, medical procedures, exercise, and cognition, including cognitive ability and neurological conditions. These findings are consistent with previously documented misconceptions and stereotypes associated with aging and older adults including the diminished ability to care for oneself in old age and/or to function independently (Cuddy et al., 2005; Ouchide & Lachs, 2015, Wright & Canetto, 2009) as well as stereotypical images regarding the need for assistive devices, poor health, and requiring assistance from others, including caregivers/nursing facilities (Barrett &

Cantwell, 2007; Wright & Canetto, 2009). Subthemes present concerning memory loss and cognitive decline are of some concern, as they can impact treatment of older adults and result in self-fulfilling prophecies (Hess et al., 2004; Levy, 2001; Nelson, 2016).

Participants used descriptive language associated with *death* most often to describe the loss of a spouse with common subthemes associated with health conditions and declines prior to the spouse's death (e.g., cancer, heart failure), rituals around death (e.g., visiting gravesites, talking to the deceased spouse), grief/mourning, transition (changes in routine/activities, changes in residence) and descriptions of fond memories of the couple's life together. Although additional study is needed, the findings appear to suggest that the death of a spouse was perceived as a common experience for women in later stages of life. Overall, major themes of health and death found within the descriptive narratives are consistent with results of the earlier ELA study, including the increased use of health and death words found in the narrative describing a day in the life of the older woman (Rook-Phenis & Scott, 2019), and provide additional confirmation of the presence of age stereotypes regarding physical aging.

Theme of Residence

The theme of *residence* included several descriptive subthemes related to type of residence (e.g., house, apartment, assisted nursing facility, retirement community), and location of said residence (e.g., state, neighborhood). The results are interesting in that they demonstrate the importance of describing the living environment of the older woman pictured, although this did not appear to generally be an important detail to include for

the younger woman. Although additional exploration is needed to understand differences in the use of this theme, one possible explanation may be that the younger image was perceived as being in a more transitional phase of life, and as such there may have been less focus on where she lived. Another possible explanation may be that when thinking about the older woman's life, participants drew from schemas associated with older adults in their own lives, depicted through media, and/or even idealized visions of their future self, and felt this was an important detail to include.

Overall, results of the theme analysis provided researchers a way to examine the previous ELA narratives in greater depth. As expected, the method was useful in uncovering textual themes and related stereotypes embedded in the narratives and to examine the different ways in which people imagine and talk about the lives of younger versus older women. Together, results further demonstrate ways in which women are viewed differently at different stages of the lifespan and offer suggestions for future research studies.

Summary

Building upon the researchers' previous work, the current study sought to begin to approach the ELA data (Rook-Phenis & Scott, 2019) from an intersectionality framework to explore ways in which language directed toward women at different stages of the lifespan differs in relation to perceived identity and social location. The researchers also sought to understand the influence of participants' own intersectional identities and previous experiences on language used to describe the younger and older women/image

conditions. The initial pilot study demonstrated the presence of several stereotypes related to concepts of being elderly, race/ethnicity, and mental illness that were useful in creating custom LIWC dictionaries to examine the presence of stereotypes within the ELA data. Consistent with results of the earlier ELA study, there were several differences in language used to describe the younger versus older woman/image condition and overall, the examination of stereotypes provided researchers a way to examine in greater depth, participants' perceptions of women at different stages of the lifespan. As anticipated, the results demonstrated that participants imagined the lives of the two women differently based on age and other perceived intersectional identities (e.g., gender, race, physical and mental health, ability, social class, religion). The analysis also demonstrated some influence of participants' intersecting identities on the use of stereotypical language related to language selection and found that experiences with ageism was found to predict differences in stereotypical language between images/conditions. Finally, a theme analysis of the narrative descriptions provided a useful way to examine in greater depth, the written accounts of a day in the life of the older versus younger woman. Several major themes emerged, including among others, those related to beliefs/emotions, health, and relations with others and further demonstrated ways in which the lives and identities of women are perceived differently based on age. Together, the current study, along with the prior ELA study (Rook-Phenis & Scott, 2019) offer researchers interested in language analysis, ageism, race, mental illness, and intersectionality a foundation from which to build upon.

Implications for Practical Use

As noted above, the overall results of author's current and previous study (Rook-Phenis & Scott, 2019) provide confirmation for the presence of age-related bias as evidenced through language usage. In addition to serving as a foundation for future research, the results of the current study, along with the previous ELA study, are useful for several reasons. For example, knowledge that language may communicate unintentional bias/microaggressions and messages toward others through everyday discourse and that it may be influenced by one's own unique identities, experiences, and social location, may provide several opportunities for education and increased awareness across multiple settings. Such knowledge for professionals working with older adults in fields including mental health and medicine can help to bring awareness to age-based perceptions of mental and physical illness at different stages of the lifespan, reduce the use of ageist language, and encourage the creation of more inclusive and age-friendly environments.

In counseling/therapy settings, results of the study may inform practitioners of ways in which to discuss age related concerns with older adults. For instance, practitioners should not only focus on how clients and/or patients process age related concerns but also age discrimination that may also be compounded by other identity variables (gender, mental health, physical health, race, social class). In addition, practitioners may consider the presence of contextual themes and stereotypes identified in the current study, including ways in which the themes present and/or influence the lives

of clients they see in therapy. For instance, discussing family/relations with others, the impact of caregiving and gender role expectations, and concerns related to quality of life. Finally, the researchers expect that results of the study will encourage practitioners to conceptualize clients from an intersectionality framework, and to reflect upon ways they may also hold and/or perpetuate age-based stereotypes in their own lives and practice.

The current researchers strongly believe there is opportunity to combat ageist beliefs early in the lifespan, particularly in the classroom, and recommend that discussion and studies of ageism be incorporated into cross-cultural curriculum within university settings. Results of the current study may help to facilitate this discussion by providing information about ways in which women/older adults are viewed differently based on age, and associated stereotypes. Such discussion and attention at the university level may be useful in combating issues associated with age bias discussed previously, including stigmatization and barriers to care associated with training (Bor, 2015; Sorrell, 2016) and labor shortages (Kane & Kane, 2005) among those who work with older adults. Further, when providing instructions for written and clinical work, the researchers recommend that educators across disciplines discuss the ways in which written language may communicate stereotypes directed toward and/or about others. Together, results of the current study provide opportunities for increased awareness and education that may be helpful in both challenging and combatting ageist beliefs as well as reducing the effect of implicit age bias across the lifespan.

Suggestions for Future Research

Along with the previous ELA study, the significant results of the current analysis continue to demonstrate the need for additional exploration of ways in which language can be used as a tool to understand and counter ageism as well as other biases. Further, the researchers believe the current study only begins to explore what language use may tell us about the ways in which adults across the lifespan may be perceived using an intersectionality framework that views age as a political location. As stated in the discussion of results, researchers suggest that future studies would benefit from including larger sample sizes, incorporating more diversity among presented images (e.g., age, race, gender), and recruiting a more diverse participant sample (e.g., age, race, gender, social class, life experiences).

Limitations

The findings of this study may not be generalizable due to limitations in participant sample and demographic variables. Although study participants were somewhat diverse in racial and ethnic makeup, due to a small sample of male participants who completed the ELA study, only the archival data from female participants was used in this study, the majority of whom were undergraduate college students. As such, it is possible that a different and/or more diverse participant sample would have yielded different results.

Further, the current analysis used archival data where participants were asked to assume the role of a reporter. This may have influenced the language participants used to

describe the younger and older image conditions in ways that were not intended. It is also possible that in doing so, language that might normally be used to describe women at different ages of the lifespan would be different than when primed to assume the role of someone else. Finally, it is possible that the LIWC dictionaries created in the pilot study did not measure concepts present in the ELA narratives as intended.

Conclusion

This is the first known study to begin to explore through an intersectionality framework, concepts related to ageism, race/ethnicity, mental health, and other social variables directed toward women at different stages of the lifespan through linguistic analysis. Results of the study demonstrated differences in themes and language use between image conditions and also found evidence to support differences in stereotypical language associated with participant race and life experiences. While additional study is needed, building upon the authors' previous research findings, results suggest that beliefs about aging, mental health, race/ethnicity, and other social variables are indeed present within the language. Together, these findings further strengthen the implications of the researchers' previous research and continue to provide a foundation upon which to build and explore.

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APPENDIX A

Written Prompt

Written Prompt

Instructions: You will be provided with a series of word prompts. For each word prompt, list the first 10 single words that come to your mind associated with the specific prompt. Work quickly and remember to use single words only. You will have 2 minutes to complete the task for each word prompt.

Prompt 1: List the first 10 words that come to your mind associated with the *Concept of being Elderly*. Work quickly and use single words only. You will have 2 minutes to complete each task.

1a: List the first 10 words that come to mind associated with *physical characteristics of being Elderly*

1b: List the first 10 words that come to mind associated with *cognitive/thinking processes of being Elderly*

1c: List the first 10 words that come to mind associated with *personality characteristics of being Elderly*

1d: List the first 10 words that come to mind associated with *social practices of being Elderly*

1e: List the first 10 words that come to mind associated with *sexuality and being Elderly*

Prompt 2: List the first 10 words that come to mind associated with the *Concept of Mental Illness*. Work quickly and use single words only. You will have 2 minutes to complete each task.

2a: List the first 10 words that come to mind associated with the *Concept of Depression*

2b: List the first 10 words that come to mind associated with the *Concept of Anxiety*

Prompt 3: List the first 10 words that come to mind associated with the *Concept of Race/Ethnicity*. Work quickly and use single words only. You will have 2 minutes to complete each task.

3a: List the first 10 words that come to mind associated with *your race/ethnicity*

3b: List the first 10 words that come to mind associated with *Black race/identity*

3c: List the first 10 words that come to mind associated with *Latinx race/identity*

3d: List the first 10 words that come to mind associated with ***White***
race/identity

APPENDIX B

Lived Experience Questionnaire

Lived Experience Questionnaire

1. Have you ever played a caregiving role?
 - ☐ Yes
 - ☐ No
2. If you answered “No” to question number 1, move to question number 3. If you answered “Yes” to question number 1, were the person’s you have cared for over the age of 65?
 - ☐ Yes
 - ☐ No
3. How many generations currently live within your home?
 - ☐ One
 - ☐ Two
 - ☐ Three
 - ☐ Four
 - ☐ More than Four
4. How many generations lived within your home during your childhood and/or adolescence?
 - ☐ One
 - ☐ Two
 - ☐ Three
 - ☐ Four
 - ☐ More than Four
5. How much intergenerational contact do you estimate you have had?
 - ☐ Minimal (little or no contact)
 - ☐ Some contact (Interactions with members of different generations often)

- ☐ Regular (I regularly interact with members of different generations than my own)
- 6. Do you believe you have ever experienced ageism? (prejudice or discrimination due to your age)
 - ☐ Yes
 - ☐ No
- 7. Have you ever witnessed ageism (prejudice or discrimination due to age) directed toward others?
 - ☐ Yes
 - ☐ No
- 8. Have you ever experienced simultaneous intersectional discrimination based on being marginalized by both your race/ethnicity and age?
 - ☐ Yes
 - ☐ No
- 9. Have you ever been diagnosed with a mental illness?
 - ☐ Yes
 - ☐ No
- 10. Have you ever experienced simultaneous intersectional discrimination based on being marginalized due to mental health issues/diagnosis and either your race/ethnicity or age?
 - ☐ Yes
 - ☐ No
- 11. Has anyone close to you ever been diagnosed with a mental illness?

- ☐ Yes
- ☐ No

APPENDIX C
Demographic Survey

Demographic Survey

Please provide the following demographic information about yourself:

- How old are you? _____
- What is your gender? _____
- With what race or origin do you identify?
 - ☐ White; European American
 - ☐ Black; African American
 - ☐ Hispanic, Latin(x), or Spanish origin
 - ☐ Asian; Asian American
 - ☐ American Indian or Alaska Native; Native Hawaiian, Other Pacific Islander
 - ☐ Biracial or Multiracial
 - ☐ Self Identify (please specify _____)
- What is your highest level of education completed?
 - ☐ High school graduate or equivalent
 - ☐ Vocational/technical school (2 year) or equivalent
 - ☐ Some college
 - ☐ Bachelor's degree
 - ☐ Master's degree
 - ☐ Doctoral degree
 - ☐ Professional degree (MD, JD, etc)
 - ☐ Other (please specify _____)
- How would you best describe your social class?
 - ☐ Elite class
 - ☐ Professional Middle class/Upper Middle class
 - ☐ Middle class
 - ☐ Working class
 - ☐ Poor/Invisible class

Other (please specify:_____)

- What is your political affiliation?
 - ☐ Republican
 - ☐ Democrat
 - ☐ Independent
 - ☐ Other (please specify:_____)

- Do you identify as a religious person?
 - ☐ Yes
 - ☐ No

- With what religion do you identify?
 - ☐ No religion
 - ☐ Protestant
 - ☐ Roman Catholic
 - ☐ Other Christian
 - ☐ Jewish
 - ☐ Buddhist
 - ☐ Muslim
 - ☐ Hindu
 - ☐ Other (please specify:_____)

APPENDIX D
SONA Study Description

SONA Study Description

You are being asked to participate in a research study being conducted by Amber Rook-Phenis, M.A. at Texas Woman's University. This study is being conducted as part of a doctoral dissertation project. Participation consists of viewing a series of word prompts and writing the first single 10 words that come to your mind. Following this, you will be asked to complete a short questionnaire about your lived experience and demographic information. There is a potential risk of loss of confidentiality in all email, downloading, and internet transactions. Your participation will take approximately 30-40 minutes and you will receive one research credit for participation. Participation is voluntary, and you may withdraw from the study at any time.

APPENDIX E

Consent to Participate in Research

Consent to Participate in Research

Title: Examining the Intersections of Age, Race, & Mental Health through Linguistic Analysis: Word List Pilot Study

Investigator: Amber Rook-Phenis, M.A.....(ARookPhenis@twu.edu)

Advisors: Shannon Scott, Ph.D.....(SScott@twu.edu)

Danica Harris, Ph.D.....(DHarris17@twu.edu)

Marlene Williams, Ph. D.....(MWilliams71@twu.edu)

Explanation and Purpose of the Research

You are being asked to participate in a research study being conducted by Amber Rook-Phenis, M.A. at Texas Woman's University. This study is being conducted as part of a doctoral dissertation project. The researcher endeavors to examine whether there may be patterns and themes present within the language used to describe elderly individuals, especially when taking into consideration the influences of diverse cultural and demographic variables of the participants. Participation consists of viewing a series of word prompts and writing the first single 10 words that come to your mind. Following this, you will be asked to complete a short questionnaire about your lived experience and demographic information.

Description of Procedures

As a participant in this study you will be asked to spend approximately 30-40 minutes of your time. At a place and time of your choosing, you will be directed to the website Psych Data, where you will complete an online study in which you will be asked to view a series of word prompts and type the first 10 single words that come to your mind. You will be shown a series of similar word prompts and provide 10 words for each prompt. Following this, you will be asked to complete a short questionnaire about your lived experience and demographic information. Confidentiality will be protected to the extent that is permitted by law.

Potential Risks

The potential risks involved in this study are loss of confidentiality, potential discomfort with the material, and loss of personal time. There is a potential risk of loss of confidentiality in all email, downloading, electronic meetings and internet transactions. All information provided will be deidentified and submitted anonymously through PsychData and only members of the project research team will have access to the data. You are also able to stop participation at any time without penalty.

Steps have been taken to minimize the potential risk of loss of confidentiality. Every effort to maintain confidentiality will be made and your information will be deidentified and submitted anonymously through PsychData, a secure collection platform that ensures confidentiality and anonymity.

Steps have been taken to minimize the potential to experience emotional distress. In the event you experience emotional distress as a result of completing the study, resources for local counseling services may be found at:

<http://locator.apa.org/>;
<https://therapists.psychologytoday.com/rms/>

TWU students may utilize services at the TWU counseling center:

<https://twu.edu/counseling/>

Steps have been taken to minimize fatigue and loss of personal time. Participation is voluntary, and you may leave the study at any time without penalty. You may also choose to skip questions if you are uncomfortable answering them without penalty.

You have the option of contacting the researcher if any problems should arise. The researchers will try to prevent any problem that could happen because of this research. You should let the researchers know at once if there is a problem and they will help you. However, TWU does not provide medical services or financial assistance for injuries that might happen because you are taking part in this research.

Participation and Benefits

If you are a student at TWU, participating for SONA credit requirements, you will receive class credit as a direct benefit of your participation. Your involvement in this study is completely voluntary and you may withdraw from the study at any time. Your participation and cooperation are greatly appreciated. While no study stands alone, your participation is helping to explore an area of research that has not been examined by the means in the current study.

Questions Regarding the Study

You are advised to save and print a copy of this consent form to keep for your personal records. If you have any questions about the research study, you should ask the researchers; their email addresses are at the top of this form. If you have questions about your rights as a participant in this research or the way this study has been conducted, you may contact the Texas Woman's University Office of Research and Sponsored Programs at 940-898-3378 or via e-mail at IRB@twu.edu.

Completion of the survey constitutes your consent to participate in this research study.

APPENDIX F

Resources

Resources

Thank you for your participation in this study. If you experienced discomfort or emotional distress as a result of completing this study and would like to speak with a mental health professional, please contact one of the following agencies/services:

Texas Woman's University Counseling & Psychological Services

- (940-898-3801)
- Provides free counseling services for TWU students.

University of North Texas Psychology Clinic

- (940-565-2631)
- Provides counseling services to those in the Denton County community at a reduced cost, using a sliding income-based payment scale.

APA Psychologist Locator

- (<http://locator.apa.org/>)
- Find a therapist in your area.

APPENDIX G

Three Main Categories of Scores Created from LIWC Analysis

Three Main Categories of Scores Created from LIWC Analysis

1. Language reflecting schemas and stereotypes of concepts of being elderly (LSS-E).
 - a. Concept of being elderly (LSS-E)
 - b. Physical characteristics of being elderly (LSS-E-Ph)
 - c. Cognitive/thinking processes of being elderly (LSS-E-C/T)
 - d. Personality characteristics of being elderly (LSS-E-Per)
 - e. Social practices of being elderly (LSS-E-SP)
 - f. Sexuality and being elderly (LSS-E-Sex)
2. Language reflecting schemas and stereotypes regarding mental illness (LSS-MI).
 - a. Concept of mental illness (LSS-MI)
 - b. Concept of depression (LSS-MI-D)
 - c. Concept of anxiety (LSS-MI-A)
3. Language reflecting schemas and stereotypes regarding race/ethnicity (LSS-R/E).
 - a. Concept of race/ethnicity (LSS-R/E)
 - b. Your (participant) race ethnicity (LSS-R/E-P)
 - c. Black race/ethnicity (LSS-R/E-B)
 - d. Latinx race/ethnicity (LSS-R/E-L)
 - e. White race/ethnicity (LSS-R/E-W)

APPENDIX H

Custom LIWC Dictionaries

Custom LIWC Dictionaries

Appendix H1

Custom Elderly LIWC Dictionary

Word/Word Stem	Main Overall Category		Directive Subcategory			
	LSS-E	LSS-E-Ph	LSS-E-C/T	LSS-E-Per	LSS-E-SP	LSS-E-Sex
active*	X	-	-	-	-	X
alone	X	-	-	-	-	-
Alzheimer*	X	-	X	-	-	-
bingo	X	-	-	-	X	-
care	X	-	-	X	-	-
cared	X	-	-	X	-	-
caring	X	-	-	X	-	-
church*	X	-	-	-	X	-
confus*	X	-	X	-	-	-
conservative*	X	-	-	-	-	X
death*	X	-	-	-	-	-
dementia	X	-	X	-	-	-
families	X	-	-	-	X	-
family*	X	-	-	-	X	-

forget*	X	-	X	-	-	-
fragil*	X	X	-	-	-	-
friend*	X	-	-	-	X	-
funnie*	X	-	-	X	-	-
funny	X	-	-	X	-	-
gather*	X	-	-	-	X	-
glasses	X	X	-	-	-	-
gray*	X	X	-	-	-	-
gross*	X	-	-	-	-	X
grump*	X	-	-	X	-	-
hair	X	X	-	-	-	-
happily	X	-	-	X	-	-
happy	X	-	-	X	-	-
heterosexual	X	-	-	-	-	X
inactive	X	-	-	-	-	X
kind*	X	-	-	X	-	-
knit*	X	-	-	-	X	-
lone*	X	-	-	-	-	-
loss*	X	-	X	-	-	-
lost	X	-	X	-	-	-
loy*	X	-	-	X	-	X
mean*	X	-	-	X	-	-
memor*	X	-	X	-	-	-
old*	X	-	X	-	-	X
read*	X	-	-	-	X	-
sad*	X	-	X	-	-	-
shop*	X	-	-	-	X	-

short*	X	X	-	-	-	-
skin	X	X	-	-	-	-
slow*	X	X	X	-	X	X
straight	X	-	-	-	-	X
stubbor*	X	-	-	X	-	-
sweet*	X	-	-	-	-	-
talkative	X	-	-	-	X	-
thoughtful*	X	-	X	-	-	-
time	X	-	X	-	-	-
traditional*	X	-	-	-	-	X
walk*	X	-	-	-	X	-
weak*	X	X	-	-	-	-
White*	X	X	-	-	-	-
wise*	X	-	X	X	-	-
wrinkl*	X	X	-	-	-	-

Note. X denotes the presence of word within overall and directive dictionary categories.

Appendix H2

Custom Mental Illness LIWC Dictionary

Word/Word Stem	Main Overall Category			Directive Subcategory	
	LSS-MI	LSS-MI-D	LSS-MI-A		
alone	X	X	-		
anxiet*	X	X	-		
anxious*	X	-	X		
attack*	X	-	X		
bipolar	X	-	-		
concern*	X	-	X		
craz*	X	-	-		
cried	X	X	-		
cry*	X	X	-		
dark*	X	X	-		
depress*	X	-	-		
disorder*	X	-	-		
fear*	X	-	X		
help*	X	X	-		
isolation	X	X	-		
lone*	X	X	-		
nervous*	X	-	X		
panic*	X	-	X		

psycholog*	X	-	-
sad*	X	X	-
scare*	X	-	X
school*	X	-	X
shak*	X	-	X
shook	X	-	X
sick*	X	-	-
stress*	X	-	X
suicid*	X	X	-
therap*	X	X	-
tire*	X	X	-
worr*	X	-	X

Note. X denotes the presence of word within overall and directive dictionary categories.

Appendix H3

Custom Race/Ethnicity LIWC Dictionary

Word/Word Stem	Main Overall Category		Directive Subcategory			
	LSS-R/E	LSS-R/E-P	LSS-R/E-B	LSS-R/E-L	LSS-R/E-W	
Africa*	X	-	X	-	-	
America*	X	X	-	-	-	
Asia*	X	X	-	-	-	
beaut*	X	-	X	-	-	
Black*	X	X	-	-	-	
blonde*	X	-	-	-	X	
blue*	X	-	-	-	X	
Brown	X	-	-	X	-	
color	X	-	-	-	-	
cultur*	X	X	X	X	-	
danc*	X	-	-	X	-	
differ*	X	X	-	-	-	
discriminat*	X	-	X	-	-	
famil*	X	X	-	X	-	
fed	X	X	X	X	-	
feed	X	X	X	X	-	
food	X	X	X	X	-	
hair	X	-	X	-	-	

Hispan*	X	X	-	X	-
loud*	X	-	X	X	-
majorit*	X	-	-	-	X
Mexic*	X	X	-	X	-
money	X	-	-	-	X
music*	X	X	-	X	-
police*	X	-	X	-	-
privilege*	X	X	-	-	X
racis*	X	X	X	-	X
rich*	X	-	-	-	X
slave*	X	-	X	-	-
Spanish	X	-	-	X	-
strong*	X	-	X	-	-
superior*	X	-	-	-	X
uncultured	X	-	-	-	X
White*	X	X	-	-	-

Note. X denotes the presence of word within overall and directive dictionary categories.