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Walden University

College of Management and Technology

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Greg Milsom

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Review Committee

Dr. Walter McCollum, Committee Chairperson, Management Faculty Dr. Marilyn Simon, Committee Member, Management Faculty Dr. Branford McAllister, University Reviewer, Management Faculty

Chief Academic Officer Eric Riedel, Ph.D.

Walden University 2017

Abstract

Perceptions Among Senior Consumers Regarding Stereotyping in Magazine

Advertisements

by

Greg Milsom

MBA, The American University, 1997

BS, University of Maryland, 1993

Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

Management: Self-Design

Walden University

February 2017

Abstract

Marketing decision makers often employ stereotypes in their advertising messages, but constant exposure to negative messages is offensive to older consumers and contributes toward ageism. The general problem is that many senior adults feel dissatisfied with advertising directed toward them and may not purchase products that they could otherwise enjoy. Based on the tenets of social identity theory, the purpose of this study was to explore the perceptions of a group of senior consumers toward the stereotypes used to portray older adult models featured in magazine advertisements by uncovering the factors that influence purchasing decisions and the stereotypes that are most offensive and least offensive. Study participants included 30 self-selected volunteers living in Maryland and ranging in age from 70 to 85 years. Each participant ranked 40 magazine advertisements that featured a variety of potentially offensive age-related stereotypes. Analysis of the data included correlation, factor analysis, and factor scores. Three unique factors emerged from the data, which were termed *Pioneers*, *Unpredictables*, and *Cupids*. Pioneers, Unpredictables, and Cupids had 17, 18, and 15 distinguishing advertisements, respectively, each at a 95% confidence level. Participants found stereotypes portraying older adults as sickly or weak to be the most offensive. Stereotypes highlighting active lifestyles and loving relationships were least offensive. This study has implications for social change by increasing awareness of the negative effects of ageism in magazine advertisements. Understanding how senior adults perceive stereotypes presented in advertisements may challenge generalizations and facilitate their happiness, health, and positive identity formation.

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Dedication

To my parents, children, and wife... without whom this dissertation would have been completed three years earlier.

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I wish to acknowledge those who provided guidance and support throughout this project including Dr. Walter McCollum, my committee chair, and the other members of my committee, Dr. Marilyn Simon and Dr. Branford McAllister.

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Chapter 1: Introduction

Some marketing decision makers depict older individuals in advertisements with negative stereotypes (Coudin & Alexopoulos, 2010; Davis & Davis, 1985; Lewis, Medvedev, & Seponski, 2011). These negative depictions may offend older shoppers and contribute toward ageism (Coudin & Alexopoulos, 2010; Rinallo, Basuroy, Wu, & Jeon, 2012). Negative stereotypes are potentially hurtful to older people, and they may even shorten their lives (Anti-Ageism Taskforce at the International Longevity Center, 2006; Jesmin, 2014). According to one study, older adults with positive self-perceptions of aging lived more than 7 years longer than those with negative self-perceptions did (Allen, 2016).

Changes in fertility, lower mortality rates, advances in health care, and changes in lifestyle (Brunborg, 2012) have resulted in an estimated 810 million people worldwide age 60 years and older (International Council on Active Aging, 2016). In the United States, nearly 80 million adults are ages 65 years and older (U.S. Census Bureau, 2012). The size and projected growth of the older adult (age 65 years and older) consumer segment is changing the marketplace unlike any prior demographic shift in recent history (Angell, Megicks, Memery, Heffernan, & Howell, 2012; Myers & Lumbers, 2008; United Nations Department of Economic and Social Affairs, 2012).

Some marketing decision makers ignore older adults and favor younger segments (Lee, 2006; Lumme-Sandt, 2011). Younger cohorts tend to be more desirable because of their lavish spending habits, and they have many years of spending ahead of them (Ferguson, Muñoz, & Medrano, 2012; Lee, Carpenter, & Meyers, 2007). Older -

consumers tend to have established preferences and are unlikely to switch brands or experiment with new product offerings (Festervand & Lumpkin, 1985; Sudbury & Simcock, 2009).

However, being older in years does not necessarily translate to being old in outlook. The market for senior adults between ages 70 and 85 years is large, diverse, and complex (Allan, Johnson, & Emerson, 2014). When addressing the needs of the market for senior adults, business leaders often employ clichés and stereotypes (Coudin & Alexopoulos, 2010).

Older audiences have indicated their dissatisfaction with the predominantly negative stereotypes used to portray them in advertising (Milner, Van Norman, & Milner, 2012; Thompson, 2007). Stereotypes are mental shortcuts that individuals use to verify beliefs, interpret new situations, and digest new information (Cuddy, Norton, & Fiske, 2005). Stereotypes also help shape identities and influence perceptions (Ramlo, 2015; Hoffmann, Liebermann, & Schwarz, 2012; Moschis, Ferguson, & Zhu, 2011). Marketing decision makers rely on the stereotyping and categorizing powers of the brain to create brand identities. Marketing professionals group individuals with similar characteristics and target them with specific advertising messages.

Negative stereotypes promote ageism, can have adverse consequences, and may be especially harmful to groups susceptible to mistreatment, such as older adults (Chrisler, Barney, & Palatino, 2016; González, Ramírez, & Viadel, 2012). Older adults exposed to negative stereotypes experience increased feelings of vulnerability, insecurity, and powerlessness (Robinson, Popovich, Gustafson, & Fraser, 2003); and lower self-

esteem (Holbrook, 1987; Kwak, Ingersoll-Dayton, & Burgard, 2014). Developing a better understanding of older consumers is important for their health and happiness, in addition to the success of businesses marketing to them (Allen, 2016). Marketing executives need to appeal more strategically to this important segment of society (Lewis et al., 2011; Pak & Kambil, 2006).

Self-image congruence relates to the connection between consumers' self-concept of actual self and ideal self. Self-congruity is instrumental regarding how consumers process information (González et al., 2012; Mangleburg et al., 1998; Sirgy, 1982).

Individuals use products to create and communicate their self-concepts (Claiborne & Sirgy, 2015; Kleine, Kleine, & Allen, 1995). Advertising directed at senior adults is ineffective when negative images create an internal conflict between the actual self-image and the ideal self-image (Robinson et al., 2003). Advertising both reflects and shapes social attitudes toward older people (Zhang et al., 2016). Advertising also sways individual perceptions of the self and affects the formation of personal identity (Featherstone & Hepworth, 2007; Serino, 1998). Advertising that results in incongruent messages may lead to senior adults boycotting some products (Hummert, Garstka, & Shaner, 1997; Moschis, 1994; Oakes & North, 2011).

Advertising messages can become more effective when advertisers understand how stereotypes influence identity and esteem. Advertisements for products with self-congruent images are more favorable than products with self-incongruent images (Oakes & North, 2011). When advertisements contain actors and models incongruent with how a

consumer considers himself or herself, they are more likely to form unfavorable responses that result in less positive product evaluations (Chang, 2010; Fung et al., 2015).

Research on stereotyping adults older than 50 years in advertising is diverse. Advertisers have generally portrayed senior adults in a positive manner with little evidence of negative stereotyping (Kay & Furnham, 2013). Other research has indicated that some marketing decision makers depict older adults in advertisements using negative stereotypes (Kotter-Grühn & Hess, 2012).

Problem Statement

Between 1970 and the early 21st century, the senior consumer population grew exponentially, enjoyed increasing purchasing power, and wielded significant economic influence (Beard et al., 2011; Kohlbacher, Prieler, & Hagiwara, 2011; Kowal et al., 2012). However, some marketers ignore senior consumers in favor of younger segments of the population (Lumme-Sandt, 2011). Marketing decision makers who target older adult populations often employ clichés and stereotypes in their marketing messages (Coudin & Alexopoulos, 2010). Constant exposure to negative advertising messages of older adults offends older adult shoppers and contributes toward ageism (Chasteen & Cary, 2015; Langmeyer, 1984).

The primary focus in previous studies on stereotypes of senior adults in advertising has been all older adults as a singular unified homogenous group consisting of anyone older than the age of 50 years (Addington, 2013; Hummert, 1993). However, the senior segment, like the young and middle-aged, contains a broad range of individuals and can include other segments, including either chronological or self-perceived age

(Hoffmann et al., 2012; Montepare & Lachman, 1989; Sudbury & Simcock, 2009). Studying various older age categories is necessary to have a more balanced viewpoint. The general problem is that many senior adult consumers feel dissatisfied with advertising directed toward them and may not purchase products that they could otherwise enjoy (Brooks, Bichard, & Craig, 2016; Milner et al., 2012). The specific problem is the need for a better understanding of the perception of senior adult consumers regarding targeted advertisements.

The focus of my study was on 30 volunteer participants belonging to a specific age cohort: adults born between 1930 and 1945, who were therefore age 70 to 85 years during the study. I used Q methodology as a technique to explore individual perceptions within the field of ageism. Researchers use Q methodology to study participants from a subjective perspective.

Purpose of the Study

The purpose of this Q methodology study was to understand senior consumers, specifically their perceptions of the stereotypes used to portray older adults in magazine advertisements through the lens of social identity theory, to shape future action directed toward initiating positive social change. Perceptions influence individual health, happiness, and purchase decisions. Perceptions also influence expectations, which may affect satisfaction levels both positively and negatively (Meisner, 2012; Thompson, 2007). The focus of my study was a specific age cohort: adults born between 1930 and 1945, who were ages 70 to 85 years during the study.

This Q methodological study led to a better understanding of perceptions held by senior adults regarding stereotyping older adults in magazine advertisements. I identified and described similarities and differences in the perceptions of senior adults. The focus was on the perceptions of senior adults between ages 70 and 85 years.

This Q methodological study generated knowledge about ageism from the subjective perceptions of senior adults to close an identified gap in the scholarly research. Senior adults play a significant role in the world economy (Milner, 2012). This Q methodological study provided senior adults with an opportunity to share their perceptions of stereotypes in magazine advertisements. Recommendations that may reduce ageism and improve the happiness and health of senior adults everywhere appear in Chapter 5.

Significance of the Study

Promoting positive social change by increasing awareness of the negative effects of ageism is a positive outcome. Perceived age stereotypes are a barrier to individual goal achievement (Emile, Chalabaev, Stephan, Corrion, & d'Arripe-Longueville, 2014).

Achievement of goals in one domain of an individual's life carries into other domains of an individual's life, such as career success leading to personal and social success (Shawn, Kim, & Jitendra, 2014). Achievement of a difficult goal positively relates to individual well-being, job satisfaction, personal development, and motivation toward future goal achievement (Dougherty, Dorr, & Pulice, 2016; Hagestad & Uhlenberg, 2005).

Increasing awareness of ageist stereotypes in magazine advertisements can help marketing decision makers break down perceived barriers, which may prevent senior

adults from establishing a positive self-identity, developing a positive well-being, and enjoying a high degree of life satisfaction (Dougherty et al., 2016).

Perceptions affect purchase decisions and influence expectations that affect satisfaction levels either positively or negatively (Hummert, 1993; Schmidt & Boland, 1986; Thompson, 2007). Many senior adults feel more youthful than their actual or chronological age (Hoffmann et al., 2012; Myers & Lumbers, 2008; Sudbury & Simcock, 2009; Uotinen, Rantanen, Suutama, & Ruoppila, 2006) and view advertisements more favorably when the advertisements reflect their self-concept (Hoffmann et al., 2012).

Nature of the Study

I used Q methodology, a mixed methodology including aspects of both qualitative and quantitate research methods. Q methodology involves integrating subjective opinions to produce a richer understanding of the perceptions of a targeted audience (Stephenson, 1953). Q methodology researchers mitigate the limitations of both qualitative and quantitative methodologies (Chen, 1998).

A quantitative study requires a large sample size and closed-ended questions and thus lacks rich details, whereas the in-depth interviews or focus groups in a qualitative study result in rich details but require subjective coding of the interview transcripts (van Exel & de Graaf, 2005). Qualitative research often receives criticism for lacking transparency and scientific rigor and providing findings subject to researcher bias (Rolfe, 2006). The overwhelming majority of published research on ageism has used either qualitative or quantitative techniques. Research using Q methodology adds to the

growing knowledge base and provides a different perspective of the issues that affect senior adults.

Advertising is complex, and each individual develops a unique set of both positive and negative perceptions of advertising throughout a lifetime. Perceptions are not universally positive or negative, but are unique to each individual (Ramlo, 2015). Research on consumer advertising has traditionally involved taking an objective approach. The objectivist approach has not added much to areas of human subjectivity (Kim, 1993).

A growing number of researchers have incorporated cross-disciplinary approaches that use both quantitative and qualitative research techniques and a variety of theoretical perspectives (Coles, Byles, Dow, & Tavener, 2013; Robinson et al., 2003). Q methodology is a unique design for assessing individual perceptions (Brown, 1980) and is useful for marketing and advertising research (Kim, 1993). A key assumption of Q methodology is that people can share, measure, and compare opinions (Brown, 1980). Another aspect of Q methodology is that researchers try to view individual perspectives from different vantage points and to sit where each participant sits.

Researchers use Q methodology to study a group of participants from a subjective perspective and develop an understanding of their feelings and perceptions. A goal of Q methodology is to identify different thoughts within a relatively small sample rather than generalize findings to a larger population (McKeown & Thomas, 1988). The sample of participants in a Q study is nonrandom, and research findings are not generalizable to a larger population (Watts & Stenner, 2005). An individual will consider an advertisement

meaningful or not based on his or her beliefs, attitudes, perceptions, and opinions. Q methodology provides valuable insights into a participant's attitudes toward a subject and enables the organization of participants into clusters with similar attitudes (Brown, 1980). Researchers execute Q methodology with as much care and diligence as the participant selection process for completing surveys in quantitative studies.

The participants for my study ranged in age between 70 and 85 years and came from a heterogeneous population of senior adults who resided in an age-restricted community located in Maryland. Participants were mentally alert and reflected general population characteristics. Participants were self-selected using a convenience sampling technique. My study involved using correlation, factor analysis, and factor scores to analyze participants' Q sorts, which are rankings of variables according to a specific set of instructions, to identify common characteristics among senior adults. A more detailed description of the research methodology appears in Chapter 3.

Theoretical Framework

The study included a theoretical framework of social identity theory (Tajfel & Turner, 1986). Social identity theory is a social psychology theory that contains individual identity as its focus. Individuals express their identities by the connections made with organizations and social groups (Christian, Bagozzi, Abrams, & Rosenthal, 2012). Members of groups seek to attain and sustain a positive identity by establishing positive comparisons between their group (in-group) and other groups (out-groups; Escalas, 2013; Rowe & Kahn, 1997).

Not all groups have positive social identities. For example, advertisers in the United States generally favor youth rather than old age (Hodkinson & Bennett, 2013; United Nations Department of Economic and Social Affairs, 2005). The social group labeled *youth* has a favorable distinctiveness compared with the unfavorable characteristics instilled with the *older adult* social group. Unfavorable stereotyping can lead to older adults having negative social identities in terms of their self-perceptions and in the perception of younger members of society (Weiss & Lang, 2012).

The focus of marketing research grounded in social identity theory has been on the connection between individual customers and product perception (i.e., if an individual identifies with a product as either being *me* or *not me*; Kleine et al., 1995) and behavior when in agreement with social identity (Christian et al., 2012). However, individuals belonging to the same social group may express different responses based on the degree of their dedication to that group (Schultz & Fielding, 2014). A more detailed description of social identity theory appears in Chapter 2.

Research Questions

Based on the literature review and the need for a more thorough understanding of perceptions toward using stereotypes in advertising (Barber & Mather, 2013; Coudin & Alexopoulos, 2010; Lee et al., 2007), my study involved exploring two questions (Robinson et al., 2003):

RQ1: What do senior adults believe to be the most important factors regarding magazine advertisements featuring older adults that influence their purchasing decisions?

RQ2: Which stereotypes of older adults in magazine advertisements do senior adults find most offensive and least offensive?

Limitations

As a research methodology, Q methodology can be a time-consuming process (McKeown & Thomas, 1988). Because research participants are likely to be unfamiliar with Q methodology, I explained both the method and the instructions thoroughly. In addition, participants with limited education may need guidance on how to participate. Participants' lack of understanding or undue influence by a researcher can compromise the validity of data (Dennis, 1988).

Conducting focus groups can reduce the negative effects of the time-consuming process of Q sorting. In focus groups, multiple participants can arrange statements on several Q sort diagrams simultaneously. However, results of the Q sort would be less effective because this would compromise significant amounts of the qualitative data gathered (Dennis, 1988).

Previous research indicates that individuals with a lower social status, minorities, and females perceive more stereotypes (Schmitt, Branscombe, Kobrynowicz, & Owen, 2002; Trytten, Lowe, & Walden, 2012). Members of these identified groups may be more sensitive to age stereotypes. Similarly, participants may neglect to attribute a stereotype to age because they attribute it to other reasons such as gender or race.

Several additional limitations affected the study:

1. Participants in the study would all reside in a single, upscale, age-restricted community located in the suburbs of a major mid-Atlantic city and might not

- share the same perceptions regarding stereotypes in advertisements as senior adults located in other geographical areas.
- 2. Participants' ranked advertisements in the Q sort might not accurately reflect their real views.
- 3. Although retirees were not specifically the intended sample, many participants might no longer have been in the workforce or their employment was minimal. Living on a fixed or limited budget might have affected their spending potential and purchasing decisions.
- 4. Results would include different perceptions among the participants only and would not be generalizable to the larger population (Schlinger, 1969).
- 5. Participants might have paid more attention to the advertisements used in the study than they normally would, and there would not be a differentiation between advertisements for different types of products, companies, or industries, which could affect individual responses.

Scope and Delimitations

The focus of the study was the effect of perceived age stereotypes on purchasing decisions. Emphasis was on the specific type of age stereotype experienced. A single agerestricted housing community located in Maryland was the source of the research population.

Self-selected individuals ages 70 to 85 years volunteered to participate in interviews and to sort 40 different magazine advertisements. Each advertisement featured

at least one older adult model. The advertisements came from mass circulation, general audience American magazines published from 2010 to 2015.

Operational Definitions

Terms that I used in my study are not always consistent across disciplines or authors. Confusion and controversy surround terminology used for segmenting the population older than age 50 years (Forman, Berman, McCabe, Baim, & Wei, 1992; Gendron, Welleford, Inker, & White, 2015; World Health Organization, 2016). A list of terms follows:

Ageism: Negative attitudes toward older adults (Allen, 2016).

Older adult: An individual aged 50 to 69 years (World Health Organization, 2016).

Senior adults: An individual aged 70 to 85 years (World Health Organization, 2016).

Stereotype: Cognitions, beliefs, and expectancies about the characteristics of a group of individuals (Cuddy & Fiske, 2002).

Assumptions

Researchers base research on assumptions. If the assumptions are not valid, readers will consider the research less significant. A key assumption of my study was that participants would answer honestly and accurately to all questions based on their unique personal experiences. To ensure complete openness and honesty, I concealed the identities of all participants to preserve confidentiality.

Another assumption was that participants would be able to internalize and perceive age stereotypes. I assumed that participants had been sufficiently socially active during their lives to make accurate assessments regarding any potential age-based stereotypes. I also assumed that an acceptable number of male and female participants who met the selection criteria would volunteer to participate in the study. I screened potential research participants and selected them for their ability to make unique contributions to the study.

Summary

Age stereotype is a social issue that affects society. Everyone grows older each day and in time is likely to experience some form of age discrimination (Palmore, 2001; Townsend, Major, Gangi, & Mendes, 2011). Perceptions of age stereotype threaten the creation of an accepted and favorable social identity (Barber & Lee, 2015; Hagestad & Uhlenberg, 2005; Steele & Aronson, 1995). Using magazine advertisements provided an excellent opportunity to measure age stereotypes because of the prevalence of their use in society (Harwood & Roy, 2009). Existing research regarding senior adults' perceptions of stereotypes is incomplete. Therefore, based on the theoretical framework of social identity theory, I used Q methodology to explore how perceived age stereotypes contribute to ageism.

A more comprehensive discussion of social identity theory appears in Chapter 2. In addition, Chapter 2 includes an overview of research specific to stereotypes, ageism, and identity. The methodology selected for my study appears in Chapter 3. Results of my

study appear in Chapter 4. Chapter 5 includes the findings and recommendations for further study.

Chapter 2: Literature Review

In this Q methodology study, I intended to achieve a better understanding of perceptions held by senior adults regarding the stereotyping of older adult models in magazine advertisements through the lens of social identity theory. Perceptions influence individual health, happiness, and purchase decisions. Perceptions also influence expectations, which may affect satisfaction levels both positively and negatively (Meisner, 2012; Thompson, 2007). The focus of the research was the perceptions of senior adults between age 70 and 85 years.

After reviewing more than 800 articles and books published since the early 20th century, including more than 600 articles from peer-reviewed journals, I found a gap in the research pertaining to the perceptions of senior adults regarding how consumers perceive older adult models in magazine advertisements. Understanding how senior adults perceive stereotypes presented in advertisements could help challenge systematic generalizations and facilitate happiness, health, and positive identity formation (Denmark & Zarbiv, 2016). Understanding the prevalence of ageism can help to create a best practices approach to integrate members of different age groups and promote positive relationships (Robbins, 2015). Understanding the prevalence of ageism is a first step toward creating an effective approach to reduce stereotyped thoughts, attitudes, and behaviors between age groups and eliminating the inaccuracies associated with generalizations associated with age-expected behavior (Nelson, 2016).

This chapter begins with an introduction to aging, including social stigmas and stereotypes. Some of the material presented relates to internalizing advertising messages,

forms of media advertising, and purchasing behaviors that include international trends.

The focus of the final section is on senior adults through the lens of social identity theory.

People learn about aging many different ways, such as personal contact with senior adults, idle talk, stereotypes, and personal experience (Hodkinson & Bennett, 2013). Other sources include books, magazines, movies, and television (Miller, Leyell, & Mazachek, 2004; Xie, Watkins, Golbeck, & Huang, 2012). Including advertisements on the list is also important. Advertising is one marketing medium that influences how individuals learn about ageing (Boyland & Halford, 2013). Advertisements are a vital public resource that influences individuals' lifetime evolution (Ferguson et al., 2012).

Individuals between the ages of 18 and 25 years and older than 65 years have a lower social status than other age groups have (Stephens, Alpass, Towers, & Stevenson, 2011). Having a lower social status adversely affects individuals' self-identity, and individuals belonging to a lower social status are more likely to perceive age stereotypes (Tajfel & Turner, 1986). Erratic sampling of various adult age groups leads to an unclear representation of how perceptions of age stereotypes and individual social status help form an individual's age identity. Researchers have often sought older individuals from long-term care facilities for studies because they are easily accessible. Thus, participants in many studies were unwell for various reasons and institutionalized (Woolf, 1998).

Researchers have brought the ability to generalize the findings from early studies into question because many senior adults live healthy active lives, and only a small percentage live in institutions (Woolf, 1998). Subjective measures of social status offer a more complete picture of status than objective measures do (Stephens et al., 2011).

Additional research on the relationship between age groups and perceived age stereotypes is necessary to understand how perceived age stereotypes contribute to individuals' public status and private self-image as conceptualized by social identity theory.

Research Strategy

The major online databases accessed for researching articles using the Walden library were PsycINFO, Sage Journals, and ABI/INFORM Complete. I used a combination of keywords to retrieve articles, including *social identity theory, ageism*, *advertising*, *Q methodology*, and *stereotyping*, but found limited research on age stereotypes specifically perceived by individuals older than age 70 years. To ensure saturation of the topic and contribute to the body of literature from which to review and to capture the spirit of the meaning from the original authors, I reviewed more than 825 articles and books published between 2000 and 2015. More than 600 articles were from peer-reviewed journals.

Theoretical Framework

Social identity theory (Tajfel & Turner, 1986) has originated from social psychology and highlights group membership as a factor of identity. Society can better understand many types of isms using social identity theory, including racism, sexism, and ageism. Social identity theory sheds light on the possible motivations underlying the factors associated with stereotyping, in addition to the categorization of intergroup comparisons. Social identity theory has been popular owing to its applicability to concepts such as attitudes, social influence, and stereotyping (Christian et al., 2012). The

theory indicates that individuals cultivate their self-identity through a process of attachment toward a preferred group (Escalas, 2013).

Attachment to a preferred group provides a sense of identity realization and leads to creating a constructive self-concept (Hodkinson & Bennett, 2013). Social identity theory hypothesizes that members of groups attempt to attain or sustain a favorable distinctiveness in part by making positive comparisons between their group (in-group) and other relevant groups (out-groups; Tajfel & Turner, 1986). Building self-esteem is a powerful motivational force driving the comparison of oneself as a member of a high-status in-group as opposed to a member of a low-status out-group (Scholer, Ozaki, & Higgins, 2014). The societal pressure to judge one's own group more favorably when conducting in-group–out-group comparisons causes members of social groups to try to distinguish themselves to increase self-esteem (Lisjak, Lee, & Gardner, 2012).

Individuals belonging to different age groups can either accept or reject their actual age group as a true indication of their self-identity (Weiss & Lang, 2012). If individuals agree that their age cohort is actually a true reflection of their self-perception, then the individuals should act in a way that is consistent with the customary and expected age-appropriate behaviors exhibited by that group (Caprara, Alessandri, & Eisenberg, 2012). This customary behavior leads to positive acceptance from individuals' social group. Group acceptance leads to social value, as well as to self and group identities (Orth, Robins, & Widaman, 2012).

Age stereotypes occur during different life stages: young adult, middle adult, and older adult (Kornadt & Rothermund, 2012). Society values individuals between ages 35

and 50 years more than individuals between ages 18 and 25 years or individuals older than age 65 years (France, Bottrell, & Haddon, 2013). Belonging to an esteemed age group is a positive addition to an individual's identity (Cornman et al., 2012). However, a content analysis of major U.S. newspapers indicated that middle-aged individuals were more likely to receive a characterization with unfavorable characteristics than with favorable or neutral characteristics (Bailey, 2006).

Regarding ageism, social identity theory can be a lens through which individuals judge magazines containing advertisements featuring older adults and whether the readers perceive the images as stereotypical. Younger members of society, often considered an in-group, should resist ageist messages because they are often the ones creating media messages. A marginalized group can experience an elevated status when the members of an in-group change their views (Serino, 1998).

Occupation is the most important status for individuals in the United States (Falk & Falk, 1997). Older adults are often in retirement, and no longer having an occupation deprives them of achieving a dominant position in society. Retirement has a social stigma based on negative stereotypes of being inadequate and inept. Social identity is an important component of status (Abrams & Hogg, 1990).

Individuals seek a connection with social groups they identify with and that mirror their values (Maccheroni, Marinacci, & Rustichini, 2012). Acceptance in a desired group creates a positive self-concept of having a common identity with other group members. The social group an individual belongs to is an in-group, and other groups, or less desirable groups, are out-groups (Hodkinson & Bennett, 2013). Age is a special

social category because if social identity theory is correct, individuals invest a lifetime distinguishing their age group from senior adults, only to one day discover that they too have become senior adults (Kite & Wagner, 2002).

Perceived age stereotypes can affect self-identity (Palmore, 2003). Perceptions of stereotypes can arise from seemingly harmless activities such as a senior adult joke or a silly birthday card making fun of the implications of growing old. Disrespect of senior adults may create negative views of oneself in old age that result from the internalized and persistent perceptions of stereotypes (Peng, 2012). Self-esteem steadily increases throughout adulthood until old age, when it starts to deteriorate quickly (Carstensen et al., 2011).

When group boundaries are unstructured, members of an out-group may attempt to improve their self-image and seek membership with a high-status in-group (Tajfel, 1978). Senior adults do not have the option to change their chronological age and return to the social group of youth. Age-based groups are unable to increase their self-image via social mobility. However, senior adults can symbolically identify with being younger by altering to a younger outward appearance via cosmetic surgery or style of dress, rejecting senior discounts, and acting in ways typically associated with younger persons. Senior adults may also claim that age 70 years is the new age 40 years (Tajfel & Turner, 1986).

Older individuals may turn to the strategy of social creativity owing to the challenges associated with social mobility among senior adults. Individuals often use the social creativity strategy when the status quo is defensible and not likely to change (Gerbner, 2002). Individuals within a marginalized group may form subgroups that have

relative advantages. With senior adults, creating a subgroup of young-old may establish a positive differentiation from the subgroup of old-old. Establishing this type of subgroup enables young-old adults to compare themselves with old-old adults rather than the young (Abrams & Hogg, 1990; Hinkle, Taylor, Fox-Cardamone, & Ely, 1998).

Exposure to positive stereotypes is much more desirable than exposure to negative stereotypes (Peng, 2012). The process of changing an individual's self-perception requires interaction with other groups (Allen, 2016). Individuals can learn to redefine their self-perception through positive interactions with out-groups to lessen previously held stereotypical attitudes about different age groups.

Promoting relationships between various age groups is a suggested path toward positive social change. Decreasing age-based prejudice begins with reducing stereotypical thoughts, attitudes, and behaviors. Further, promoting interactions among members of various age groups is an effective way to forge long-lasting relationships in which individuals can benefit from shared experiences (Hagestad & Uhlenberg, 2005).

Disciplinary Progression

The primary academic location for researching issues regarding senior adults was historically in the field of gerontology (International Council on Active Aging, 2016). The concept of ageism gained popularity during the 1980s and has evolved in the course of a relatively short time to become multidisciplinary and complex (Giles & Reid, 2005). Scholars from many different fields have incorporated the concepts of ageism to investigate many social issues.

Aging used to be straightforward: after birth, a person grew through childhood and adolescence into adulthood, reached midlife, reached old age, and died. People started living longer in part because of advances in health care and medicine.

Furthermore, families had fewer children, and more resources became available for better nutrition and safety. All factors result in an older population (Salomon et al., 2012). In 2012, an individual age 65 was likely to live almost another 19 years (Brunborg, 2012). Someone born in 2010 might live 30 or more years longer than someone born in 1900 lived. Individuals born between 1946 and 1964 are part of the baby boom generation (Nielsen, 2012) and started turning age 65 in 2011. More than 77 million Americans are included in the baby boom generation (Hilt & Lipschultz, 2005).

By 2008, older adults comprised 12.9% of the population (Salomon et al., 2012). By 2030, those age 65 years and older might reach 72 million, or 20% of the population (Salomon et al., 2012). The population of individuals age 70 years and older is the most rapidly increasing segment of the population (Salomon et al., 2012). Predictions indicate that this age category could reach nearly 30 million by 2050 (Brunborg, 2012). With an increased life span, individuals can live longer and more fulfilling lives. However, a new view on aging has developed.

Ageism is a relativity new fear within society (Levy & Macdonald, 2016). The portrayal of senior adults in the media is either as a burden to society or as respected sages (Dahmen & Cozma, 2009). These unrealistic perceptions of aging can affect the mental and physical health of older individuals (Webster, Westerhof, & Bohlmeijer, 2012). Some marketing decision makers incorporate fear tactics to sell antiaging products

or medication promising to cure an array of ailments (S. C. Jones & Mullan, 2006). All these advertisements send a common and unending message that growing old is undesirable and people should avoid it or at least postpone it as long as possible (Larkin, 2011; Milner et al., 2012).

Although senior adults represent a significant portion of the population, marketing decision makers spend less than 7% of marketing dollars targeting them (Lewis & Reiley, 2013), even though senior adults have money to spend (Finkelstein, Luttmer, & Notowidigdo, 2013; Nielsen, 2012). Perceptions often become reality, and creating a new reality is the only way to change established perceptions. Stereotypes regarding senior adults are ubiquitous in society, and individuals of all ages are often unaware of how stereotypes of aging shape perceptions (Garstka, Schmitt, Branscombe, & Hummert, 2004). Greater sensitivity begins with increased awareness.

Social Issue of Aging

A growing older population is an important social issue and has significant implications for all age cohorts, as each generation influences social policy, government, and economics (Chonody & Wang, 2014). The media send a constant stream of messages about aging and stereotypes. Having a better understanding of ageism, specifically with regard to marketing activities, is important to prepare for changing demographics. The constant focus on the younger population segment by marketing decision makers may lead to the creation of a significant number of unhappy seniors (Puccinelli, Wilcox, & Grewal, 2014).

The issue of aging is becoming more prominent and decidedly mixed. Ageism can exist in any form of mass media (Snead, 2013). My study involved examining the perceptions of senior adults towards stereotypes in magazine advertisements. Participants were between age 70 and 85 years and viewed a cross section of advertisements featuring older adults found in magazines advertisements published since 2010. The rationale behind my study was to understand the message systems and their effect on the populations represented. Senior adults see many advertising messages that can either contribute to or combat the issue of age stereotyping.

My study focused on participant perceptions of the stereotypes presented in magazine advertisement and did not involve measure the overall amount or frequency of advertisement viewing conducted by the senior adults. My study involved examining magazine advertisements to understand the messages about aging promoted. The focus of my study was determined because issues of aging are a significant social issue. Marketing decision makers continue to understand the graying of a significant population in terms of health care, the workforce, and the economy (Abrams, Swift, & Drury, 2016; Harwood & Roy, 2009). Any large population will affect a country's health care system (Dall et al., 2013). Senior adults require health care services more than any other demographic (Kirch, Henderson, & Dill, 2012), and negative portrayals of senior adults are a social issue because of the influence of mass media on socialization and individual attitudes (Mason, Kuntz, & Megill, 2015).

The importance of the study is its focus on the views of senior adults. The study involved exploring how senior adults perceive the process of aging and old age as a stage

of life based on their perceptions, beliefs, opinions, and attitudes. Uncovered knowledge may contribute to setting research or policy targets regarding aging, in addition to evaluating the usefulness of existing policies aimed at older adults. My study is important because it adds to the existing literature and provides another lens through which to understand the effects marketing has on an aging population.

Defining *Old*

Wealth, strength, and productivity have determined the social status of senior adults throughout history. With Social Security benefits, the expectation was that senior adults would retire, which would provide employment opportunities for younger adults. However, loss of employment resulted in loss of status. In the United States, productivity is important, and retirement indicates a lack of worth (Burtless, 2013).

The age at which an individual is considered *old* is often disputed (Smith & Rock, 2014). Researchers have defined old age multiple ways: chronologically, biologically, psychologically, and socially (Addington, 2013). In the United States, the traditional retirement age, 65, often indicates the beginning of old age (Myers, 1990). Others have contended that old age starts much later because advances in health care are helping individuals to live longer (Rechel et al., 2013). Advertisers often define age 50 years as the start of old age because it marks the age segment after their main target group of 18-to 49-year-olds (Treguer, 2002). Researchers have not fully defined old age and tend to either lump everyone older than age 50 years or 60 years into a single study or focus on the younger end of the old-age spectrum.

The definition of old age is also an individual determination (Gerbner, 2002). Younger individuals often consider the beginning of old age to occur earlier in life than older people do. Alternatively, older individuals often have a self-perceived or cognitive age (the age felt internally) about a decade younger than their chronological age (Van Auken, Barry, & Anderson, 1993). Yet another variation by Gullette (1998) was that old is the time when individuals realize they are not young anymore.

In my study, the term *senior adults* describes individuals who are 70 to 85 years old. The term *older adult* refers to individuals who are 50 to 69 years old. Terms not used in my study but found in the literature include *senior citizens*, *mature*, *seasoned or experienced individuals*, *retirees*, *silver or golden citizens*, and *the elderly*.

Ageism

Defining Ageism

Ageism is one of the most publicly accepted forms of prejudice in U.S. society (Allan et al., 2014). The media often brand senior adults as senile, stubborn, and having old-fashioned morals (Butler, 1975). Ageism refers to "a deep seated uneasiness on the part of the young and middle-aged—a personal revulsion to and distaste for growing old, disease, disability; and fear of powerlessness, 'uselessness,' and death" (Butler, 1969, p. 243).

Ageism allows younger individuals to view adults greater than age 50 years as being different from themselves; thus, they subtly stop recognizing their elders as real people and become comfortable neglecting and disliking them (Garstka et al., 2004). The term ageism is an attempt to evade the reality of human aging and death (Butler, 1975).

Ageism is the cruelest rejection (Palmore, 1982). With ageism, unlike sexism and racism, individuals are not born into the group; everyone will become a member and potentially experience discrimination simply by living long enough.

Ageism refers to the biased and unfavorable attitudes individuals have of adults greater than age 50 years (Islam, 2016). Ageism also refers to the stereotyping of senior adults based on expectations, roles, and behaviors (Chonody & Wang, 2014). For the purposes of this research, ageism refers to negative perceptions toward adults older than age 50 years.

History of Ageism

Every society throughout time has treated its older population differently, with attitudes ranging from respect to scorn (Palmore, 1990). Older adults once primarily taught survival skills and cared for the young, which allowed parents to hunt. Without the contributions of older adults, the human species would not exist (Palmore, 1990).

Research on aging has not incorporated all senior adults and has therefore limited society's understanding of senior adults and their contributions (Woolf, 1998). This limitation led to stereotypes and prejudices formed against senior adults. Four factors contribute to ageism: fear of death, a youth-centric culture, a high value on productivity, and use of participants from long-term care facilities in early research on aging (Woolf, 1998).

A contributing factor regarding the fear of death may be the relatively recent societal change from providing care for the dying at home to moving the dying to the hospital (Moller, 2000). The movement from home to hospital removes the natural

occurrence of death from the social and moral fabric of the culture (Löckenhoff et al., 2015; Moller, 2000). An increase in ageism occurred simultaneously with an emphasis placed on a youth-centric society. Woolf (1998) noted, "The media, ranging from television to novels, place an emphasis on youth, physical beauty, and sexuality. . . . The emphasis on youth not only affects how older individuals are perceived but also how older individuals perceive themselves" (para. 4).

Economic productivity is another factor that has added to ageism. In the workforce, employers consider senior adults to be less productive than younger adults (Desmette & Gaillard, 2008; Kite & Johnson, 1988) and therefore an economic liability (Picchio & van Ours, 2013). Children are also less productive, but society views them as being the future and values them as being a necessary economic investment.

Poorly controlled original research on ageism is another contributing factor in Woolf's (1998) review of ageism research. Early researchers sought adults older than age 50 years for their studies where they were most readily accessible, which was long-term-care facilities. The tainted participant pool meant researchers relied on "non-well, institutionalized older individuals" (Woolf, 1998, para. 6).

Between the 1600s and 1700s, attitudes toward senior adults in America were courteous. In the American colonies, only 2% of the population was age 75 or older (Kite & Wagner, 2002). The population held elders in high esteem, and they held the most important positions in society (Kite & Wagner, 2002). The common view of senior adults involved being good, being educated, and conducting their lives according to biblical norms. Older adult landowners wielded significant power. The oldest male in a family

controlled ownership of any land belonging to the family and thus maintained his status in the family and the respect of younger generations (Kite & Wagner, 2002). The land eventually passed from father to son in exchange for support in old age (Falk & Falk, 1997).

During the 1700s and 1800s, affluence replaced age as a qualification for leadership. People used disparaging terms such as gaffer, codger, fuddy-duddy, and geezer to poke fun of senior adults (Kite & Wagner, 2002). The status of senior adults declined owing to the formation of a public education system for the young, the creation of retirement programs, and the custom of separating family residences (Cornman et al., 2012). Industrialization also contributed toward ageism. Another factor that lowered the status of senior adults was physical strength and the inability to keep pace with change. Younger generations no longer highly valued a lifetime of acquired knowledge and expertise. As books became more readily available, older adult storytellers became unnecessary (Falk & Falk, 1997).

During the early 20th century, social reformers with the intent of securing support for the new social insurance programs often stereotyped senior adults as sickly, impoverished, and not capable of providing for themselves (Falk & Falk, 1997). Nine million families lost their life savings after 20% of the nation's banks collapsed during the Great Depression of the 1930s. Senior adults lost homes and their ability to provide for themselves (Kite & Wagner, 2002). The government passed the Social Security Act of 1935 and established limited support in old age. As set by the legislation, 65 was the age when individuals became old and were eligible for benefits (Falk & Falk, 1997).

Between 1970 and 2000, the consumer population of senior adults grew, experienced increased purchasing power, and wielded significant economic influence in many countries (Kohlbacher et al., 2011). To some marketing professionals, senior consumers are an attractive consumer niche, whereas in other countries marketers do not give senior adults much consideration (Zayer & Coleman, 2014). In some countries, the senior population has not reached significant numbers and the younger population regards senior adults as unworthy of attention (Williams, Wadleigh, & Ylänne, 2010). Evidence has indicated that older consumers enjoy stronger purchasing power compared to previous generations (Zhang et al., 2006). As older age groups increase in population in many countries and enjoy strong economic power, marketing decision makers might give more attention to this potentially profitable age segment (Harwood & Roy, 2009). Most consumer and advertising research regarding senior consumers has taken place in Western countries, with fewer studies carried out to investigate the older market in other countries (Ong & Chang, 2009; Trytten et al., 2012; Williams et al., 2010).

This section included a discussion on senior adults during the last few decades of the 20th century. The next section starts in the new millennium and includes recent trends regarding the portrayal of senior adults in the media and the effect on both older individuals and society. The review of recent studies reveals the portrayal of senior adults in television and magazine publications. The section indicates how the messages and images of media outlets influence senior adults. The concluding discussion is on the purchasing decisions made by senior adults based on media portrayals and stereotypes.

Stigma

Social stigma is the disapproval of a person or group because people consider their cultural norms to be significantly different from other members of society (Jones & Corrigan, 2014). The roots of aging stigmas started in the evolutionary past. Throughout time, humans had to avoid poor social exchange partners to survive (Tomasello, Melis, Tennie, Wyman, & Herrmann, 2012). Individuals viewed as possessing cognitive or physical limitations have an unfavorable cost—benefit ratio and therefore are not desirable social exchange partners (Burtless, 2013). From an evolutionary viewpoint, it is understandable that humans would become sensitive to those attributes that could signal an individual's contribution potential. The common expectation is that individuals should contribute an amount equal to or greater than the amount of benefits received. Stigmas occur when attributes limit an individual's contribution potential.

Older adults face stigmatization based on these same factors (United Nations Population Fund, 2012). An association exists between old age and possessing reduced physical and cognitive abilities. Society views senior adults as taking on a dependent role and being unable to benefit society sufficiently compared to the benefits that they receive (Uotinen et al., 2006). Senior adults pose proportionally higher costs to society and place an unfair burden on younger generations (Finkelstein et al., 2013).

Stereotype

Stereotypes refer to cognitions, beliefs, and expectancies about the characteristics of group individuals (Cuddy & Fiske, 2002). Cultural beliefs and social interactions create stereotypes, and stereotypes held regarding senior adults are unique to each

individual (Mason et al., 2015). Some people may share similar stereotypes on an abstract level in which they share a general set of traits, but their personal set of traits might be different (Ramos, Garcia-Marques, Hamilton, Ferreira, & van Acker, 2012). Using cognitive psychology to study stereotypes of senior adults in advertising is more advantageous than making inferences from coding the variables such as the scenario setting or the role played by an older actor. Cognitive psychology provides a better understanding of specific stereotypes held by many individuals (Hummert, 1990; Logel, Walton, Spencer, Peach, & Mark, 2012).

Stereotypes are cognitive structures, and Lippmann (1922) originally defined stereotypes as the pictures in people's heads. As a cognitive process, stereotyping represents an attempt to "introduce simplicity and order where there is complexity and nearly random variation" (Tajfel, 1978, p. 82). Stereotyping involves assigning similar characteristics to large groups of individuals, but often ignores the real existence of differences. Entrenched stereotypes underscore a limited number of group characteristics while discounting characteristics inconsistent with existing beliefs (Lee, 2014).

One of the initial characteristics used to establish a stereotype is age (Levy, Slade, Chung, & Gill, 2015). Ageism stereotypes develop as individuals perceive changes occurring throughout their lifetime. Individuals store these perceptions in memory and recall them to decipher social cues and to affect behavior. Negative stereotypes highlight perceived undesirable characteristics.

According to cognitive psychology, stereotypes are schemas or beliefs regarding certain concepts residing in long-term memory (Smith & Rock, 2014). The schemas

appear in a hierarchical fashion. Everyone has a unique schema with particular beliefs about the concept of senior adults (Ashmore & Del Boca, 1981). Each schema further consists of many separate but similar subschemas. Each subschema consists of a set of traits that defines types of senior adults and becomes a unique stereotype (Kossowska, Jasko, Bar-Tal, & Szastok, 2012). Stereotypes regarding older individuals can be positive or negative (Meisner, 2012). Positive stereotypes consist of faultless images of senior adults, and negative stereotypes conjure up disparaging or mocking images of senior adults (Barber & Mather, 2013).

The mind naturally creates categories and stereotypes to organize what it perceives (Lee, McCauley, & Jussim, 2013). The organization of human thoughts is necessary for daily survival, and stereotyping establishes a foundation for bias (Meisner, 2012). Without the internal categorization that occurs with stereotyping, the introduction of any new person requires a perpetual stream of new information. Automatically categorizing individuals into like groups, such as age, allows the mind to focus attention on more demanding tasks (Fiske, 2015).

Society cannot battle ageism without first completely understanding ageism.

Additional research is necessary for a better understanding of how society can reduce ageism and promote respect for senior adults (Christian, Turner, Holt, Larkin, & Cotler, 2014). Stereotyping spreads beliefs within a culture (Lambert et al., 2016) and can help sustain the status quo (Hilt & Lipschultz, 2005) as the media echoes a society's prevailing beliefs. Understanding ageism is important because

Ageism, whether by older adults themselves, mass media, or the public at large, is unhealthy and unwise. . . . Ageism is unhealthy because it encourages people to expect dementia, incontinence, and loss of libido in old age, and it is unwise because it discriminates against what most of us will be in the future. (Hilt & Lipschultz, 2005, p. 117)

Stereotypes regarding senior adults influence how senior adults conceive the aging process and living in old age (Levy, 2003). Internalizing ageist stereotypes may prevent senior adults from seeking assistance if they believe symptoms such as depression are simply a natural and expected phase of growing older (Allen, 2016). Beliefs in stereotypes on aging have also caused older adults to underperform in research tests (Hess, Hinson, & Hodges, 2009) and have increased dependency (Coudin & Alexopoulos, 2010). Individuals with a favorable attitude about growing older may live up to 7 years longer than those whose attitudes are unfavorable (Meisner, 2012).

Some researchers have identified stereotyping subcategories for senior adults rather than a single comprehensive old age category. The subcategories reflect either generally positive (e.g., warm, perfect grandparent) or generally negative (e.g., recluse, incompetent) beliefs about senior adults (Barber & Mather, 2013). In studies in which individuals rated the traits of various social groups, individuals frequently clustered senior adults with individuals with disabilities and individuals with developmental disorders (Cuddy et al., 2005). People often consider senior adults as kindly but incompetent. These types of stereotypes tend to relegate senior adults to a lower status in society.

Aging Stereotypes

Everyone will eventually become a member of the older population. Younger members of society often treat the older population with a range of emotions from ambivalence to disdain in the United States, where everlasting youth is desirable (Laditka, Fischer, Laditka, & Segal, 2004; Rittenour, & Cohen, 2016). Senior adults especially fear the loss of their physical attractiveness, which enforces the aging stereotype that young is beautiful and old is ugly (Jesmin, 2014; Richards, Warren, & Gott, 2012). Although the U.S. culture has a high regard for youth, other cultures revere characteristics of old age such as gray hair and wisdom (Kotler, Schiffman, & Hanson, 2012; Palmore, 2003).

Aging stereotypes have both negative and positive qualities. Senior adults are just as likely to be defined as depressed, senile, sickly, and unproductive as they are to be defined as happy, wise, reliable, and dependable (Palmore, 1982). Many adults have both positive and negative views of aging; however, negative views of aging are more predominant (Cuddy et al., 2005; Kotter-Grühn, 2015).

Senior adults internalize primarily negative stereotypical views regarding their age group, even when they do not necessarily agree with those beliefs about themselves (International Council on Active Aging, 2016). Researchers asked a representative sample of 1,155 adults age 65 years or older if they personally encountered certain serious problems: 42% mentioned health, 36% said money, 36% said crime, and 21% said loneliness. The researchers then asked the same participants the same question, but instructed them to answer based on their beliefs of most people older than age 65 years in

general: 92% indicated health; 88% stated money; 84% indicated loneliness; and 82% said crime was a serious problem for most individuals greater than age 65.

Individuals do have different stereotypes of senior adults (Hummert, 1993). A card sort and cluster analysis conducted by Hummert (1993) revealed six positive and eight negative stereotypes. The six positive stereotypes were (a) perfect grandparent, (b) golden ager, (c) John Wayne conservative, (d) liberal matriarch or patriarch, (e) activist, and (f) small-town neighbor. The eight negative stereotypes were (a) despondent, (b) vulnerable, (c) severely impaired, (d) shrew or curmudgeon, (e) recluse, (f) mildly impaired, (g) self-centered, and (h) elitist. A focus on negative stereotypes of senior adults revealed eight categories: (a) eccentrics, (b) curmudgeons (grouchy, angry, uncooperative, nosy or peeping toms), (c) objects of ridicule or the brunt of the joke, (d) unattractive, (e) overly affectionate or sentimental, (f) out of touch with current or modern society, (g) overly conservative, and (h) afflicted (physically or mentally deficient; Robinson et al., 2003).

Adult research participants of all ages indicated marketers more often attributed positive stereotypes to senior adults than negative stereotypes (Weiss & Lang, 2012). Results from a study by Fung et al. (2015) indicated no significant difference between how young adult, middle-aged, and senior adult participants rated positive and negative stereotypes regarding senior adults. In another study, participants were more likely to associate the stereotypes mildly impaired, severely impaired, shrew or curmudgeon, despondent, recluse, and vulnerable with individuals older than age 80 years (Kotter-Grühn & Hess, 2012). Participants tended to associate positive stereotypes such as golden

ager, perfect grandparent, activist, and liberal matriarch or patriarch with younger elderly individuals ages 60-69. The participants attributed the John Wayne conservative and small-town neighbor type most often to the middle elderly between the ages of 70 and 79.

Differences also exist in the stereotyping of senior men and women (Zayer & Coleman, 2014). Study participants associated a greater number of negative attributes to photographs of young- and middle-elderly women than to photographs of young- and middle-elderly men. The participants' pattern changed for the old-elderly gender groups, where they held all but the very oldest men in higher regard than women.

A widely held belief is that senior adults have disabilities and contribute nothing to society (Palmore, 1990). Senior adults experience more chronic illness than younger individuals do, but fewer acute illnesses (Arai et al., 2012). However, only 5% of senior adults live in institutions (Salguero, Martínez-García, Molinero, & Márquez, 2011), and a majority of older individuals engage in normal daily activities and report good health (Suryadevara & Mukhopadhyay, 2012).

The ability to study and retain information decreases in late adulthood. A commonly held stereotype is that loss of memory and confusion are unavoidable in old age. However, many older adults have normal mental facilities, including memory (Mielke et al., 2013). The results in one study indicated the percentage of adults between 65 and 69 with minimal memory impairment was 96% but only 67% among individuals older than age 85 years (Geerlings, Jonker, Bouter, Adèr, & Schmand, 2014).

Ageism affects workplace dynamics. As a result of constant negative or offensive stereotypes, some hiring managers believe that older adults are less productive, less

trainable, and less creative than younger individuals, and that seniors are unable to learn new material and resist using technology (Dall et al., 2013). Negative aging stereotypes establish grounds for bias in hiring practices, training, and promotion. However, research on senior workers revealed older individuals were often just as productive as younger workers were (Burtless, 2013). Senior workers were also less likely to quit their jobs and missed fewer work days than younger employees did. People in many countries, including Sweden, Great Britain, and Japan, consider senior adults a valuable resource and encourage them to remain in the workforce (Butler, 1994).

Depression, loneliness, and social isolation are common aging stereotypes; however, findings from one study showed less than 30% of senior adults lived alone and less than 5% lived in severe isolation (Denmark & Zarbiv, 2016). Older individuals did report having fewer total social interactions but maintained the number of people in their social circle. Senior adults also experience less depression than younger adults (Salguero et al., 2011).

Exposure to aging myths and stereotypes throughout a lifetime can lead senior adults to internalize aging stereotypes (Emile et al., 2014). These myths influence expectations of aging and potentially become a self-fulfilling prophecy (Wurm, Warner, Ziegelmann, Wolff, & Schüz, 2013). Negative stereotypes influence the self-view and behavior of senior adults, who are likely to reinforce society's beliefs by accepting damaging definitions of themselves and to spread the very stereotypes directed against them (Rush, Watts, & Stanbury, 2013).

Opinions on the financial status of senior adults span the entire wealth spectrum. More than two thirds of young adults surveyed believed that the majority of older individuals had finances insufficient for survival (Finke, Howe, & Huston, 2011). However, a majority of senior adults live above the federal poverty level (Fokkema, Gierveld, & Dykstra, 2012). Households led by senior adults have a higher net worth than households led by younger individuals: \$78,000 versus \$36,000, respectively (Bischoff, Sudore, Miao, Boscardin, & Smith, 2013).

The underlying problem with negative stereotypes is the belief that senior adults are actually different from one's own present and future self and do not possess similar desires, concerns, or fears (Hendricks & Hendricks, 1986). Some members of society relegate senior adults to a lower status. Lower status groups can attempt to change the stereotypes placed upon them, but are successful only if the higher status groups also agree with the changes (Perna et al., 2011).

Ageism is a socially constructed term and harms everyone, not only older individuals (Lewis et al., 2011). Women of all ages receive antiaging messages (Richards et al., 2012) that can cause women to fear the natural progression of aging (Lewis et al., 2011). Having a fear of growing older can harm the self-esteem of women, encourage women to hide their real age, and lead women to develop unhealthy eating habits (Fealy, McNamara, Treacy, & Lyons, 2012).

As baby boomers age, the U.S. population will change dramatically (Coudin & Alexopoulos, 2010). The use of negative stereotypes when referring to senior adults influences how people think about senior adults (Sudbury & Simcock, 2009). People can

consider senior adults different and separate from everyone else. Researchers have used negative images to examine how younger individuals and senior adults perceive each other (Yoon & Powell, 2012). Negative stereotypes can cause younger individuals to view senior adults as being inferior and to believe that they would not enjoy the friendship of an older individual (Coudin & Alexopoulos, 2010). A significant discovery from the research was the significant relationship between the young people's responses to the images and their social attitudes toward older people (Coudin & Alexopoulos, 2010). Young people learn negative stereotypes early in life; as they grow older, they become familiar with negative stereotypes about senior adults (Nelson, 2011). Children and young adults adopt preconceived negative stereotypes about senior adults and use them when making decisions (Robinson & Umphrey, 2006). A major risk in continuing to portray senior adults negatively is that younger people will age believing that growing old is bad and they will be miserable in old age. Senior adults who believe the negative stereotypes and experience lower self-esteem are also at risk (Nelson, 2011).

Internalization of Aging Messages

Negative stereotypes can adversely influence how individuals age (Emile et al., 2014). Studies have shown that when researchers showed senior adults negative words or pictures about aging, they internalized the messages and began to feel negative about themselves (Dionigi, 2015; Kolata, 2006). Such internalization can lead to health issues. Older individuals may become infirm because many messages of ailments in old age are prevalent throughout society. Positive aging words and pictures have had a positive effect on health.

Ageism has serious implications with negative psychological and sociological effects (Moran, Jolly, & Mitchell, 2012). A widely held belief is that senior adults have cognitive and physical deficits that can diminish the self-esteem of older individuals (Nelson, 2011). These beliefs cultivate a fear of the aging process for the older population.

Research that included individuals between ages 50 and 79 years revealed their views on cognitive age and chronological age (Sudbury & Simcock, 2009). The cognitive ages of participants spanned from 30 to 85 years, and the average cognitive age was nearly 53 years. The average chronological age for the participants was almost 63 years (Sudbury & Simcock, 2009). People consider themselves about 10 years less than their true age (Gullette, 1998).

Self-identity is fluid and changes based on many factors, including consumer choices and lifestyle (Lewis et al., 2011). Magazines aimed toward readers greater than age 50 years have undergone analysis with the aim to consider the kinds of aging identities created and the kinds of roles available for readers during old age (Lumme-Sandt, 2011). The majority of articles fell into one of three categories: freedom, activity, and appearance. Discussions about freedom included freedom from work and roles expected from society and creating new identities. Articles about activities focused on physical and mental exercises to keep the body and mind healthy. Looking good during old age to boost self-esteem and the need to establish positive impressions with others were also major topics.

The aging process leads people to be more creative in problem-solving tasks (Thornberg, Lindquist, & Josephsson, 2012). Researchers of recent research have disputed preconceived notions of aging. Senior adults are as creative as at any other time in their life (Zhang & Niu, 2013). Regarding creativity and the arts, the trials of aging may improve the artistic process (Huhtinen-Hildén, 2014). A significant number of artists who have continued to be very creative well into old age have indicated that participating in the arts might have a positive, therapeutic effect on individuals who become active in the arts late in life (Rogers & Van Norman, 2011). Neurological scans have shown that emotional well-being improves throughout the life span (Williams et al., 2006).

Individuals' subjective age mirrors how they personally view age and has been linked to an individual's physical and mental health (Barnes-Farrell & Piotrowski, 1989; Chang, 2010). The tendency of both middle-aged and older individuals to understate their actual age is common across Western countries (Westerhof & Barrett, 2005). A study on how individuals ages 65-84 viewed their own age during an extended period included more than 450 older individuals who participated during an 8-year period (Uotinen et al., 2006). Participants described the age they felt they were and their ideal age. Results from the initial baseline study indicated that 53% of the participants felt younger than their actual age (Uotinen et al., 2006). During the follow up study 8 years later, approximately 26% of the participants claimed to feel younger than their true age and another 26% reported they felt older than their actual age (Uotinen et al., 2006). Findings were similar between the chronological age and the ideal age. About half of the participants indicated that their ideal age was 10 or more years less than their actual age.

The very young, individuals under age 40, often give little thought to senior adults (International Council on Active Aging, 2016). Senior adults are not part of the very young's age group so they give little thought to stereotypes of senior adults. One important issue regarding age stereotypes is that everyone eventually becomes older. People can internalize previously held stereotypes of senior adults, which can begin to influence their self-views. Personally held views of old age developed early in life have a strong influence on the self and future well-being later in life (Kornadt & Rothermund, 2012). Individuals' thoughts about senior adults become part of those individuals' future self-conceptions, which in turn influences individuals' actual self-concept in old age.

Evidence of the effects of positive, neutral, and negative stereotypes on older individuals revealed that negative aging stereotypes influence self-reported loneliness, risk-taking, and subjective health among senior adults (Coudin & Alexopoulos, 2010). Exposure to negative stereotypes can also contribute to dependency among older individuals. Stereotypes can shape perceptions and behaviors of senior adults (Coudin & Alexopoulos, 2010).

A study on the effect of stereotypes on life and death attitudes included 64 individuals ranging in age from 18 to 85 years (Levy, 2003). Participants completed a questionnaire regarding attitudes about age and their health status. Participants also chose to accept or decline necessary life-sustaining health care after Levy (2003) randomly primed them with either negative or positive aging words. The findings indicated that older individuals were more likely to accept life-saving health care when primed with positive aging stereotypes than were older individuals primed with negative age

stereotypes. Older participants conversely tended to decline life-saving health care when primed with negative aging stereotypes. The priming did not affect younger participants' decision whether to accept life-saving health care, which indicated the younger participants did not internalize the aging stereotypes (Levy, 2003).

A 20-year-longevity research project with 660 participants ages 50-94 years involved finding out if individuals who held a more positive outlook toward aging would live longer (Levy, Slade, Kunkel, & Kasl, 2002). Findings indicated that those individuals with a more positive outlook toward aging lived longer than individuals with a negative view of aging did. The median survival time of individuals with a positive view was more than 7.5 additional years. The increased life span from having a positive outlook on aging was greater than the psychological benefits of having low cholesterol, low blood pressure, and low body mass index; not smoking; and exercising (Levy et al., 2002).

Positive individual perceptions and experiences of aging are important for all adults with regard to health (Sargent-Cox, Anstey, & Luszcz, 2012) and identity development (Serino, 1998). Negative attitudes about aging are at least in part a result of stereotypes. Common ageism stereotypes indicate that older adults are absentminded, frail, sickly, inefficient, and stubborn; avoid new technology; and have no sexual desires (Meisner, 2012). Perceptions of aging and the aging process affect how individuals experience their own transition to old age. People develop their perceptions individually through a dynamic process that involves the interplay of the self and social norms (Meisner, 2012).

Media

The national press significantly influences what a majority of the public believes (Liu & McConnell, 2013). Advertising perpetuates stereotypes in part because messages are quick, unambiguous, and repetitious. Magazine advertisements are particularly suitable for conveying prevailing attitudes (Zayer & Coleman, 2014).

Consumers learn from the media and a strong relationship exists between stereotyping and mass media (Pinkleton, Austin, Zhou, Willoughby, & Reiser, 2012). The media perpetuate stereotypes and create facsimiles of social groups. Some marketing decision makers copy artificial social groups and use repetition to sell goods and services, with little consideration for reality, correctness, or ethics. The media also have the power to change perceptions (Xie et al., 2012).

Age-based stereotypes in U.S. culture are ubiquitous (Cuddy et al., 2005).

Negative messages in the media show senior adults as having little value, being dependent, and being unattractive. Dominant views of senior adults in the media contribute to the amount of discrimination directed toward older adults (Nelson, 2011) and damage side effects on older individuals' self-image (Robinson, Gustafson, & Popovich, 2008).

When generalizations using a negative stereotype exist in the media, others become encouraged to internalize similar opinions (Whitley & Berry, 2013). Some aging stereotypes are so in-built in people's minds that when confronted with an individual who does not conform to the stereotype, people tend to view the nonconformist as an exception and therefore do not challenge or change prominently held stereotypical beliefs

(Kotter-Grühn, 2015). The media underrepresent senior adults in proportion to their respective percentage of the population (Xie et al., 2012; Ylänne, 2015). Media representations of senior adults are significant because viewers measure themselves against them (Lumme-Sandt, 2011). Media portrayals of senior adults often reflect their stigmatized, lower social status. A review of adults greater than age 50 years in magazine advertisements revealed the underrepresentation of senior adults and a frequent portrayal as being sickly (Lumme-Sandt, 2011).

Advertising

Advertising in the United States is a \$250 billion per year industry (White, Oliffe, & Bottorff, 2012). People see millions of advertisements throughout the course of their lifetime. Although they will ignore and not mentally process the vast majority of advertisements, they will internally process many of the advertisements (Festervand & Lumpkin, 1985; Tian, 2015). Entertainment value, information, and physical attractiveness of the spokespeople are a few factors that affect how consumers view advertisements and the level of persuasiveness (Holbrook, 1987). Advertising affects the vehicles individuals drive, the clothes they wear, the vacation they take, and the votes they cast. Advertising messages also contain aging stereotypes (Kay & Furnham, 2013).

The 18- to 49-year-old market was historically attractive to advertisers because this group had a large number of consumers with high levels of disposable income.

Consumers age 50 years and older have more than 40% more disposable income than the average consumer, and the senior adult population is likely to reach 40% of the total adult

population by 2025 (U.S. Census Bureau, 2012). The size and growth of the older population has caused marketers to examine its potential (Lumme-Sandt, 2011).

Advertisements portray senior adults in many different ways, from healthy and rich to lonely and sick. Each representation helps to cultivate the formation of stereotypes. Some advertisements featuring senior adults appear to misrepresent reality, but consistent and repetitive messages in the mass media foster ageism. According to Cortes (2001), "Stereotypes develop easily, rigidify surreptitiously, and operate reflexively, providing simple, comfortable, convenient bases for making personal sense of the world" (p. 6).

Senior adults react to marketing efforts in vastly different ways than younger buyers do (Garstka et al., 2004). To reach the 50-and-older age segment, marketing decision makers should modify their advertising plans to meet the unique set of needs and desires of an older demographic. Some marketing decision makers are still hesitant to use older models in advertisements for fear of alienating the youth (Drolet, Williams, & Lau-Gesk, 2007). When older models appear in advertising campaigns, the portrayals mirror common stereotypes and promote ageism (Drolet et al., 2007). Marketing research is lacking on how to best connect with older consumers (Lim & Kim, 2011).

An investigation on how to target older consumers effectively using advertising indicated that the more the models in the advertisements actually reflected the self-concepts of the senior adult target market, the more positive the senior adult target market felt toward the advertisement (Hoffmann et al., 2012). Consumers age 50 years and older tend to have a greater preference for advertising models that represent the concept of

activity than do consumers age 60 and older (Hoffmann et al., 2012). Consumers greater than age 50 years seem to strive for a more active lifestyle.

Television

Highlighting public images of senior adults is important in two ways. Public images shape and reflect social attitudes toward senior adults and influence how others treat them. In addition, public images influence individual self-perceptions and the development of self-identity (Lumme-Sandt, 2011).

Researchers have examined whether marketers use negative stereotypes often when depicting senior adults. One review included nearly 1,700 television commercials that aired during a 40-year period. Television may have been the chosen medium because of the belief that it had a greater effect on individuals (Bracken, 2014). Coding each commercial and classifying the older characters revealed that advertisers positively portrayed senior adults, and little negative stereotyping existed. In general, senior adults emerged as being adventurous, conservative, and perfect grandparents.

Younger people form opinions about senior adults from personal experiences, family members, and friendships (Lee et al., 2007). Exposure to characters on television can also affect the attitudes of young individuals regarding senior adults. One study involved examining television advertisements airing on different networks and at different times during the day to determine the portrayal of older adults (Lee et al., 2007). Senior adults tended to have minor roles in advertisements and promoted only a limited type of stereotypical products. Older women were underrepresented in the commercials

relative to older men, but the characters of both sexes were overwhelmingly positive (Baumann & de Laat, 2012).

Senior women emerged as underrepresented in television commercials compared to senior men (Lee et al., 2007). Approximately 17% of the U.S. population consists of women greater than age 50 years (U.S. Census Bureau, 2012). The fashion industry has a great influence on the self-image of women (Lewis et al., 2011). Findings from a visual content analysis of eight fashion magazines indicated decision makers in the fashion industry concentrate their marketing efforts on younger populations and rarely include images of women age 40 and older, even though a sizeable percentage of subscribers are older adults.

Several studies exist regarding depictions of older individuals in television advertisements (Lemish & Muhlbauer, 2012; Richards et al., 2012). A sequential review of the literature started with Francher (1973). An examination of 100 commercials that aired on television during the early 1970s revealed that older individuals were often in commercials containing humor and often had comical roles (Francher, 1973).

A study conducted in the late 1970s benefited from a content analysis of 80 television commercials that aired during 1976 (Harris & Feinberg, 1977). Although representations of incapacitated older individuals did not occur, findings did indicate older individuals often appeared as having more physical impairments than younger individuals did. As they got older, the percentage of women depicted in commercials as advice givers decreased more significantly than the percentage of advice-giving older men did. The conclusion was that older individuals depicted in commercials appeared as

having "unflattering . . . unhealthy, unstylish, and uninteresting ways" (Harris & Feinberg, 1977, p. 467). The findings also indicated that the depictions of older women were harsher than those of older men were. The harsh depiction of senior women reflected a decline in appreciation for women of age (Harris & Feinberg, 1977).

During the 1970s, researchers conducted several studies that revealed negative images of older individuals in television commercials. Recent research has depicted a more positive view. The shift might underscore a trend toward more positive depictions. Any meaningful conclusion about the trends in the stereotyping of older individuals in television commercials is difficult to make because researchers adopt different empirical approaches for the studies and none incorporated a longitudinal approach.

Langmeyer's (1984) study contrasted with previously cited studies. A study on the perceptions of older individuals regarding the depiction of senior adults during primetime television commercials included nearly 55 older participants and a list of predetermined adjectives containing both favorable and unfavorable traits (Langmeyer, 1984). The study involved rating senior actors shown during 17 commercials. Research participants found the older commercial characters neutral and not having predominantly positive or negative traits (Langmeyer, 1984). No significant differences between the gender groups were found.

A content analysis of television commercials that aired on the three major networks in 1986 revealed most of the senior adults shown had only supporting roles in the commercials (Swayne & Greco, 1987). Few negative depictions of older individuals emerged. Less than 15% of the older individuals shown in the commercials appeared to

be humorous or in a comical setting, and less than 7% of the older individuals depicted appeared confused or in ill health (Swayne & Greco, 1987). Nearly 65% of the older individuals were in an advisory role and considered a positive stereotype.

A replication of the original study conducted by Swayne and Greco (1987) appeared in 1995, conducted by Robinson, Duet, and Smith. The study involved examining more than 800 television commercials that aired during prime time on the three major networks in 1994. Similar to the previous findings, the conclusion was that most of the older individuals in the commercials held only minor roles, and as before, depicting fewer negative stereotypes. Approximately 13% of the older characters appeared to be amusing and less than 5% of the senior characters appeared as confused or in ill health. A much lower percentage of older individuals (30%) appeared as advisors, whereas nearly 65% of the older individuals appeared in an advisory role in the previous study (Robinson et al., 1995).

To discover whether depictions of senior adults were positive or negative based on the target audience for the commercials, researchers studied nearly 1,900 commercials on television in 1991 (Peterson & Ross, 1997). The study involved labeling older individuals portrayed as displaying mental and physical skills as desirable. Undesirable depictions of older individuals showed senior adults exhibiting mental or physical weakness or appearing to be helpless, ignorant, or idle (Peterson & Ross, 1997). The conclusion was that the depictions of individuals age 65 and older were desirable (Peterson & Ross, 1997).

The number of desirable and undesirable depictions changed based on the target audience for the commercial (Peterson & Ross, 1997). Commercials targeted at people ages 45 and older contained the highest percentage of desirable depictions, which was approximately 72%, and the lowest percentage of undesirable portrayals, which was approximately 28%. The lowest percentage of desirable depictions, approximately 55%, and the highest percentage of undesirable portrayals, approximately 45%, was from commercials not geared toward any specific age group (Peterson & Ross, 1997). In commercials targeting the youth market, the depiction of senior adults was desirable in nearly 63%, with 37% being undesirable depictions (Peterson & Ross, 1997). For each target market, most of the portrayals of senior adults were desirable, but the percentage of undesirable portrayals was also high. The percentage of desirable depictions of older individuals was lower than for younger individuals ages 46 to 64, and even lower for individuals ages 45 and under.

Radio

Researchers investigated the effectiveness of radio advertising when mature study participants perceived the age of a narrator to be different from his or her actual age (Oakes & North, 2011). Researchers manipulated the advertisement narrator's voice to examine the effect on perceived image of the advertised product, likelihood of purchase, recall, and perceived attractiveness. Findings indicated a perceived difference between the actual age of the listener and the perceived age of the narrator negatively affected the perceptions of the product, reduced the likelihood of purchasing the product, and reduced product recall (Oakes & North, 2011).

Print

A solid theoretical basis and a longitudinal sample are necessary to study trends in stereotyping older individuals in the media. A study involving stereotypes of older individuals in print advertisements involved examining stereotypes portrayed by senior adults in advertising based on research conducted by Hummert (1990); Hummert, Garstka, Shaner, and Strahm (1994); and Hummert's colleague Miller (Miller, Miller, McKibbin, & Pettys, 1999). Nearly 1,950 print advertisements featured in *Life, Better Homes and Gardens*, and *Popular Mechanics* magazines between 1956 and 1996 underwent analysis (Miller et al., 1999). No significant negative stereotyping regarding older adults emerged. When senior adults appeared in advertisements, less than 2% contained shrew or curmudgeon stereotypes, and less than 6% contained mildly impaired stereotypes. The advertisements depicted senior adults using positive stereotypes such as the perfect grandparent (almost 15%) and the John Wayne conservative (nearly 10%; Miller et al., 1999).

At 37%, the golden ager was the most frequently occurring senior stereotype in the print advertisements, which had an association with the younger elderly (Miller et al., 1999). A trend analysis showed a statistically significant increase in the number of mildly impaired and perfect grandparent stereotypes (Miller et al., 1999). Further analysis showed a greater association between senior adults and the mildly impaired, perfect grandparent, and John Wayne conservative than with the older adults (Miller et al., 1999).

The findings of Miller et al.'s (1999) study appeared reasonable according to the authors when looking at them from a marketing point of view. The trend in more frequent depictions of the mildly impaired stereotype might have been owing to marketers promoting goods and services aimed toward easing some of the hardships of aging and a growing aging market. The trend seems reasonable and supports why few examples existed of certain stereotypes such as the severely impaired, shrew or curmudgeon, and despondent.

Magazine

One study by Robinson et al. (2008) involved reviewing magazines to determine age stereotyping in advertising content. *Modern Maturity* targets the older adult population. Three primary findings were highlighted:

First, old age and its natural effects were depicted as decreasing sexual attractiveness and sexual intimacy. . . . Second, the older adults who appeared in advertisements with children were portrayed as dependent on children for love and purpose in life. . . . Finally, the advertisements contained a predominance of products designed to minimize the effects of ageing, such as hair dyes, denture adhesives, bran cereal, laxatives, and vitamins. (Robinson et al., 2008, p. 143)

Q methodology and personal interviews helped to determine how senior adults rank magazine advertisements that contain a mixture of possibly negative and offensive stereotypes regarding senior adults (Robinson et al., 2008).

Participants found advertisements offensive when they had stereotypes of senior adults being unattractive, out of touch, or difficult to accommodate (Robinson et al.,

2008). Alternatively, when advertisements used stereotypes to highlight real problems regarding the aging process and how to cope with change positively, participants found the advertisements were not offensive (Robinson et al., 2008). In personal interviews, senior adults expressed concern regarding the amount and frequency of offensive and harmful stereotypes in advertising that referred to their generation.

Purchasing Behavior

Marketing decision makers are aware of the growing size and levels of disposable income among senior adults (Fry, 2011; Hoffmann et al., 2012). The brand purchasing behaviors of senior consumers compared to younger consumers contain age-based differences in product category buying, although purchasing patterns between brands in the same product category were not significantly different based on age (Uncles & Lee, 2006). Popular brands in a particular category tended to be leading purchase preferences across every age group (Uncles & Lee, 2006).

Other research benefited from different approaches to investigating older shoppers (Myers & Lumbers, 2008). One exploration into the shopping behaviors, needs, and wants of consumers greater than age 55 involved interviewing senior retail executives and holding focus groups with senior shoppers to gain insight regarding perceived needs and wants. An important finding was the need to use functional age and not chronological age when developing marketing strategies. Functional age is the perceived age of an individual, influenced by health and lifestyle (Myers & Lumbers, 2008). Chronological age is the actual age of an individual, based on birth date (Sudbury & Simcock, 2009). Another key finding was the importance older consumers placed on

shopping as a social activity. Senior consumers considered themselves experienced shoppers and demanded quality items and full service from the stores they visited (Myers & Lumbers, 2008).

Promotional spending on products such as pharmaceuticals has increased significantly during the past few decades, and a large percentage of pharmaceutical marketing efforts is directed at consumers using direct-to-consumer advertising (DTCA; Niederdeppe, Byrne, Avery, & Cantor, 2013). Direct-to-consumer advertising targets consumers using various media channels such as television, radio, and print advertising (Rosenthal & Kaiser, 2003). The focus of one study was pharmaceutical advertising, the perceptions of older individuals regarding the effects of DTCA, views held by senior adults regarding how much and what type of information marketers should provide to them, and their understanding of the information (Jones & Mullan, 2006). The study involved presenting participants with two different versions of a DTCA advertisement for a type of medicine. One advertisement contained significant amounts of information, and the other contained only basic information. Participants claimed the two versions were similar in terms of information recall. In addition, participants reported little perceived benefit from DTCA and worried that DTCA advertising may lead to more patients pressuring their doctors for inappropriate medications and even become confused because of too much information (Jones & Mullan, 2006).

International Ageism

An examination of the portrayal of older adults in advertisements in the United States, Great Britain, Germany, China, and India involved looking at the power of senior

adults in different societies based on status and demographic characteristics (O'Keeffe, 2015; McKenzie, 2006). The existence or nonexistence of a group in the media is a gauge of the status that group has in society. The focus of the study was on the prevalence, prominence, relational context, and age stereotypes of senior adults in advertisements. The collective influence of those factors indicated whether advertisers are socially responsible by allocating appropriate attention to senior adults and perpetuating positive or negative age stereotypes.

A trend emerged toward advertising positive images of senior adults (Zhang et al., 2006). One explanation for the positive portrayals was advertisers' desire not to alienate a significant and increasing segment of the population with significant purchasing power. However, underrepresentation of senior adults occurred in several product categories, especially females. The low representation may lead the viewers of advertisements to conclude senior adults are unimportant and contribute little to society. Advertisements featuring positive images of senior adults may lead to inaccurate feelings of senior adults if the advertisements are uncommon or inaccurate (Chen, 2015).

An investigation into the use of senior models in advertisements in Malaysia and Korea revealed the underrepresentation of senior adults compared to the total older adult population in both countries (Ong & Chang, 2009). The portrayals of senior adults were positive, but they generally had minor roles. An interesting finding was the perception that senior adults served as information receivers, not information providers.

Advertisements reinforce and potentially create images of senior adults. One study on the portrayal of senior adults in magazine advertisements in the United

Kingdom differed from a common content analysis where researchers lose contextual complexity and the study uses complex stereotypical depictions (Williams et al., 2010). Research participants recognized several stereotypical depictions often used with senior models, such as frail and vulnerable, happy and affluent, mentors, and active and leisure-oriented. Participants viewed some of the senior models in the advertisements as being fake or portrayed in an unrealistic manner. Participants also identified the need to portray older advertisement models in a dignified manner.

Asian cultures may not significantly differ from Western cultures in terms of the portrayal of senior adults in magazine advertisements (Fung, 2013). A content analysis of print advertisements from 10 popular magazines in the United States and India involved reviewing advertisements containing older adults to define the context of the depictions. In both cultures, the presentation of older adults was generally positive, but older women were in fewer advertisements than older men were in both cultures. Practical implications to the findings demonstrated the limitations to naïve theories of culture. An easy prediction would have been that the portrayals of senior adults in Indian magazines would be more positive than portrayals of senior adults in U.S. magazines because of the high status of senior adults in the Indian culture (Fung, 2013).

One study involved researching practitioner perspectives and consumer opinions regarding using older models in Japanese television advertising with surveys to gather the perspectives of each group (Kohlbacher et al., 2011). More than 75% of practitioners believed using senior spokespersons in television advertisements helped persuade the target audience, and greater than 62% of practitioners indicated that including senior

adults in advertisements enhanced product credibility. More than 61% of the practitioners also believed the use of older models in television advertisements would increase.

A second study conducted by Kohlbacher et al. (2011) involved contacting consumers greater than age 65 years. Approximately 50% of the consumers indicated that older individuals portrayed in television advertisements seemed happier in the advertisements than in reality. Almost 44% of consumers agreed that television advertisements do not show senior adults as they really are. One surprising find was that nearly 50% indicated that they would not mind if television advertisements did not have older models.

To address older German consumers using effective advertising, Lee et al. (2007) posited that the more the advertisement reflects the self-concept older individuals have about themselves on the dimensions of activity and modesty; the more positive is the attitude about the advertisement. Mature participants tended to prefer advertising models that highlight the concept of activity, especially the group between ages 50 and 60 years.

Gap in the Literature

Research on stereotyping adults greater than age 50 years in advertising is diverse. An examination of how marketing decision makers portrayed senior adults indicated that advertisers have generally portrayed senior adults in a positive manner, with little evidence of negative stereotyping (Kay & Furnham, 2013). Alternative research indicated some marketing decision makers depict older adults in advertisements using negative stereotypes (Kotter-Grühn & Hess, 2012). In addition, the primary focus of many previous studies of stereotypes of senior adults in advertising has been the

depiction of all older adults as a singular unified homogenous group consisting of anyone greater than the age of 50 years (Addington, 2013; Hummert, 1993). However, the senior segment of the population, like the young and middle-aged, contains a broad range of individuals and can include other segments, including chronological and self-perceived age (Hoffmann et al., 2012; Montepare & Lachman, 1989, Sudbury & Simcock, 2009). Studying various senior age categories is necessary to have a more balanced viewpoint.

The general problem is that many older adult consumers feel dissatisfied with advertising directed toward them and may not purchase products that they could otherwise enjoy (Brooks et al., 2016; Milner et al., 2012). The specific problem is the need for a better understanding of the perception of older adult consumers regarding targeted advertisements. The purpose of my study was to understand senior consumers, specifically their perceptions of the stereotypes used to portray older adults in magazine advertisements. The focus was on 30 volunteer participants belonging to a specific age cohort: adults born between 1930 and 1945, who were ages 70 to 85 years during the study. My study used Q methodology as a technique to explore individual perceptions within the field of ageism. Researchers use Q methodology to study participants from a subjective perspective.

Based on the literature review and the need for a more thorough understanding of perceptions toward using stereotypes in advertising (Barber & Mather, 2013; Coudin & Alexopoulos, 2010; Lee et al., 2007), my study involved exploring two questions (Robinson et al., 2003):

RQ1: What do senior adults believe to be the most important factors regarding magazine advertisements featuring older adults that influence their purchasing decisions?

RQ2: Which stereotypes of older adults in magazine advertisements do senior adults find most offensive and least offensive?

This research has valuable practical implications. My study involved exploring perceptions within the field of ageism. Studying the perceptions of senior adults is important because perceptions affect purchase decisions and influence expectations that affect satisfaction levels (Hummert, 1993; Schmidt & Boland, 1986; Thompson, 2007). Insight into the research questions may lead to improved advertising practices and may inform marketing decision makers.

Summary

After reviewing more than 800 articles and books published between 2010-2015, including more than 600 articles from peer-reviewed journals, I discovered a gap in the research pertaining to the perceptions of senior adults and how they see older adult models in magazine advertisements. Understanding how senior adults perceive stereotypes presented in advertisements could help challenge systematic generalizations and facilitate happiness, health, and positive identity formation (Coudin & Alexopoulos, 2010). Understanding the prevalence of ageism can help to create a best practices approach to integrate members of different age groups and promote positive relationships (Hagestad & Uhlenberg, 2005). Understanding the prevalence of ageism is a needed first step to create an effective approach to reduce stereotyped thoughts, attitudes, and

behaviors between age groups and to eliminate the inaccuracies associated with generalizations associated with age-expected behavior (Hagestad & Uhlenberg, 2005).

Although many senior adults might not personally believe they match the stereotypical picture of an older person, they do believe the negative age stereotypes of older adults as a group, which highlights the extent to which ageism and ageist views have become part of society. Research has been inconclusive regarding whether marketing decision makers have negatively stereotyped older adults and senior adults in the media. Some advertisements show older individuals as being "half-dead codgers, meddling biddies, grandfatherly authority figures or nostalgic endorsers of products that claim to be just as high-quality as they were in the good old days" (Abrams, 1981, p. 27). Some television advertisements incorporate stereotypes of older individuals by showing them as "feeble, foolish or inept, passing their time aimlessly in rocking chairs" (Goldman, 1993, p. B4). Demeaning advertising enforces stereotypes, dehumanizes interpersonal relations, and exaggerates ageism (Kay & Furnham, 2013).

Researchers have contended that negative stereotyping of older adults can harm self-concepts and negatively influence socialization between young people and senior adults (Robinson et al., 2008). Media may be a child's primary source of information regarding older individuals, and the effects of featuring senior adults in a negative light can be powerful (Carter, Patterson, Donovan, Ewing, & Roberts, 2011). Marketing may be powerless to change or shape social values and may reflect only the values of its target audience (Purani, Sahadev, & Kumar, 2014).

Attitudes toward older individuals have improved, and advertising including senior adults has become more positive (Moss, Wulf, & Mullen, 2013). Because of the increasing wealth of senior adults, images of senior adults in advertising campaigns might meet their needs. Marketing decision makers would be unwise to insult senior shoppers by using negative stereotypes in advertisements owing to the size and economic power of older adults. Research regarding stereotypes in the media remains mixed. The size and disposable income of the baby boom generation will continue to influence the retail environment and be a major focus for both marketers and researchers (Lewis et al., 2011).

The study involves gathering unique insights on the perceptions of senior adults on magazine advertisements. The study also involves using Q methodology, explained more thoroughly in Chapter 3, to collect data that provides insights into the varying perceptions of senior adult research participants. The theoretical constructs covered in Chapter 3 are helpful for interpreting the implications of the findings and the potential for positive social change.

Chapter 3: Research Method

The purpose of this mixed method Q methodology study was to achieve a better understanding of perceptions held by senior adults regarding stereotyping older adult models in magazine advertisements. Marketing decision makers often depict older individuals in advertisements with negative stereotypes (Coudin & Alexopoulos, 2010; Davis & Davis, 1985; Lewis et al., 2011). These negative depictions may offend older shoppers and contribute toward ageism (Coudin & Alexopoulos, 2010; Rinallo et al., 2012).

This chapter has several major sections. Research design and rationale is the first section, and I restate the research questions and provide a rationale for using Q methodology. Role of the researcher is the next section. In this section, I explain my role as the researcher and reveal any biases. Methodology is the next section, where I identify the research population and sampling strategy. The data collection and analysis sections follow. In these sections, I describe the recruitment process and criteria for participants, the development of the sample advertisement used in my study, and the ways I evaluated the data. The final two sections cover issues regarding validity and ethical concerns.

Research Design and Rationale

Advertising studies on older adults reviewed in Chapter 2 primarily emphasized marketers' viewpoints. However, input from consumers obtained in my study, in addition to marketers, were useful in gaining a better understanding of several controversial issues underlying advertising that targets senior adults and achieving a more balanced viewpoint (i.e., bias, stereotypes, and discrimination). Advertising is a highly targeted and

individualized medium. To elicit individuals' perceptions toward advertising, adopting a method that deals with subjective viewpoints may be necessary (Chang, 2010).

Q methodology was designed so that it can be applied to study both subjective and objective behaviors. The philosophical underpinnings of Q methodology are a mixture of qualitative and quantitative ideas. Q methodology has a contentious position in research which has resulted in its relatively small following (Brown, 1980). Mixed-methods research is a combination of qualitative and quantitative research.

The term mixed-methods research has appeared during only the last few decades. Q methodology is shown to fit well methodologically into the mixed-methods continuum as described by prominent mixed-methods scholars (Ramlo & Newman, 2011). Q methodology shares many of the focuses of qualitative research while using the type of statistical analyses typically found in quantitative studies.

The mixed-methods philosophy acknowledges that multiple kinds of knowledge can exist. In mixed-methods research ideas, such as objectivity and subjectivity can be combined (Johnson & Gray, 2010). It is challenging for any research project to be strictly qualitative or strictly quantitative. Most research contains aspects of both qualitative and quantitative research (Teddlie & Tashakkori, 2009). Q is a unique hybrid of qualitative and quantitative research methods.

Q methodology is a technique to study people's viewpoints. Researchers can perform Q methodology with a small number of participants and conduct detailed analysis with "a low budget, limited time, or some specialized or applied research

purpose" (Singleton & Straits, 2005, p. 220). A study by Robinson et al. (2003) influenced the research questions for this Q methodological study:

RQ1: What do senior adults believe to be the most important factors regarding magazine advertisements featuring older adults that influence their purchasing decisions?

RQ2: Which stereotypes of older adults in magazine advertisements do senior adults find most offensive and least offensive?

Q methodology is a unique design for assessing individual perceptions (Brown, 1980). Researchers use Q methodology to study participants from a subjective perspective. Individuals place unique subjective meanings onto advertisements, and individuals consider advertisements meaningful or not based on their beliefs, attitudes, perceptions, and opinions.

Some marketing and advertising scholars have shown the effectiveness of Q methodology in their fields of research. Q methodology is suitable for measuring the distribution of opinions and for studying human subjectivity in a systematic way (McKeown & Thomas, 1988). Researchers traditionally used the objectivist approach to research consumers and advertising, but the objectivist approach has not added much to areas that use human subjectivity (Kim, 1993).

Several characteristics of Q methodology make it suitable for examining advertising in consumer research (Kim, 1993). Q methodology provides an understanding of participants' attitudes and considers thoughts, feelings, and opinions that participants may have regarding the brand, product, or advertisement. Q methodology also generates structured data that researchers can easily adapt to statistical analysis. Q methodology

involves grouping participants with similar attitudes and is valuable because it can offer marketing decision makers key patterns of consumers' attitudes and thereby lead to a better understanding of the target market for their products or services (MacLean, 1965).

Role of the Researcher

The role of the researcher is to function as the primary instrument for the data collection process and to maintain strict adherence to ethical guidelines (Yilmaz, 2013). Everyone views the world through different lenses that form distinct personal perspectives. Some individuals view everyday things in unique ways, and some individuals view things other individuals cannot. Opinions are neither right nor wrong, but created based on the viewpoint and perceptions of each individual.

I am currently a full-time student and part-time adjunct college instructor. Before embarking on the quest for a doctoral degree, I earned a graduate degree and was an entrepreneur with 20 years of business experience. My areas of expertise include marketing, finance, operations, and management. In my study, I served as participant recruiter, research facilitator, and recorder of the Q sort process. The exploratory nature of the research questions and scope of my study were bias-neutral from my perspective. I held no preconceived notions regarding how senior adults perceive magazine advertisements.

Method

Stephenson (1953) developed Q methodology in the mid-1930s as a tool for objectively studying individual perceptions by applying deductive reasoning to discern elements that are similar among participants. Q methodology does not use pre-established

theories, but does include theories that emerge from the data gathered. The use of Q methodology enables participants to express their views on issues of subjective importance (McKeown & Thomas, 1988).

Q methodology does not begin with a hypothesis, as is common with quantitative methods, but rather it is exploratory and not designed for hypothesis testing (McKeown & Thomas, 1988). Using Q methodology to collect data enables researchers to mine data from the participants without trying to prove or disprove a particular hypothesis.

Researchers develop hypotheses based on the data provided. Q methodology typically incorporates a smaller number of participants than other research methods. Q methodology is not an appropriate research methodology to use if the ultimate intent is to generalize participant information to a larger population (McKeown & Thomas, 1988).

The value in Q methodology is that it gives marketers a better grasp of consumers by providing key patterns of consumers' perceptions. Researchers perform Q methodology to study a subject from participants' subjective viewpoint. Participants in a Q study may even be unaware of their perceptions (Brown, 1980). Researchers can gather valuable information by studying a single individual for a long period rather than by studying many individuals for a short period (van Exel & de Graaf, 2005).

Q methodology is appropriate for collecting data on perceptions and attitudes of senior adults because the methodology provides a way to detect groupings of like-minded perceptions (Brown, 1996). Participants segment themselves based on similarities and differences in their attitudes and perceptions. Researchers who use Q methodology can

ascertain subtle and not subtle differences in perceptions (McKeown & Thomas, 1988) of stereotypes of senior adults in magazine advertisements.

Research on consumer advertising has traditionally involved taking an objectivist approach. The objectivist approach has not added much to areas of human subjectivity (Kim, 1993). Q methodology is uniquely useful for marketing and advertising research (Kim, 1993) and involves a small group of participants for whom researchers develop an understanding of their feelings and perceptions. Q methodology provides valuable insights into participants' attitudes toward a subject and enables researchers to organize participants into clusters with similar attitudes.

Participant Selection Logic

Q methodology does not involve defining the proportion of individuals in a population who have similar or diverse perceptions, attitudes, or beliefs regarding a topic (McKeown & Thomas, 1988). Q methodology emphasizes individual thoughts, attitudes, perceptions, and opinions and uses a relatively small sample. Q methodology is "biased toward small person-samples and single case studies, a preference in keeping with the behaviorist dictum that it is more informative to study one subject for 1,000 hours than 1,000 subjects for one hour" (McKeown & Thomas, 1988, p. 36).

My study began with the process of selecting senior adults as participants to create the person sample or P sample. A P sample in Q methodology is usually small. In most studies, 30 to 50 participants are adequate (Brown, 1996). Researchers can achieve significant insights with fewer than 30 participants (Van Exel & de Graaf, 2005). The goal for my study was 30 senior adults.

Potential research participants from an older-adult age-restricted housing community located in Maryland chose to participate through a process of self-selection. I selected the community for convenience. Selection criteria for the community included population size, average age range of the residents, average mental and physical abilities of the residents, geographic location, and willingness of the facility management team. The community consisted of more than 300 residents, with the majority having sufficient physical and mental capabilities to make their own decisions. The sample of participants consisted of residents between ages 70 and 85 years.

Procedures for Recruitment and Participation

Participants lived in an age-restricted older-adult housing community. I identified six communities that matched the selection criteria. I contacted an officer of each homeowner's association for each community and presented background material regarding the nature of the study. Gaining written permission from an officer of the community was necessary prior to speaking with any residents. I reviewed a draft letter of cooperation with a representative of the Walden Institutional Review Board prior to obtaining a signature from an authorized official from the community to confirm the letter contained all necessary aspects. Walden University's approval number for my study is 11-01-16-0223986 and it expires on October 31, 2017.

I recruited participants using a nonrandom convenience sampling technique. I requested the assistance of a homeowner's association officer from the community. The participant recruitment flyer is in Appendix A. A flyer requesting volunteer participants for the study was posted in the community clubhouse. Residents interested in

participating in the study contacted me for additional information and set up a meeting time. As my study was confidential, I did not gather any names or other identifying information.

Meetings took place in a private room located within the community clubhouse that had minimal distractions to increase participant comfort. I reviewed the consent form, which explained the purpose and voluntary nature of the study. No signature was necessary on the consent form, as participation was completely confidential. I did not collect any names or other identifying information. Frequent opportunities for breaks were available to prevent fatigue. The total time required for each participant in my study was approximately 45 minutes.

I tried to maximize the heterogeneity of participants in terms of their ages, educational levels, and other demographic variables. The major criteria for including participants in the P sample was being 70 to 85 years old with minimal cognitive impairment. The participant goal for my study was 30 senior individuals. I collected demographic information from each participant and assigned a random three-letter identifier to each participant and noted the identifier on his or her questionnaire. The questionnaire appears in Appendix B.

Instrumentation

Q methodology enables the integration of subjective opinions to produce a richer understanding of the perceptions of a targeted audience (Stephenson, 1953). Q methodology researchers accomplish this integration of opinions while mitigating the limitations of both qualitative and quantitative methodologies (Chen, 1998). A

quantitative study requires a large sample size and closed-ended questions and thus lacks rich details, whereas in-depth interviews or focus groups in a qualitative study result in rich details but require subjective coding of the interview transcripts (van Exel & de Graaf, 2005). The overwhelming majority of published research on ageism has used either qualitative or quantitative techniques. Introducing new research using Q methodology adds to the growing knowledge base and provides a different perspective of the issues that affect senior adults.

A Q methodology study begins with developing the concourse or group of statements for participants to evaluate. The concourse can contain not only statements, but also art, pictures, or music, depending on the topic under study (van Exel & de Graaf, 2005). Only topic relevance and a researcher's imagination can limit the nature of items (Stephenson, 1953). As long as someone can physically move an item freely and easily, it can become part of the concourse. The concourse provides the raw materials for what will eventually become the Q sample.

With Q methodology, participants rank order statements with respect to their point of view (Brown, 1980). The sample of participants in a Q study is often small and nonrandom, and research findings are not generalizable to a larger population (Watts & Stenner, 2005). However, a goal of Q methodology is to identify different thoughts among members of a relatively small sample rather than to generalize findings to a larger population (McKeown & Thomas, 1988).

The focus of this proposed study was on 30 self-selected individuals between ages 70 and 85 years. Each volunteer participant viewed 40 separate magazine advertisements

featuring older adult models. Participants then ranked each advertisement based on the perceived level of offensiveness. Participants ranked each advertisement on a continuum that was a 9-point scale ranging from most offensive (-4) to least offensive (+4). Using individual advertisements forced each participant to rank each advertisement. The forced ranking of each advertisement eliminated potential problems surrounding indecision. Additional detail regarding the advertisements for my study and the ranking process is in the Data Collection section.

Data Collection

Developing a Concourse

In my study, the concourse consisted of magazine advertisements featuring older adult models. I accessed Zinio, an online magazine database containing more than 5,500 publications, and searched a sample of more than 400 popular magazines published between 2013 and 2015 for advertisements featuring older adults. The online archives of *Time* magazine (2010-2015) provided an additional source of advertisements. The extended time span reflected the difficulty of locating a variety of advertisements featuring older adults.

The total advertisement needed to be at least a half page in size and contain at least one adult model who appeared to be 50 years or older. Criteria for determining age focused on style of dress, hair color, and skin appearance (Pritchard & Whiting, 2015). I discovered 147 advertisements that appeared in at least one of 20 common newsstand publications. The process of advertisement gathering ended when new advertisements began to reiterate images and situations reflected in older ones.

I used this concourse to develop a Q sample that became the foundation of the Q sort. The Q sample consisted of a selection of advertisement from the concourse. The Q sort is "the process whereby a participant models his or her point of view by rank-ordering Q Sample stimuli along a continuum defined by a condition of instruction" (McKeown & Thomas, 1988, p. 30).

It was difficult to determine the age of women in the advertisements. Many advertisements featured seemingly older female models, but the vast majority of the older female models appeared to have dyed hair, favorable lighting, and makeup that concealed their age. The concourse did not include advertisements in which it was difficult to determine the approximate age of the adult model. Each advertisement in the Q sample promoted a different brand or company (see Table 1).

Table 1.

Magazine Advertisements and Their Stereotypes of Older Adults

No.	Company/brand	Description	Stereotype
1	McDonalds	Cowboy	Active/rugged
2	Aleve	Woman leaning on bicycle	Active/rugged
3	Fidelity	Couple sitting next to campfire	Happy spouse/grandparent
4	Medifast	Close-up of surprised woman	Silly/shocking
5	Alcon	Woman standing while painting a picture	Independent/stoic
6	Bernina	Man standing next to portrait	Conservative
7	Crosby's	Close-up of woman in purple sweater	Old fashioned
8	Dove	Nude woman sitting	Silly/shocking
9	Citi	Man in glasses looking into the distance	Concerned citizen
10	Fjall Raven	Man hiking on mountain	Active/rugged
11	New York Life	Man wearing hat and carrying flowers	Old fashioned
12	Dos Equis	Close-up of bearded man	Attractive
13	Charles Schwab	Woman wearing glasses walking outside	Conservative
14	Kate Spade	Man wearing large glasses	Silly/shocking
15	Chevron	Close-up of woman in blue dress	Concerned citizen
16	BREO	Woman wearing hat with clipboard	Concerned citizen
17	Glassex	Man conducting magic trick	Silly/shocking
18	Exelon Patch	Woman being kissed	Sickly/weak
19	Aricept	Man hugging woman drinking from cup	Sickly/weak
20	Las Vegas	Close-up of man wearing gray suit	Conservative
21	Rosetta Stone	Men arm wrestling	Sickly/weak
22	Regions	Man petting horse	Active/rugged
23	Vimovo	Woman working in a garden	Independent/stoic
24	Xarelto	Woman drinking from cup next to water	Independent/stoic
25	Precision IR	Man standing wearing blue suit	Conservative
26	Louis Vuitton	Man relaxing at the beach	Attractive
27	Wrangler	Man sitting on tree with chainsaw	Active/rugged
28	Prostate Cancer Foundation	Woman hugging man	Happy spouse/grandparent
29	Alzheimer Association	Close-up of man wearing purple shirt	Concerned citizen
30	Mazda	Man talking on old cell phone	Old fashioned
31	Farmers	Man standing in front of chalkboard	Conservative
32	Tommy Hilfiger	Man at wedding	Attractive
33	COPD	Woman blowing bubbles	Happy spouse/grandparent
34	AARP	Man cooking with girl	Happy spouse/grandparent
35	Jambu	Couple standing behind large leaves	Silly/shocking
36	Olay	Close-up of female face	Attractive
37	Chartwell	Close-up of male face	Sickly/weak
38	Centers for Disease Control and Prevention	Man lying in a hospital bed	Sickly/weak
39	American Heart Association	Man and woman sitting and hugging	Happy spouse/grandparent
40	Bausch & Lomb	Close-up of woman painting	Independent/stoic

The next step was to assign the advertisement to categories. Using an inductive design in which patterns emerged while collecting advertisements (McKeown & Thomas,

1988), I selected nine stereotypes because of their importance to understanding perceptions of senior adults (see Table 2). In an inductive design, "the dimensions that guided the final assignment and selection of statements were suggested, for the most part, by the statements and were not obvious prior to statement collection" (McKeown & Thomas, 1988, pp. 29-30). To ensure the content validity of this concourse, two advertising subject matter experts reviewed the advertisements, provided valuable input and identified nine stereotype categories based on the portrayal of older adults in the advertisements: (a) active/rugged, (b) attractive, (c) concerned citizen, (d) conservative, (e) happy spouse/grandparent, (f) independent/stoic, (g) old fashioned, (h) sickly/weak, and (i) silly/shocking.

Table 2.

Categories and Advertisements

	Stereotype	Number of advertisements
1	Active/rugged	5
2	Attractive	4
3	Concerned citizen	4
4	Conservative	5
5	Happy spouse/grandparent	5
6	Independent/stoic	4
7	Old fashioned	3
8	Sickly/weak	5
9	Silly/shocking	5
	Total advertisements	40

Development of Q Sample

The Q sample consists of a selection of advertisement from the concourse. With the original group of 147 advertisements, I conducted a critical review. I discarded many advertisements to avoid duplication, repetition, and vagueness. In addition, to keep the sorting process as simple as possible while still yielding meaningful results, I reduced the

number of advertisements. I made an effort to select advertisements of similar photographic quality and to ensure the older adult models were all approximately the same size in each advertisement.

Two independent reviewers with training in target market analysis and advertising strategy received the relevant advertisements that best represented the stereotypes. Each individual evaluated the advertisements and placed them into one of the nine stereotype categories. The advertisements that appeared most often in each category established the basis for the Q sample. I made the final selection of the advertisements that formed the final Q sample.

The final Q sample consisted of 40 advertisements found in mass circulation in general audience U.S. magazines published from 2010 to 2015 (see Table 1). Different opinions exist regarding the number of items that researchers can include in the Q sort. A Q sort can range from a low of 30 up to 100 items (McKeown & Thomas, 1990). However, the number of items should not stress or overwhelm participants or result in difficulty administering the Q sort (Carr, 1992; Kinsey & Kelly, 1989; Schlinger, 1969). Of the 40 advertisements, five contained more than one older adult, which resulted in 45 total images of older adults. Of the 45 images, 60% featured male models, and 40% were female models. Minorities were in eight advertisements (20%). Each stereotype category contained an approximately equal number of advertisements.

The O Sorting Procedure

The Q methodology study continued with the Q sort. The Q sort is "the process whereby a participant models his or her point of view by rank-ordering Q Sample stimuli

along a continuum defined by a condition of instruction" (McKeown & Thomas, 1988, p. 30). During the Q sort, participants reviewed the 40 advertisements in the Q sample and evaluated each based on their own experiences, knowledge, attitudes, perceptions, and opinions.

To reduce the chance of bias, participants should read a standard set of instructions that explain the sorting procedure (Stainton, 1995). Participant instructions appear in Appendix C. The instructions included a request that participants first view all the randomly organized advertisements. The next request was to make three piles, such that each pile represented a positive, negative, or neutral reaction to the representation of older adults in each advertisement.

After the initial separation, each participant sorted each pile of advertisements along a continuum. The continuum ranked each advertisement on a 9-point scale ranging from most offensive (-4) to least offensive (+4). Participants rearranged the placement of each advertisement along the continuum until the continuum best reflected their views. Q samples smaller than N = 40 can effectively use a range of +4 to -4; when N = 40-60, a range of +5 to -5 is typical (Brown, 1980). See Figure 1.

Most Offensive			Neutral			Least Offensive			
 -4	-3	-2	-1	0	1	2	3	4	
Α	Α	Α	Α	Α	Α	Α	Α	Α	
Α	Α	Α	Α	Α	Α	Α	Α	Α	
Α	Α	Α	Α	Α	Α	Α	Α	Α	
	Α	Α	Α	Α	Α	Α	Α		
		Α	Α	Α	Α	Α			
				Α					
3	4	5	5	6	5	5	4	3	

Figure 1. Quasi-normal distribution for the Q sort. A = advertisement placement. The numbers across the bottom indicate the number of placements for each column.

Participants received instructions to sort each advertisement based on their views of the older adults in the advertisements and not based on their knowledge of the brand or company. Each advertisement in the Q sample was printed in color on paper, resized to approximately 5 × 7 inches, and laminated in a clear protective covering. The size of each advertisement might have compensated for any age-related visual changes in the senior adult population. Using individual advertisements forced each participant to rank each advertisement. Each advertisement had a random number assigned from 1 to 40 handwritten on a small sticker in the lower left corner. This number was for data collection purposes only and in no way indicated importance or placement.

The sorting grid used in Q methodology forces the Q sort into the shape of a quasi-normal distribution pattern. Each participant can potentially rank the advertisement in a different order. Participants can place more advertisements into the middle section and fewer advertisements at either end. Advertisements placed on both ends of a distribution reflect significance for the participant. Advertisements placed in the middle lack significance and represent a neutral view. The forced ranking of each advertisement

eliminated potential problems surrounding indecision. Both the symmetry and the preset number of items in each category facilitated the quantitative methods of correlation and factor analysis. See Figure 1.

I made the sorting grid for my study from fabric, with the 9-point scale at the top handwritten in black marker. The fabric contained a grid of 5×7 -inch boxes that looked similar to Figure 1. The fabric grid was on a table in front of the participant, who then placed a single advertisement is each box.

The kurtosis, or extent to which the distribution is concentrated about its mean, depends on the controversy of the topic (van Exel & de Graaf, 2005). The distribution should be steeper from the end to the middle if there is more ambiguity, indecisiveness, or lack of knowledge about the issue by the participants. When participants have strong opinions on the topic, the distribution should be flatter to provide more opportunity for strong agreement or disagreement with the items in the Q sample (van Exel & de Graaf, 2005).

Advertising is complex, and each individual develops a unique set of both positive and negative perceptions of advertising duing a lifetime. There are no universal positive or negative perceptions, but only those perceptions carried by each individual (Ramlo, 2015). Therefore, advertising is a controversial topic. Figure 1 shows the distribution of the Q sample.

Lacking researcher-imposed value judgments on the Q sample is a key aspect of a Q sort. Participants can arrange each Q sort according to their unique perspectives (van Exel & de Graaf, 2005). The ordering of each advertisement in the Q sort represented the

expression of an opinion, and the ordering of all the advertisements in the Q sample represented the expression of an attitude toward the advertisement.

The position of the card along the continuum signified the participant's amount of agreement or disagreement with the advertisement. The position of the card also signified the intensity level of that feeling. I studied an individual's views by analyzing the positioning of the Q statements depicting advertisements in a quasi-normal distribution. This analysis led to assumptions regarding how this individual may react when exposed to certain types of advertisements in the future.

After completing the Q sort, I captured each participant's unique configuration of advertisements on the continuum using a log sheet. Each log sheet resembled the sorting grid and was unique to each participant. The random three-letter identifier assigned to each participant appeared on the log sheet. Each log sheet noted the exact order and placement of each advertisement by writing the number assigned to each advertisement based on its location on the sorting grid. Appendix D illustrates a sample log sheet.

I questioned participants both before and after the Q sort. Phase I questions occurred prior to the Q sort to gather general demographic information and confirm eligibility to participate. Phase II questions occurred after the Q sort and contained four open-ended questions. The questionnaire is in Appendix B. In addition, I confirmed with participants that the Q sort accurately reflected their perspective and clarified any challenges in conducting the Q sort. I read each question aloud to the participant and recorded the response on the questionnaire, and I recorded the interviews using a small

digital data voice recorder. The audio from each interview underwent analysis if I had any doubt regarding the answer to a question after the interview ended.

Participants had the opportunity to provide details regarding their decision-making process and to express their views regarding the use of stereotypes in advertising. Researchers should encourage participants to discuss the Q sample items placed at the extreme ends of the distribution because they are often the most important (Brown, 1993). More neutral placements are also meaningful owing to their lack of importance to the participant (Brown, 1993). Interviews with participants who typify factors can be beneficial in establishing the full meaning relevant to a particular factor (Stainton, 1995). This additional information provides breadth and depth when interpreting the analysis of each Q sort.

Each semi-structured interview consisted of open-ended questions. To promote unbiased statements and to encourage articulate responses, the study used a nondirective interviewing technique because it encouraged participant to talk freely and established an accommodating atmosphere with minimal fear of judgment or prompting from the researcher.

Interview questions included the following (Robinson et al., 2003):

- 1. Why did you select the three most offensive and three least offensive advertisements?
- 2. Is there any harm or danger to senior adults resulting from the portrayal of older adults in a stereotypical manner?

- 3. How might younger people be affected from viewing advertising messages portraying older adults in a stereotypical manner?
- 4. Would any of the advertisements featuring offensive stereotypes stop you from purchasing the advertised product?

Data Analysis

The statistical procedures involved with Q methodology begin with correlation and factor analysis (McKeown & Thomas, 1988). Correlation and factor analysis techniques were suitable to evaluate and match the individual Q sorts. I entered each Q sort into a database by recording the exact placement of each advertisement in one of the 40 boxes on the sorting grid using its assigned number. I completed the analysis using PQMethod software Version 2.35, which is available without charge in the public domain.

PQMethod is a statistical program uniquely developed for the analysis of Q studies and facilitates easy data entry of the Q sorts for analysis. PQMethod calculates correlations among all the Q sorts from each participant. The correlations can be factor analyzed using the centroid or principal component analysis (PCA) method (Watts & Stenner, 2005) and then comparing the resulting factors either automatically or manually. After selecting the relevant factors, the extensive report generated includes factor loadings, item factor scores, and consensus statements across factors.

The statistical analysis begins with the calculation of the correlation coefficients between pairs of Q sorts, which results in a correlation matrix. The correlation matrix represents the level of agreement or disagreement in points of view between the

individual participants in the Q sort. The relationship between sorts is nearly negligible when the correlation coefficient is less than .2. Between .2 and .4, the relationship is low, between .4 and .7 the relationship is moderate, between .7 and .9 the relationship is high, and a correlation coefficient more than .9 is very high (Guilford, 1956).

The statistical analysis continued with a factor analysis. As my study included 30 participants, the study had a 30 × 30 correlational matrix to undergo factor analysis (McKeown & Thomas, 1988). Q methodology involves correlating the participants, not the Q sample. Factor analysis involves examining the correlation matrix and establishing a number of existing Q sort clusters or numbers of different Q sorts that exist based on either being statistically similar or dissimilar to each other. The resulting factors indicate patterns or groups of participants who sorted the advertisements in a similar manner and represented various points of view among the participants (Brown, 1980).

The uncovered patterns create factors that represent different perspectives. Highly correlated Q sorts belong to the same factor. Patterns are *loaded* if factors have statistically significant correlations between participants. A positive factor loading is a sign of having shared views with other participants, while factors with negative loadings indicate opposing views among participants (McKeown & Thomas, 1988). By comparing the average Q sort for participants in each factor of various groupings of Q sorts, the research indicated how different types of senior adult consumers view stereotypes in magazine advertisements.

A z score measures the significance of each statement, or in my study advertisement, to the factor on which it is loaded. A z score is a measure of standard

deviation computed by the software for each advertisement that loads onto a factor. For example, a z score of +3.0 indicates that an advertisement is 3 standard deviations above the midpoint of the data distribution and has a high level of agreement with the factor.

The next phase involved performing a rotational factor analysis on the previously extracted, statistically significant factors. During the rotational analysis, I examined each factor with respect to all the Q sort clusters. The goal was to determine which of the clusters or factors load onto more than one participant.

Two primary methods exist to develop factor loadings between the participants (Watts & Stenner, 2005). Centroid analysis is the most flexible method of identifying common factors. Researchers who use this technique rotate the data and view patterns between participants from many different angles. Rotation does not change the data of the individual Q sorts or the connection between Q sorts. Rotation only changes the viewpoint from which the researcher observes the Q sorts. The resulting factor signifies a cluster of highly correlated distinct points of view uncorrelated with other clusters.

Although use of the centroid method is popular among researchers and highly customizable, many researchers prefer the PCA approach (Watts & Stenner, 2005). Principal component analysis also extracts factors with significant loadings, but the software performs this method, not the researcher as with centroid analysis. PCA is especially valuable in exploratory studies in which the researcher has not hypothesized the results owing to its mathematical precision (Brown, 1996). I used the PCA method for my study because the perceptions of senior adults on advertisements remained unknown prior to collecting the Q sorts.

Determining whether a factor is significant can be challenging. Researchers must measure statistical and subjective data (McKeown & Thomas, 1988). An often-used statistical approach is to consider eigenvalues based on the previously derived correlation matrix. Eigenvalues measure the amount of variance between the participants on a selected factor. Factors with eigenvalues greater than 1.0 explain more of the total variance than factors with eigenvalues less than 1.0 (McKeown & Thomas, 1990).

Researchers cannot determine the importance of a factor using only statistics.

Considering eigenvalues alone may result in factors without meaning (McKeown & Thomas, 1988). In addition to the rank ordering of a participant's Q sort, researchers find meaning through understanding why each participant sorted the Q sample in a particular manner (Brown, 1993). Researchers achieve this additional understanding through a follow-up interview after the Q sort is complete.

Issues of Trustworthiness

Q methodology does not have the same issues with validity that other research methodologies may have. The concourse cannot represent what a researcher intends because each participant ascribes his or her own meaning to the advertisements. Q sorts are anchored in self-reference, with no external standard to compare them to in order to estimate their validity (McKeown & Thomas, 1990). From a Q study perspective, validity infers the correctness to which the subjective views of all participants are revealed (Dennis, 1988).

Validity in a Q study implies having a representative concourse. Researchers can achieve a representative Q sample by referring to a variety of sources such as focus

groups, personal interviews, and literature searches. The Q sample selection process could be open to issues of reliability because the Q sample is a selected subset of statements from the concourse, which makes it possible that a different sample might produce different conclusions (McKeown & Thomas, 1990). However, a review of the Q sample by experts in advertising and stereotyping, which I have done in my study, can further strengthen the validity.

Interviewing each participant after finishing a Q sort can also enrich the validity to verify that the researcher correctly understands the participants' views (Brown, 1996). In my study, the concourse consisted of advertisements drawn from 20 different publications. Two subject matter experts reviewed the research methodology and the Q sample. In addition, I interviewed each participant after the Q sort for a thorough understanding of his or her views. Having the participants confirm I have recorded their responses correctly controlled for the chance that I coded the wrong advertisement number on the log sheet diagram. I emphasized internal validity rather than external validity in my study.

Generalizability refers to the extent to which researchers can draw conclusions about a population based on information derived from a sample (van Exel & de Graaf, 2005). External validity is another term for generalizability. Q samples are not subject to concerns regarding external validity. Interest in Q methodology is on the perspectives of individuals who have an opinion about the topic (van Exel & de Graaf, 2005). Viewpoints gleaned from Q methodology studies are not generalizable to a larger

population. Q methodology provides a basis for new hypotheses about a subject and serves as a basis for continued research.

Threats to internal validity include the concept that participants might inflate their opinion of the self in relation to their social status. Inflating social status may happen when participants feel embarrassed about their social status and consequently inflate it. In addition, previous research indicated that persons lower in social status, minorities, and females may identify more stereotypes (Schmitt et al., 2002). I took no actions to validate the social status, race, or gender of participants.

In a Q study, reliability equates to the repeatability of Q sorts using the same participants and conditions. Q studies tend to be more replicable than other types of strict qualitative or quantitative research using in-depth interviews or surveys (Dennis, 1988). Researchers have revealed negligible effects of time on reliability; studies repeated weeks and even years later had high correlation coefficients (Akhtar-Danesh, Baumann, & Cordingley, 2008). Based on the custom of qualitative research, Merriam (2002) suggested researchers use peer examination to ensure reliability. In my study, two subject matter experts evaluated the concourse and Q sample.

Ethics Procedures

All steps in identifying and recruiting participants and overseeing the Q sort adhered to the requirements of the Walden University Institutional Review Board.

Involvement in the study was voluntary. Participants were self-sufficient, in general good health, and not from a class of citizens characterized as vulnerable to harm from

performing a Q sort. No appreciable risk to the participants existed, and I did not ask them to perform any tasks more strenuous than their regular daily activities.

Research procedures and consent forms did not require a participant signature because the study did not involve gathering any personally identifiable information. Participants received a verbal review of the following information: purpose of study, confidentiality of information, estimated time requirement, voluntary nature of participation, and freedom to withdraw at any time (van Exel & de Graaf, 2005). Hard copies of all documents are available.

I assigned a random three-letter string to each participant for identification and wrote the string on the questionnaire before conducting each interview. The data identifier code was necessary to correspond with the Q sort data in the PQMethod software. The same code appeared on the Q sort log sheet.

To protect the integrity and confidentiality of participant data, only the researcher had access to all research material. I did not record or use participants' real names in any part of my study. All data documented on paper or electronic media remained in a locked facility when not in use. In addition, electronic data were stored on a password-protected computer. I will keep the data for at least 5 years, as required by the university, and I will inform the participants that they may view the results of the study when it is complete.

Summary

Q methodology is an efficient way to investigate, describe, and develop a better understanding of personal perceptions, beliefs, views, and attitudes (McKeown & Thomas, 1988). Q methodology is also a flexible approach that researchers can use to

develop meaning from personal experiences (Brown, 1980). The intent of this Q methodological study is to explore the potential similarities and differences in the perceptions of 30 senior adults regarding images of older adult models in magazine advertisements. Participants performed a Q sort of the advertisements in the Q sample derived from a concourse of 20 mass circulation, general audience U.S. magazines from 2010 to 2015.

I analyzed data from the Q sorts using PQMethod software, which results in clusters or patterns of perspectives held by the senior participants. Marketing decision makers will find my study useful to provide goods and services to older adults more effectively. Quantitative researchers may also use the results to design hypothesis-testing research for future marketing studies. In Chapter 4, I summarize details pertaining to the data collection process, including data analysis with a specific focus on the major themes related to each research question. Chapter 5 includes a discussion of the factor interpretations, implications for social change, and suggestions for future research.

Chapter 4: Data Analysis

Between 1970 and the early 21st century, the senior adult consumer population grew exponentially, enjoyed increasing purchasing power, and wielded significant economic influence (Beard et al., 2011; Kohlbacher et al., 2011). However, many businesses ignore older consumers in favor of younger segments of the population (Lumme-Sandt, 2011). Organizations that do target older adult populations often employ stereotypes in their marketing messages (Coudin & Alexopoulos, 2010). Constant exposure to negative advertising messages of older adults offends senior adult shoppers and contributes toward ageism (Coudin & Alexopoulos, 2010; Langmeyer, 1984). The general problem in my research was that many senior adult consumers feel dissatisfied with advertising directed toward them and may not purchase products they could otherwise enjoy (Brooks et al., 2016; Milner et al., 2012). The specific problem was the need for a better understanding of the perception of senior adult consumers regarding targeted advertisements.

A demographic profile of research participants is included in this chapter in addition to the data collection methods and overall recruitment process. The next sections cover the Q sorting process and data analysis. Afterward, I address the results and the two research questions. The final sections include a discussion regarding evidence of trustworthiness, validity, reliability, and generalizability.

The focus of this research was on the perceptions among 30 senior adults between ages 70 and 85 years. Study participants ranked an assortment of 40 magazine advertisements and assessed stereotypes used in the depiction of older adult models in

those advertisements. The purpose of my study was to understand senior consumers by highlighting their perceptions of the stereotypes used to portray older adults in magazine advertisements. Perceptions influence individual health, happiness, and purchase decisions. The senior population contains a broad range of individuals and many different segments. Studying various age cohorts is necessary to have a more balanced viewpoint. The results of the study provide much-needed quantitative guidance that incorporate qualitative perceptions that might provide marketing and advertising decision makers with a deeper understanding to meet the growing needs of the senior market more effectively.

This research used Q methodology and aligned with the theoretical framework of social identity theory, which is a social psychology theory that stresses individual identity. Individuals express their self-identities by the connections made with organizations and social groups (Christian et al., 2012). Marketing research grounded in social identity theory has focused on the connection between individual customers and product perception and behavior, such as if an individual identifies with a product as either being *me* or *not me* (Kleine et al., 1995), and behavior when in agreement with social identity (Christian et al., 2012). However, individuals belonging to the same social group may express different responses based on the degree to which they are dedicated to that group (Schultz & Fielding, 2014). In my study, I determined how offensive or inoffensive senior individuals saw the portrayal of older adults in magazine advertisements. The study included the following research questions:

RQ1: What do senior adults believe to be the most important factors regarding magazine advertisements featuring older adults that influence their purchasing decisions?

RQ2: Which stereotypes of older adults in magazine advertisements do senior adults find most offensive and least offensive?

Q methodology reveals how individuals group themselves according to the way they sort a specific set of items (McKeown & Thomas, 1988). This chapter contains a description of each of the steps involved in the systematic analysis of the Q methodology data. This chapter also includes section on the setting, demographics, data collection, and data analysis. Q methodology data analysis characteristically involves "the sequential application of three sets of statistical procedures: correlation, factor analysis, and the computation of factor scores" (McKeown & Thomas, 1988, p. 46). The Results section includes a discussion of each of the significant factors identified that influenced how the older adult participants perceived stereotypes in magazine advertisements.

I used Q methodology to evaluate senior adults' views regarding their perceptions of offensive magazine advertisement. By using this method, I reviewed multiple points of view. Quantitative methods such as Likert-type scale surveys would not have resulted in as much detail (McKeown & Thomas, 1990). The subjective nature of the information that can be gleaned from qualitative methods such as individual interviews means that they are open to misinterpretation and observer bias (McKeown & Thomas, 1990).

Demographics

Extensive demographic data were not pertinent to my study. However, I collected general participant data as a part of the pre-Q sort questionnaire. Thirty individuals

participated in the study, 20 (67%) female and 10 (33%) male; and the participants ranged in age from 70 to 85 years (M = 76.47). All 30 participants were Caucasian. Participants had the following educational profile: less than high school, 1 (3.3%); high school, 19 (63.3%); undergraduate college degree, 5 (16.7%); and advanced college degree, 5 (16.7%). Participants were predominantly Protestant, 18 (60%); others were Catholic, 8 (26.67%); atheist, 3 (10%); and other, 1 (3.33%). No participant had any previous employment history in the advertising industry.

The questionnaire also contained financial brackets for gross annual household income ranging from less than \$10,000 to more than \$200,000. However, it became evident during the early interviews that any data collected would be limited. Nearly every participant was retired with no source of employment income and was on a fixed budget. Several participants were uncomfortable disclosing their financial status and refused to answer. I did not collect any meaningful financial data.

Similarly, the questionnaire included a question regarding current living situation and regarding whether the individual lived with a spouse or alone. Several early participants refused to answer, stating that they did not understand how such a question related to the study. I removed the question for latter interviews and did not collect any meaningful data.

Data Collection

Participants in the study were all residents in an age-restricted community for individuals ages 55 years and older. The community consisted of approximately 200 single-family homes and 320 residents in central Maryland and was approximately 40

miles outside of Washington, DC. I chose the community because of its population size, the age range of residents, location, and management's willingness to help. The recruitment method was a convenience sample of self-selected residents. This method was suitable owing to cost and time constraints, as well as the desire to minimize undue pressure to participate.

Recruitment

A flyer announcing the research study was posted on the bulletin board in the lobby of the main clubhouse for the community (see Appendix A). A wide variety of flyers were already posted in the same location. Interested individuals contacted me directly for more information and to schedule a meeting. Thirty-seven individuals expressed interest in the study and sought additional information. Thirty individuals met the age criteria of being between 70 and 85 years old, and I scheduled them for an interview.

At the mutually agreed upon day and time, I met each individual separately in the main clubhouse for the community. Two distinct staging areas were established. I initially instructed participants to wait in a designated private waiting room until I came to escort them to the main room where the interview would occur. The waiting room was separated from the private interview room by approximately 60 feet. The two rooms were not in the line of sight of each other. Participants in the waiting room were unable to either see or hear any activities or conversations occurring in the interview room.

After I brought each participant into the main interview room, detailed information regarding the study, including the purpose and format, was again discussed,

including a thorough review of the consent form prior to data collection. I read the consent form aloud to each participant. In addition, participants had an opportunity to read the consent form themselves. After each participant reviewed the consent form thoroughly, I asked three questions to confirm comprehension:

- 1. Do you understand that you will be provided with 40 magazine advertisements and asked to sort each based on their level of perceived offensiveness?
- 2. Do you understand that any information you provide will be kept confidential?
- 3. Do you understand that your participation is voluntary and there will be no direct compensation provided to you for contribution to this study?

Humor and anecdotes were incorporated in this initial process, which helped participants relax and built rapport. Finally, I restated that there was no obligation to participate in this study and that each participant was able to stop and leave at any time. I did not collect any names or personally identifying information. Each participant had a unique random three-letter identifier assigned. No signatures were necessary on the consent form.

Interviews took place during a 17-day period, and each lasted for approximately 60 minutes. Total face-to-face data collection time was about 45 minutes. An additional 15 minutes were available for additional interview time if necessary, for additional note taking by me, and for physical interviewee transitions. In addition, frequent rest breaks were available to prevent fatigue. I diligently monitored the time during each interview to

minimize the number of sessions that exceeded the allotted time. At times, it was challenging to control the pace and time, and several interviews took longer than the expected 45 minutes.

O sort

Using an inductive design in which patterns emerged while collecting advertisements (McKeown & Thomas, 1988), I selected nine stereotypes because of their importance to understanding perceptions of senior adults. In an inductive design, "the dimensions that guided the final assignment and selection of statements were suggested, for the most part, by the statements and were not obvious prior to statement collection" (McKeown & Thomas, 1988, pp. 29-30). To ensure the content validity of this concourse, two advertising subject matter experts reviewed the advertisements, provided valuable input and identified nine stereotype categories based on the portrayal of older adults in the advertisements: (a) active/rugged, (b) attractive, (c) concerned citizen, (d) conservative, (e) happy spouse/grandparent, (f) independent/stoic, (g) old fashioned, (h) sickly/weak, and (i) silly/shocking.

Participants were shown 40 advertisements found in mass circulation, general audience American magazines published from 2010 to 2015 and asked to perform a Q sort, which involved ranking each advertisement by first sorting the advertisements into three piles based on their perceived level of offensiveness (most offensive, neutral, least offensive) due to the stereotypes of older adults perceived in each ad and then placing each advertisement on a predetermined forced distribution grid (see Figure 2). While placing and ranking the advertisements, I asked questions relating directly to their

placement, the rationale behind each placement, and any clarification questions to assess the participants' subjectivity. After participants placed all advertisements on the grid, I logged the placement of each on paper for later analysis.

Most offensive	2 (4)	2 (5)	1 (E)	Neutral	.1 (5)	. 2 (F)	.2 (4)	Least offensive	
-4 (3)	-3 (4)	-2 (5)	-1 (5)	0 (6)	+1 (5)	+2 (5)	+3 (4)	+4 (3)	٦
									9
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Figure 2. Q sort grid.

After the Q sort, I asked participants additional questions regarding the reasoning behind their selections. In some cases, this took up a significant amount of time because they opened up and felt the need to express themselves fully and narrate a majority of their life story. It also was a perfect opportunity for participants to pause and assess the meaning of their advertisement placement offering insight into their perception.

Questions included the following:

- Why did you select the three most offensive and three least offensive advertisements?
- Is there any harm to seniors resulting from the portrayal of older people in a stereotypical manner?

- How might younger people be affected from viewing advertising messages portraying older adults in a stereotypical manner?
- Would any of the advertisements featuring offensive stereotypes stop you from buying the advertised brand?

This phase of the interview was audio recorded for accuracy using a small digital audio voice recorder. Using this sequential design method allowed the outcomes of the Q sort to help inform the follow-up interview questions. Each participant seemed to enjoy the process and provided detailed rational regarding the sorting decisions made. Multiple opportunities were available to the participants during the meeting to verify their data and to confirm the meaning of their responses. I thanked the participants for their time and made no further contact.

Anomalies

Participants occasionally found it challenging to assess the degree of offensiveness of an advertisement quickly. When this occurred, I suggested participants place the advertisements they were undecided about aside in a separate pile to expedite the sorting process and to address after they sorted all the other advertisements. This additional process allowed the Q sort to become participant friendly. The participants saw the sort as somewhat of a game, which consequently improved comfort levels and incited them to become more expressive when discussing their grid placements, asking questions, and even laughing and telling anecdotes that related to the advertisements.

I laminated each 5×7 -inch magazine advertisement to make handling easier and to reduce paper wear. The grid used by participants to sort each advertisement based on

their perceived level of offensiveness was made from a large cloth measuring approximately 6×5 feet. The large horizontal surface space required for administering the Q sort proved to be more challenging than originally thought. I often had to move and connect multiple tables to achieve a sufficient work area. I used the floor on several occasions. In addition, a few participants with limited physical mobility required assistance in physically placing each laminated card on the cloth grid.

Data Analysis

Correlation, factor analysis, and the computation of factor scores are the three statistical procedures involved in a Q methodology (McKeown & Thomas, 1988). In the first step of statistical analysis, correlation coefficients between pairs of Q sorts are calculated. The correlation coefficient indicates the degree of similarity between Q sorts.

This section provides the results of the data analysis of the Q sorts. Participant responses underwent analysis for factors on which they loaded. The section includes a correlation matrix and the PCA results, along with a varimax rotation of the extracted factors. Explanations of both PCA and varimax appear in more detail below. The outputs of the detailed statistical analysis of the rotated factors contain a description of distinguishing advertisements from the Q sample. The next step includes a comparison of factor differences with factor consensus advertisements in the form of a narrative description of the factors. Participant comments that reflect advertisements that loaded strongly on a factor serve to develop a richer interpretation of the data.

Correlation

The first step in analyzing the Q sorts required comparing the relative positions of each participant's advertisement sort with the other respondents. I used PQMethod software to tabulate the results of the Q sorts. PQMethod is available without charge in the public domain. PQMethod is a factor analytic program that reveals patterns of perceptions and quantifies subjectivity. I calculated correlations of the individual Q sorts using the software. I created a 30 × 30 matrix, where the total number of individuals participating in the study was 30 (see Appendix E). The correlation matrix illustrates the numerous ways the participants subjectively arranged the 40 advertisements of the Q sort. The correlation matrix highlights the distinctive perspectives of the participants regarding their perceived stereotypes of the older adult models in the magazine advertisements.

The correlation matrix illustrates the numeric delineations of the participant's subjective responses to the Q sort. The correlation coefficient ranges from -1.0 to +1.0. The correlation value indicates the degree of association between sorts (Ramlo, 2015). Correlations of +1.00 represent perfect positive relationships, correlations of -1.00 represent perfect negative relationships, and a 0.00 correlation statistic represents no relationship. Guilford (1956) provided a rough guide to determine whether a correlation is substantial. For a correlation coefficient that is less than .20, the relationship between variables is almost negligible. A correlation coefficient that is between .20 and .40 is a low correlation. When the correlation coefficient is between .40 and .70, the two variables have a moderate correlation. If the correlation coefficient is between .70 and .90, the two variables have a high correlation. A correlation coefficient that is more than

.90 is very high. Coefficients showed moderate positive correlations of .50 and above throughout the matrix produced by the PQMethod software, which indicated commonly held viewpoints.

The significant statistical basics of the Q sort from the developed correlation matrix determined the significance level of a correlation value. Determining the correlation significance involved calculating the standard error and dividing the standard deviation for a 99% confidence interval, or 2.58, by the square root of the total number of items in the Q sort, which in this case was 40 advertisements. Based on the 40 advertisements used within the Q sort, the standard error was $2.58/\sqrt{40} = 0.408$. Correlations that are 2 to 2.5 times the standard error are statistically significant; $2 \times 0.408 = 0.816$ and $2.5 \times 0.408 = 1.02$ (Brown, 1980).

Factor Analysis

The initial stage of analyzing data for all the Q sorts produces a correlation matrix. However, it usually does not receive much attention, as a correlation matrix serves only as a transition between the raw data and the factor analysis. Brown (1980) noted, "Correlation is useful for indicating which pairs of Q sorts bear a resemblance; factor analysis searches for family resemblances more generally" (p. 207). Although every Q sort mirrors each participant's unique point of view regarding most offensive and least offensive stereotypes, I was most interested in the grouping of behaviors resulting from the sorts. These groupings are termed factors.

Factor analysis involves grouping variables so that each grouping represents correlations among advertisements and each participant's Q sort (Ramlo & Newman,

2011). Factor analysis is a useful technique in simplifying complex variables. By applying factor analysis to data, researchers can extract fewer and more basic factors (Brown, 1980). In the context of Q methodology, factor analysis provides the statistical means for respondents to group themselves through the process of Q sorting (Ramlo, 2016). Factor analysis involves examining the correlation matrix and determining how many different groupings of Q sorts exist. Q sorts that highly correlate with one another belong to the same factor. The sorts that showed low correspondence (i.e., did not correlate to that factor) aligned with another, separate factor. Therefore, factor analysis can identify how many factors are present in the Q sorts.

The factor analysis process extracts factors from the data (Ramlo, 2015). The most common methods of data extraction are centroid factor analysis and PCA (Ramlo, 2015). Principal component analysis is the most popular factor analytical choice used by Q methodologists and is the default extraction method in common statistical software programs like SPSS (Ramlo, 2015). The PQMethod software was suitable for conducting a PCA of the sorts to identify factors that best explain the correlations. These factors were those groups of advertisements that contributed most strongly to the correlation value between two or more sorts. Using PCA, I identified factors and calculated a separate eigenvalue for each possible factor.

Q methodology lacks any firm rules regarding the number of factors to extract from the analysis. Both statistical and theoretical criteria have to be considered. One common statistical approach is to consider the eigenvalue (McKeown & Thomas, 1988). In general, factors with eigenvalues greater than 1.00 are significant. Any variance below

1.00 provides inconclusive results (Ramlo, 2016). However, McKeown and Thomas (1988) warned that following only this statistical criterion might result in factors lacking in meaning. Further, researchers might overlook factors of special theoretical significance. Therefore, Brown (1980) noted, "The importance of a factor cannot be determined by statistical criteria alone, but must take into account the social and political setting to which the factor is organically connected" (p. 42).

Incorporating PCA factor analysis, I produced an unrotated factor matrix that identified the number of groupings inherent in the correlation matrix (see Appendix F). The unrotated factor matrix extracted eight factors from the data with eigenvalues greater than 1.00, ranging from 1.204 to 10.297. The PQMethod computer program identifies a maximum of eight factors. It is not likely, given the decrease in eigenvalue for each factor, that unidentified factors were statistically significant.

Although eight factors presented eigenvalues greater than 1, after careful examination, I found that five factors among them did not explain enough variance to include in the analysis. Only Factors I, II, and III showed statistically significant loadings where respondents more than marginally exceeded the standard error. Therefore, in this matrix, I deleted Factors IV-VIII; each accounted for less than 7% of the total variance and generally demonstrated weak correlations of less than .50. Each of the remaining three factors had 20, four, and five defining variables, respectively, and indicated a unique viewpoint that exists among the group of sorters. I subsequently applied factor rotation to these three factors.

Factor rotation typically follows factor extraction (Ramlo, 2016). Factor rotation sharpens the factor structure. Varimax is generally the best and most common rotation method in factor analysis (Ramlo, 2015). Varimax is the default rotation method in common statistical software programs such as SPSS. The popularity of conducting a Varimax rotation is due in part from its ability to provide the clearest, maximized separation of factors (Ramlo, 2015). The underlying relationships found in the correlation matrix remain unchanged by factor rotation. McKeown and Thomas (1988) noted, "Only the vantage point from which the data are viewed" is changed (p. 53).

The PQMethod software was suitable to perform a varimax rotation of selected factors to examine each factor with respect to all the Q sort patterns to determine which of them loaded onto more than one respondent. The software statistically identified which of the factors provided the most loading (i.e., was statistically significant in the most Q sorts) while simultaneously controlling for the variance and noise produced by the other factor.

Analysis of the 30 Q sorts resulted in three factor types (see Appendix F). The eigenvalues for these three factors were 10.297, 2.73, and 2.098, respectively. The three factors extracted explained 50% of the total variance in the sorts. Factor I accounted for 31%, Factor II for 9%, and Factor III for 10% (see Table 3). The factor matrix resulted in 29 of the 30 participants represented by one of the three factors. Factor I included 20 defining variables, Factor II included four defining variables, and Factor III included five defining variables. Participant 1 ranked high on both Factors I and III, which indicated bimodal factor distribution.

Table 3.

Factor Matrix With an X Indicating a Defining Sort

		F	actor loading	S
	Q Sort	I	II	III
1	HXK	0.4402	-0.1592	0.4562
2	GSH	0.2836	0.4758X	0.21
3	GQW	-0.1149	0.0893	0.6199X
4	XŽQ	0.3796	0.1549	0.5467X
5	KXM	0.1476	0.0565	0.6908X
6	KLW	0.1723	-0.2869	0.5333X
7	BCS	0.5799X	0.0618	0.064
8	GGH	-0.1128	0.6592X	0.4071
9	PKA	0.2042	0.7954X	-0.2527
10	HJO	0.4720X	-0.3654	-0.1025
11	WVX	0.2295	0.0886	0.5368X
12	KQR	0.4520X	0.0012	0.1567
13	FGM	0.0399	0.8123X	-0.0716
14	HLT	0.7507X	-0.0432	0.1764
15	JRP	0.6141X	0.2647	0.2855
16	JAQ	0.5838X	0.0548	0.2727
17	LPB	0.6121X	0.0763	0.2478
18	AQX	0.7670X	-0.0069	-0.1158
19	GXR	0.6626X	0.1646	0.3371
20	BKB	0.7773X	0.2535	0.1463
21	KRG	0.7792X	-0.3095	-0.1164
22	CDX	0.8018X	0.2101	0.0268
23	JPA	0.7068X	0.3312	0.2248
24	PQR	0.6686X	0.1954	0.0836
25	JBY	0.7683X	-0.0563	0.2599
26	CFP	0.6887X	0.0237	0.1284
27	HPJ	0.6846X	-0.0899	0.1171
28	QPR	0.7050X	0.0673	0.1764
29	XYZ	0.4499X	0.3147	0.2006
30	HIO	0.4679X	0.1451	0.3156
% expla	ined variance	31	9	10

Note. The three-letter Q sort code has no meaning; each participant received a random identifier.

The correlations between groups of senior adults are in Table 4. Negligible correlations exist between Factor I and Factor II (0.1907) and between Factor II and Factor III (0.1008). The correlation between Factor I and Factor III was low (0.3911). The data indicated that although senior adults in these two factors held different views about stereotypes presented in magazine advertisements, they also shared common views.

Table 4.

Correlations Between Factor Scores

	I	II	III
I	1.0000	0.1907	0.3911
II	0.1907	1.0000	0.1008
III	0.3911	0.1008	1.0000

Factor Scores

After I determined the factors, I compared their factor scores. The purpose of obtaining factor scores is to allow for closer examination and interpretation of that factor (Ramlo & Newman, 2011). Therefore, each advertisement in various groupings of Q sorts had a different factor score. For example, a particular advertisement may have fallen into the +1 grid position in one group but -3 grid position in another group, which revealed that participants in each factor evaluated the perceived stereotypes in the advertisement differently. I calculated factor scores, or *Z* scores, for all participants defining a factor. Tables 5, 6, and 7 illustrate the *Z* scores and grid position for each advertisement for the three factors.

Results

I highlight each of the three factors in the following sections, including the similarities and differences derived from the Q sorts. Included are the post-Q sort comments obtained from interviews with participants. These comments illustrate areas of agreement or disagreement regarding the most offensive and the least offensive stereotypes perceived in advertisements and further define the emergent factors.

Table 5.
Factor Scores for Factor I

No.	Advertisement	Stereotype	Z score	Grid position
1	Cowboy	Active/rugged	1.974	+4
11	Man wearing hat and carrying flowers	Old fashioned	1.908	+4
27	Man sitting on tree with chainsaw	Active/rugged	1.689	+4
7	Close-up of woman in purple sweater	Old fashioned	1.682	+3
33	Woman blowing bubbles	Happy spouse/grandparent	1.676	+3
3	Couple sitting next to campfire	Happy spouse/grandparent	1.479	+3
29	Close-up of man wearing purple shirt	Concerned citizen	0.620	+3
22	Man petting horse	Active/rugged	0.583	+2
39	Man and woman sitting and hugging	Happy spouse/grandparent	0.472	+2
24	Woman drinking from cup next to water	Independent/stoic	0.414	+2
23	Woman working in a garden	Independent/stoic	0.312	+2
16	Woman wearing hat with clipboard	Concerned citizen	0.275	+2
34	Man cooking with girl	Happy spouse/grandparent	0.214	+1
25	Man standing wearing blue suit	Conservative	0.200	+1
2	Woman leaning on bicycle	Active/rugged	0.189	+1
26	Man relaxing at the beach	Attractive	0.174	+1
15	Close-up of woman in blue dress	Concerned citizen	0.074	+1
6	Man standing next to portrait	Conservative	0.005	0
12	Close-up of bearded man	Attractive	-0.014	0
20	Close-up of man wearing gray suit	Conservative	-0.021	0
28	Woman hugging man	Happy spouse/grandparent	-0.023	0
9	Man in glasses looking into the distance	Concerned citizen	-0.052	0
10	Man hiking on mountain	Active/rugged	-0.097	0
21	Men arm wrestling	Sickly/weak	-0.142	-1
5	Woman standing while painting a picture	Independent/stoic	-0.146	-1
36	Close-up of female face	Attractive	-0.181	-1
13	Woman wearing glasses walking outside	Conservative	-0.219	-1
40	Close-up of woman painting	Independent/stoic	-0.267	-1
31	Man standing in front of chalkboard	Conservative	-0.304	-2
35	Couple standing behind large leaves	Silly/shocking	-0.399	-2
14	Man wearing large glasses	Silly/shocking	-0.520	-2
17	Man conducting magic trick	Silly/shocking	-0.541	-2
19	Man hugging woman drinking from cup	Sickly/weak	-0.550	-2
30	Man talking on old cell phone	Old fashioned	-0.744	-3
32	Man at wedding	Attractive	-0.849	-3
18	Woman being kissed	Sickly/weak	-0.903	-3
37	Close-up of male face	Sickly/weak	-1.807	-3
38	Man lying in a hospital bed	Sickly/weak	-2.020	-4
8	Nude woman sitting	Silly/shocking	-2.044	-4
4	Close-up of surprised woman	Silly/shocking	-2.097	-4

Table 6.
Factor Scores for Factor II

No.	Advertisement	Stereotype	Z score	Grid position
7	Close-up of woman in purple sweater	Old fashioned	2.090	+4
4	Close-up of surprised woman	Silly/shocking	1.548	+4
30	Man talking on old cell phone	Old fashioned	1.488	+4
40	Close-up of woman painting	Independent/stoic	1.366	+3
33	Woman blowing bubbles	Happy spouse/grandparent	1.319	+3
37	Close-up of male face	Sickly/weak	1.313	+3
2	Woman leaning on bicycle	Active/rugged	1.287	+3
18	Woman being kissed	Sickly/weak	1.019	+2
22	Man petting horse	Active/rugged	0.757	+2
20	Close-up of man wearing gray suit	Conservative	0.756	+2
24	Woman drinking from cup next to water	Independent/stoic	0.746	+2
5	Woman standing while painting a picture	Independent/stoic	0.583	+2
15	Close-up of woman in blue dress	Concerned citizen	0.429	+1
36	Close-up of female face	Attractive	0.260	+1
11	Man wearing hat and carrying flowers	Old fashioned	0.235	+1
16	Woman wearing hat with clipboard	Concerned citizen	0.233	+1
1	Cowboy	Active/rugged	0.131	+1
17	Man conducting magic trick	Silly/shocking	0.116	0
25	Man standing wearing blue suit	Conservative	0.081	0
29	Close-up of man wearing purple shirt	Concerned citizen	0.072	0
21	Men arm wrestling	Sickly/weak	-0.066	0
27	Man sitting on tree with chainsaw	Active/rugged	-0.132	0
13	Woman wearing glasses walking outside	Conservative	-0.201	ő
3	Couple sitting next to campfire	Happy spouse/grandparent	-0.259	-1
23	Woman working in a garden	Independent/stoic	-0.295	-1
28	Woman hugging man	Happy spouse/grandparent	-0.311	-1
39	Man and woman sitting and hugging	Happy spouse/grandparent	-0.371	-1
19	Man hugging woman drinking from cup	Sickly/weak	-0.404	-1
9	Man in glasses looking into the distance	Concerned citizen	-0.412	-2
6	Man standing next to portrait	Conservative	-0.413	-2
26	Man relaxing at the beach	Attractive	-0.512	-2
34	Man cooking with girl	Happy spouse/grandparent	-0.803	-2
10	Man hiking on mountain	Active/rugged	-0.907	-2
38	Man lying in a hospital bed	Sickly/weak	-1.085	-3
31	Man standing in front of chalkboard	Conservative	-1.155	-3
8	Nude woman sitting	Silly/shocking	-1.551	-3
12	Close-up of bearded man	Attractive	-1.568	-3
32	Man at wedding	Attractive	-1.686	-4
14	Man wearing large glasses	Silly/shocking	-1.757	-4
35	Couple standing behind large leaves	Silly/shocking	-1.893	-4

Table 7.

Factor Scores for Factor III

No.	Advertisement	Stereotype	Z score	Grid position
39	Man and woman sitting and hugging	Happy spouse/grandparent	2.469	+4
28	Woman hugging man	Happy spouse/grandparent	2.177	+4
3	Couple sitting next to campfire	Happy spouse/grandparent	1.444	+4
5	Woman standing while painting a picture	Independent/stoic	1.138	+3
1	Cowboy	Active/rugged	1.069	+3
33	Woman blowing bubbles	Happy spouse/grandparent	1.035	+3
27	Man sitting on tree with chainsaw	Active/rugged	0.930	+3
11	Man wearing hat and carrying flowers	Old fashioned	0.908	+2
19	Man hugging woman drinking from cup	Sickly/weak	0.865	+2
36	Close-up of female face	Attractive	0.749	+2
40	Close-up of woman painting	Independent/stoic	0.745	+2
26	Man relaxing at the beach	Attractive	0.542	+2
25	Man standing wearing blue suit	Conservative	0.528	+1
6	Man standing next to portrait	Conservative	0.497	+1
23	Woman working in a garden	Independent/stoic	0.357	+1
22	Man petting horse	Active/rugged	0.340	+1
16	Woman wearing hat with clipboard	Concerned citizen	0.118	+1
18	Woman being kissed	Sickly/weak	0.031	0
13	Woman wearing glasses walking outside	Conservative	-0.029	0
2	Woman leaning on bicycle	Active/rugged	-0.072	0
31	Man standing in front of chalkboard	Conservative	-0.157	0
15	Close-up of woman in blue dress	Concerned citizen	-0.263	0
38	Man lying in a hospital bed	Sickly/weak	-0.293	0
37	Close-up of male face	Sickly/weak	-0.301	-1
9	Man in glasses looking into the distance	Concerned citizen	-0.340	-1 -1
32	Man at wedding	Attractive	-0.402	-1
4	Close-up of surprised woman	Silly/shocking	-0.407	-1
29	Close-up of man wearing purple shirt	Concerned citizen	-0.438	-1
34	Man cooking with girl	Happy spouse/grandparent	-0.462	-2
21	Men arm wrestling	Sickly/weak	-0.517	-2
35	Couple standing behind large leaves	Silly/shocking	-0.652	-2
10	Man hiking on mountain	Active/rugged	-0.712	-2
30	Man talking on old cell phone	Old fashioned	-0.961	-2
7	Close-up of woman in purple sweater	Old fashioned	-1.001	-3
8	Nude woman sitting	Silly/shocking	-1.242	-3 -3
24	Woman drinking from cup next to water	Independent/stoic	-1.242	-3 -3
12	Close-up of bearded man	Attractive	-1.299	-3 -3
14	Man wearing large glasses	Silly/shocking	-1.432	-4
20	Close-up of man wearing gray suit	Conservative	-1.432	-4 -4
17	Man conducting magic trick	Silly/shocking	-2.005	- 4 -4
1/	ivian conducting magic trick	Siny/shocking	-2.003	-4

Factor I: Pioneers

Factor I is the largest group extracted from the data, which I labeled as *pioneers* because of their high grid placements for advertising portraying active strong stereotypes

and low grid placements for goofy and ill stereotype advertisements. The pioneers consisted of 21 participants who represented 70% of the P sample. Pioneers consisted of 13 (62%) females and eight (38%) males with an average age of 77. Participants had the following educational profile: less than high school, 1 (4.8%); high school, 13 (61.9%); undergraduate college degree, 2 (9.5%); and advanced college degree, 5 (23.8%). Participants were predominately Protestant, 13 (61.9%), followed by Catholic, 4 (19.1%), atheist, 3 (14.3%), and other, 1 (4.8%).

Twenty-one participants loaded on Factor I at a level of significance greater than 0.333~(p < .05) or 0.439~(p < .01). Table 8 illustrated the Z scores and grid placements for the 17 distinguishing advertisements for this factor. Factor I has 17 distinguishing advertisements associated with it at a confidence level of 95% (p < .05). Fourteen of the 17 distinguishing statements were significant at the 99% confidence level (p < .01). Table 8.

Distinguishing Advertisements for Factor I

No.	Advertisement	Stereotype	Grid position	Z score
1	Cowboy	Active/rugged	4	1.97*
11	Man wearing hat and carrying flowers	Old fashioned	4	1.91*
27	Man sitting on tree with chainsaw	Active/rugged	4	1.69*
29	Close-up of man wearing purple shirt	Concerned citizen	3	0.62
39	Man and woman sitting and hugging	Happy spouse/grandparent	2	0.47*
34	Man cooking with girl	Happy spouse/grandparent	1	0.21*
12	Close-up of bearded man	Attractive	0	-0.01*
20	Close-up of man wearing gray suit	Conservative	0	-0.02*
10	Man hiking on mountain	Active/rugged	0	-0.10
5	Woman standing while painting a picture	Independent/stoic	-1	-0.15*
40	Close-up of woman painting	Independent/stoic	-1	-0.27*
14	Man wearing large glasses	Silly/shocking	-2	-0.52*
17	Man conducting magic trick	Silly/shocking	-2	-0.54
18	Woman being kissed	Sickly/weak	-3	-0.90*
37	Close-up of male face	Sickly/weak	-3	-1.81*
38	Man lying in a hospital bed	Sickly/weak	-4	-2.02*
4	Close-up of surprised woman	Silly/shocking	-4	-2.10*

Note. p < .05. Asterisk (*) indicates significance at p < .01.

The basis of the view that emerged from this group was that advertisements were offensive to members of this factor. Participants perceived Advertisements 18, 37, and 8 in the -3 grid positions, representing the sickly/weak and silly/shocking stereotypes, as significantly most offensive. Pioneers rejected images of older adults perceived as sick or frail and images portraying older adults wearing goofy clothing or seemingly acting in an undignified manner. One particular advertisement featured a close-up picture of an older woman dressed in unfashionable clothing with an exaggerated smile. The advertisement elicited comments like, "The picture looks as if she is senile." "That's not respectful." A different advertisement that featured a close-up image of an older man's face caused these remarks: "His face is not appealing." "I don't want to be reminded that I look old." "He's dead looking." However, those in Factor II deemed this advertisement to be significantly least offensive.

Pioneers perceived Advertisements 1, 11, and 27 in the +4 grid position to represent the active/rugged and old-fashioned stereotypes as significantly least offensive. Least offensive advertisements to pioneers both contained men; one advertisement showed a man dressed as a cowboy herding cattle and the second advertisement featured a man holding a chainsaw while sitting on a fallen tree. Pioneers perceived these advertisements to highlight their strong and active lifestyle despite their older age. Pioneers expressed satisfaction with the older adult models used in the advertisements, either because they appeared strong, were doing physical activity, or were defying their age. Pioneer perceptions were more neutral to the conservative and attractive stereotypes in the advertisements, as indicated by those rankings around the 0 grid position.

Factor II: Unpredictables

Factor II was the smallest group extracted from the data, which I labeled *unpredictables* because of their grid placements for advertisements featuring a wide variety of stereotypes. Unpredictables consisted of four participants who represented 13% of the P sample. Participants consisted of three (75%) females and one (25%) male with an average age of 72. Participants had the following educational profile: high school, 3 (75%), and undergraduate college degree, 1 (25%). Unpredictables were equally divided between Protestant, 2 (50%), and Catholic, 2 (50%).

Four participants loaded on Factor II at a level of significance greater than 0.333 (p < .05) or 0.439 (p < .01). Table 10 illustrates the Z scores and grid placements for the distinguishing advertisements. Factor II has 18 distinguishing advertisements associated with it at a confidence level of 95% (p < .05). Thirteen of the 18 distinguishing statements were significant at the 99% confidence level (p < .01).

Table 9.

Distinguishing Advertisements for Factor II

No.	Advertisement	Stereotype	Grid position	Z score
4	Close-up of surprised woman	Silly/shocking	4	1.55*
30	Man talking on old cell phone	Old fashioned	4	1.49*
37	Close-up of male face	Sickly/weak	3	1.31*
2	Woman leaning on bicycle	Active/rugged	3	1.29*
18	Woman being kissed	Sickly/weak	2	1.02*
20	Close-up of man wearing gray suit	Conservative	2	0.76*
11	Man wearing hat and carrying flowers	Old fashioned	1	0.24
1	Cowboy	Active/rugged	1	0.13*
17	Man conducting magic trick	Silly/shocking	0	0.12
27	Man sitting on tree with chainsaw	Active/rugged	0	-0.13*
3	Couple sitting next to campfire	Happy spouse/grandparent	-1	-0.26*
23	Woman working in a garden	Independent/stoic	-1	-0.3
39	Man and woman sitting and hugging	Happy spouse/grandparent	-1	-0.37*
26	Man relaxing at the beach	Attractive	-2	-0.51
38	Man lying in a hospital bed	Sickly/weak	-3	-1.09
31	Man standing in front of chalkboard	Conservative	-3	-1.15*
32	Man at wedding	Attractive	-4	-1.69*
35	Couple standing behind large leaves	Silly/shocking	-4	-1.89*

Note. p < .05. Asterisk (*) indicates significance at p < .01.

I labeled this group as *unpredictables* because the participants were outspoken on a variety of stereotypes portrayed by older adults in the advertisements. Advertisement 4, which the pioneers perceived to be most offensive, was the least offensive to the unpredictables. Unpredictables focused more on the positive physical attributes of older models in the advertisements. The close-up picture of an older woman dressed in unfashionable clothing with an exaggerated smile led to the following remarks: "She looks drunk and happy." "I wish my skin looked as good." The advertisement featuring a close-up image of an older man's face elicited comments such as, "He looks like my neighbor." "What a handsome man!"

Of the 18 distinguishing advertisements, two were in the +4 grid position, which indicated that unpredictables tended to perceive the older models in the magazine

advertisements in a silly/shocking or old-fashioned setting as least offensive. Two of the distinguishing advertisements were in the -4, most offensive, grid position, which indicated the unpredictable perceived the attractive and silly/shocking stereotypes as the most offensive.

Unpredictables were realistic about their age. One offensive advertisement featured a man seemingly having too much fun during a wedding ceremony.

Unpredictables commented that the older man should "act his age" and "dress appropriately for someone his age." A second advertisement viewed as offensive depicted a seemingly nude couple strategically standing behind plants in the forest. Unpredictables focused on the undesirable physical traits often associated with growing old. While viewing the couple in the advertisement, statements included, "I don't like when nudity is used to sell a product." "Advertisers shouldn't use people that look like that, only a few seniors really look that way." "She's wearing too much makeup." "This will cause people's expectations to become too high." Another of the offensive advertisements featured a man lying in a hospital bed. Some participants thought the advertisement exhibited "scare tactics" to exaggerate a point.

Factor III: Cupids

Factor III consisted of five participants who represented 17% of the P sample. I labeled these members *cupids* because of their high grid placements for advertising portraying happy and loving stereotypes. Cupids consisted of four (80%) females and one (20%) male with an average age of 76 years. Participants had the following educational

profile: high school, 3 (60%), and undergraduate college degree, 2 (40%). Participants were Protestant, 3 (60%), or Catholic, 2 (40%).

Five participants loaded on Factor III at a level of significance greater than 0.333 (p < .05) or 0.439 (p < .01). Table 12 illustrates the Z scores and grid placements for the distinguishing advertisements. Factor III has 15 distinguishing advertisements associated with it at a confidence level of 95% (p < .05). Twelve of the 15 distinguishing statements were significant at the 99% confidence level (p < .01). Of the 15 distinguishing advertisements, two were in the +4 grid position, which indicated that the participants comprising this factor tended to perceive older models appearing in the magazine advertisements in a happy spouse/grandparent setting as least offensive. In addition, two of the distinguishing advertisements were in the -4, most offensive, grid position, which indicated conservative and silly/shocking stereotypes were perceived as the most offensive. Factor participants indicated more neutral perceptions to the sickly/weak stereotype in the advertisements, as indicated by the rankings around the 0 grid position.

Table 10.

Distinguishing Advertisements for Factor III

No.	Advertisement	Stereotype	Grid position	Z score
39	Man and woman sitting and hugging	Happy spouse/grandparent	4	2.47*
28	Woman hugging man	Happy spouse/grandparent	4	2.18*
1	Cowboy	Active/rugged	3	1.07*
27	Man sitting on tree with chainsaw	Active/rugged	3	0.93*
11	Man wearing hat and carrying flowers	Old fashioned	2	0.91
19	Man hugging woman drinking from cup	Sickly/weak	2	0.86*
6	Man standing next to portrait	Conservative	1	0.50
18	Woman being kissed	Sickly/weak	0	0.03*
38	Man lying in a hospital bed	Sickly/weak	0	-0.29
37	Close-up of male face	Sickly/weak	-1	-0.30*
4	Close-up of surprised woman	Silly/shocking	-1	-0.41*
7	Close-up of woman in purple sweater	Old fashioned	-3	-1.00*
24	Woman drinking from cup next to water	Independent/stoic	-3	-1.30*
20	Close-up of man wearing gray suit	Conservative	-4	-1.59*
17	Man conducting magic trick	Silly/shocking	-4	-2.00*

Note. p < .05. Asterisk (*) indicates significance at p < .01.

Cupids ranked advertising stereotypes as least offensive when they positively portrayed older adults in loving and happy settings. Two significant least offensive advertisements for Factor III separated this factor from the other two factors. Both advertisement presented portraits of caring and loving relationships between a man and a woman that were least offensive to cupids, and one participant commented, "They look really happy." One advertisement featured a man conducting a magic trick. Cupids deemed the advertisement offensive because the magician had a "sinister" and "evil" look on his face. One Cupid commented, "He doesn't look right."

Comparison

Comparing how the participants ranked each advertisement in the three different factors reveals the variability among the perceived stereotypes. Table 14 illustrates the factor arrays for each of the 40 advertisements in the Q sort. Grid position +4 to +3 indicates least offensive stereotypes, and grid position -3 to -4 indicates most offensive

stereotypes. Mild offensive to the stereotypes portrayed in the advertisements are in the -2 to -1 positions. Neutral feelings regarding a particular advertisement are in the 0 grid positions.

Differences between factor scores of 2 or greater are statistically significant, thus strengthening their existence as "genuine operational definitions of [participants'] subjective points of view" (Brown, 1993, p. 22). A comparison of the difference scores greater than 2 between factors and an examination of the corresponding statements revealed distinctive elements among the three perspectives found regarding stereotypes used in magazine advertisements featuring older adult models. The difference score is "the magnitude of difference between a statement's score on any two factors that is required for it to be statistically significant (van Exel & de Graaf, 2005, p. 9).

Table 11.

Factor Q Sort Values for Each Advertisement

			Fac	tor ar	rays
No.	Advertisement	Stereotype	I	II	III
1	Cowboy	Active/rugged	4	1	3
2	Woman leaning on bicycle	Active/rugged	1	3	0
3	Couple sitting next to campfire	Happy spouse/grandparent	3	-1	4
4	Close-up of surprised woman	Silly/shocking	-4	4	-1
5	Woman standing while painting a picture	Independent/stoic	-1	2	3
6	Man standing next to portrait	Conservative	0	-2	1
7	Close-up of woman in purple sweater	Old fashioned	3	4	-3
8	Nude woman sitting	Silly/shocking	-4	-3	-3
9	Man in glasses looking into the distance	Concerned citizen	0	-2	-1
10	Man hiking on mountain	Active/rugged	0	-2	-2
11	Man wearing hat and carrying flowers	Old fashioned	4	1	2
12	Close-up of bearded man	Attractive	0	-3	-3
13	Woman wearing glasses walking outside	Conservative	-1	0	0
14	Man wearing large glasses	Silly/shocking	-2	-4	-4
15	Close-up of woman in blue dress	Concerned citizen	1	1	0
16	Woman wearing hat with clipboard	Concerned citizen	2	1	1
17	Man conducting magic trick	Silly/shocking	-2	0	-4
18	Woman being kissed	Sickly/weak	-3	2	0
19	Man hugging woman drinking from cup	Sickly/weak	-2	-1	2
20	Close-up of man wearing gray suit	Conservative	0	2	-4
21	Men arm wrestling	Sickly/weak	-1	0	-2
22	Man petting horse	Active/rugged	2	2	1
23	Woman working in a garden	Independent/stoic	2	-1	1
24	Woman drinking from cup next to water	Independent/stoic	2	2	-3
25	Man standing wearing blue suit	Conservative	1	0	1
26	Man relaxing at the beach	Attractive	1	-2	2
27	Man sitting on tree with chainsaw	Active/rugged	4	0	3
28	Woman hugging man	Happy spouse/grandparent	0	-1	4
29	Close-up of man wearing purple shirt	Concerned citizen	3	0	-1
30	Man talking on old cell phone	Old fashioned	-3	4	-2
31	Man standing in front of chalkboard	Conservative	-2	-3	0
32	Man at wedding	Attractive	-3	-4	-1
33	Woman blowing bubbles	Happy spouse/grandparent	3	3	3
34	Man cooking with girl	Happy spouse/grandparent	1	-2	-2
35	Couple standing behind large leaves	Silly/shocking	-2	-4	-2
36	Close-up of female face	Attractive	-1	1	2
37	Close-up of male face	Sickly/weak	-3	3	-1
38	Man lying in a hospital bed	Sickly/weak	-4	-3	0
39	Man and woman sitting and hugging	Happy spouse/grandparent	2	-1	4
40	Close-up of woman painting	Independent/stoic	-1	3	2

Note. Variance = 5.450. SD = 2.335.

The three factors exhibited similarities and differences in advertising grid

placement. Factors I and II placed Advertisements 7 (old fashioned), 32 (attractive), and

38 (sick/weakly) in similar grid positions. Grid placement differed for Advertisements 30 (old fashioned), 37 (sick/weakly), and 4 (silly/shocking). Factors 2 and 3 closely aligned on Advertisement 12 (attractive) and 14 (silly/shocking), but factors 2 and 3 were different regarding Advertising 7 (old fashioned). Factors 1 and 3 ranked Advertisements 1 and 27 (active/rugged) and 3 (happy spouse/grandparent) in similar grid positions. Advertisement 7 (old fashioned) received a dissimilar grid ranking. Advertisements 33 (happy spouse/grandparent) and 8 (silly/shocking) shared similar grid positions across all three factors.

The consensus advertisements illustrate a lack of significance that is important to the study in terms of distinguishing advertisements that do not present distinctive elements to any precise factor (see Table 15). Similar to the process for identifying advertisements with large positive or negative differences in factor scores, the consensus advertisements represented those with small differences. Consensus advertisements are Q sort advertisements collectively agreed upon by the participants. Advertisements 9, 15, and 16 related to the concerned citizen stereotype. Advertisements 13 and 25 related to the conservative stereotype. Advertisements 21 and 22 related to the sickly/weak and active/rugged stereotypes, respectively.

Table 12.

Consensus Advertisements: Those That Do Not Distinguish Between ANY Pair of Factors

			Facto	r I	Facto	r II	Factor	· III
			Grid	Z	Grid	Z	Grid	Z
No.	Advertisement	Stereotype	position	score	position	score	position	score
9*	Man in glasses looking into the distance	Concerned citizen	0	-0.05	-2	-0.41	-1	-0.34
13*	Woman wearing glasses walking outside	Conservative	-1	-0.22	0	-0.20	0	-0.03
15	Close-up of woman in blue dress	Concerned citizen	1	0.07	1	0.43	0	-0.26
16*	Woman wearing hat with clipboard	Concerned citizen	2	0.27	1	0.18	1	0.12
21*	Men arm wrestling	Sickly/weak	-1	-0.14	0	-0.07	-2	-0.52
22*	Man petting horse	Active/rugged	2	0.58	2	0.76	1	0.34
25*	Man standing wearing blue suit	Conservative	1	0.20	0	0.08	1	0.53

Note. All listed statements are nonsignificant at p > .01. Asterisks (*) are nonsignificant at p > .05.

Data Analysis Aligned to Research Questions

Research Question 1

Research Question 1 was as follows: What do senior adults believe to be the most important factors regarding magazine advertisements featuring older adults that influence their purchasing decisions? When asked whether any of the advertisements featuring offensive stereotypes prevented them from purchasing the advertised brand, 57% said no. However, 43% stated that offensive advertisements would cause them to reconsider future purchasing decisions. One participant commented, "When I get mad at a company, I stay mad!" Selected participant comments regarding factors that influence purchasing decisions appear in Tables 13, 14, and 15. I labeled factor I *pioneers*, factor II *unpredictables*, and factor III *cupids*.

Table 13.

Selected Participant Comments for Factor I

No.	Advertisement	Stereotype	Comments
1	Cowboy	Active/rugged	He's appealing; I wanted to look longer; it's
			great that he's still active
11	Man wearing hat and carrying flowers	Old fashioned	Very distinguished - reminds me of my father
27	Man sitting on tree with chainsaw	Active/rugged	He looks confident and strong
18	Woman being kissed	Sickly/weak	Made me feel sad, this ad is not attractive
37	Close-up of male face	Sickly/weak	His face is not appealing; I don't want to be
			reminded that I look old; he's dead looking
38	Man lying in a hospital bed	Sickly/weak	Very sad, smoking is bad; brought back sad
			images of my own family
8	Nude woman sitting	Silly/shocking	Very offensive; she's naked!
4	Close-up of surprised woman	Silly/shocking	Not a nice picture; I don't want to see an old,
			unattractive woman; very exaggerated

Table 14.

Selected Participant Comments for Factor II

No.	Advertisement	Stereotype	Comments
7	Close-up of woman in purple sweater	Old fashioned	Confidence comes with age
4	Close-up of surprised woman	Silly/shocking	See, older folks can be happy
33	Woman blowing bubbles	Happy spouse/grandparent	I play like that with my grandkids
			too
38	Man lying in a hospital bed	Sickly/weak	I don't like scare tactics
8	Nude woman sitting	Silly/shocking	women should act their age; I
			didn't want to see that
14	Man wearing large glasses	Silly/shocking	This ad is very condescending;
			disrespectful to all seniors
35	Couple standing behind large leaves	Silly/shocking	I don't like when nudity is used to
			sell a product; too sexual

Table 15.

Selected Participant Comments for Factor III

No.	Advertisement	Stereotype	Comments
39	Man and woman sitting and hugging	Happy spouse/grandparent	They are a beautiful loving couple
28	Woman hugging man	Happy spouse/grandparent	Very pleasant; aww, how cute
7	Close-up of woman in purple sweater	Old fashioned	She doesn't look like a nice person
8	Nude woman sitting	Silly/shocking	The ad was crude; undignified
14	Man wearing large glasses	Silly/shocking	What a geek!

Many seniors in the sample expressed a dislike for two advertisements that displayed aspects of nudity. Advertisement 8, an advertisement for Dove soap, featured

an older woman sitting completely nude with her arms and legs strategically crossed, and Advertisement 35, which was an advertisement for a brand of shoes that depicted a supposedly nude older couple in the woods strategically covered by leaves. This finding may indicate a generation gap between senior adults and marketing decision makers. Advertisements featuring various degrees of nudity might draw age groups who are more youthful to products, but nudity seemed to repel the senior adult participants. One participant stated, "I didn't want to see that."

I asked participants if they thought any danger or harm would result from portraying older adults in a stereotypical manner in magazine advertisements. Sixty-nine percent said no, and 31% said yes. Typical comments from seniors included, "I'm old and I'm happy." "The elderly can be happy too." Notable comments regarding the harm of stereotypes, include, "I don't like the false hope, it's sad not being too active anymore." "I don't want to be reminded of being old." The percentages differed from a similar study conducted by Robinson et al. (2003), in which 33% of participants indicated there was no harm to them from advertising portraying older adults in a stereotypical manner. Sixty-seven percent indicated it was harmful or dangerous.

I also asked seniors how viewing advertising messages portraying older adults in a stereotypical manner might affect younger people. Several respondents mentioned they believed that younger people give little attention to advertisements featuring older adults; they simply overlook the advertisements. Comments included, "It's a young person's world; the young ignore the old." "They won't even take the time to look at an ad with older people, they think old is funny, they have no respect." "They don't pay attention to

older people in ads; it does speak to them so they don't pay attention to the ads. They don't want to think about getting old so they ignore everything." A few respondents commented regarding the positive aspects of seeing older stereotypes in advertisements, including, "Ads can educate the young regarding what to expect." "Advertising might have positive impact . . . if the young still see seniors active and not quit living when they get old." "They will learn about aging and understand it's a natural process; it happens to everyone that's fortunate enough to live this long."

Research Question 2

Research Question 2 was as follows: Which stereotypes of older adults in magazine advertisements do senior adults find most offensive and least offensive? Tables 16, 17, and 18 illustrate the most offensive and least offensive magazine advertisements for each factor. I labeled factor I *pioneers*, factor II *unpredictables*, and factor III *cupids*. Table 16.

Most Offensive and Least Offensive Stereotypes for Factor I

			Z-	Grid
No.	Advertisement	Stereotype	Score	Position
1	Cowboy	Active/Rugged	1.974	+4
	Man wearing hat and carrying	Old Fashioned		
11	flowers	Old Pasillolled	1.908	+4
27	Man sitting on tree with chainsaw	Active/Rugged	1.689	+4
38	Man lying in a hospital bed	Sickly/Weak	-2.020	-4
8	Nude woman sitting	Silly/Shocking	-2.044	-4
4	Close-up of surprised woman	Silly/Shocking	-2.097	-4

Table 17.

Most Offensive and Least Offensive Stereotypes for Factor II

			Z-	Grid
No.	Advertisement	Stereotype	Score	Position
	Close-up of woman in purple			
7	sweater	Old Fashioned	2.090	+4
4	Close-up of surprised woman	Silly/Shocking	1.548	+4
30	Man talking on old cell phone	Old Fashioned	1.488	+4
32	Man at wedding	Attractive	-1.686	-4
14	Man wearing large glasses	Silly/Shocking	-1.757	-4
35	Couple standing behind large leaves	Silly/Shocking	-1.893	-4

Table 18.

Most Offensive and Least Offensive Stereotypes for Factor III

·			Z-	Grid
No.	Advertisement	Stereotype	Score	Position
'	Man and woman sitting and	Нарру		
39	hugging	Spouse/Grandparent	2.469	+4
		Нарру		
28	Woman hugging man	Spouse/Grandparent	2.177	+4
		Нарру		
3	Couple sitting next to campfire	Spouse/Grandparent	1.444	+4
14	Man wearing large glasses	Silly/Shocking	-1.432	-4
20	Close-up of man wearing gray suit	Conservative	-1.587	-4
17	Man conducting magic trick	Silly/Shocking	-2.005	-4

Participants felt attracted to happy and active images. Pioneers, the largest group, were inclined to rank stereotypes of strength and energetic lifestyles as least offensive, while older adults portrayed as being sickly or weak were most offensive. Unpredictables were the least unified of the three factors in their views. Stereotypes showing older adults with less desirable personality traits, such as acting undignified or displays of nudity, were most offensive to unpredictables. Unpredictables also focused on the problems and physical changes associated with aging. Cupids tended to rank highly the stereotypes centered on enjoying life while being surrounded by friends and family and felt most offended when advertisements portrayed older adults as being goofy or cartoonish.

Another view that emerged was that seniors were aware of how marketing decision makers use older models in advertisements. Many participants commented how unusual it is to see older adults in advertisements in general. When older adults do appear in advertisements, they are often for products such as pharmaceuticals or life insurance (Bracken, 2014; Chen, 2016). Participants were outspoken in their dislike for that type of marketing practice. Participants expressed an understanding of how those types of advertisements affected their self-esteem and young people viewed senior adults. One participant commented, "All these stereotypes cause young people to think we are all like this." Senior adults preferred more realistic advertisements containing older adult models who are enjoying life and are active in spite of their advanced age.

Building self-esteem is a powerful motivational force driving the comparison of oneself as a member of a high-status in-group as opposed to a member of a low-status out-group (Scholer et al., 2014). Regarding ageism, social identity theory can be a lens through which individuals judge magazine advertisements featuring older adult models and whether the readers perceive the images as stereotypical (Palmore, 2015). Perceived age stereotypes can affect self-identity (Levy et al., 2015). Perceptions of stereotypes can arise from seemingly harmless activities such as a joke about graying hair or a silly birthday card making fun of the implications of growing old (Gendron et al., 2015).

Although I cannot generalize the sample of 30 participants across the whole older adult population, in my study senior adult perceptions indicated that marketing decision makers might have misjudged how sensitive seniors are to their own images in magazine advertisements. The majority of seniors noted that the stereotypes portrayed in the

advertisements would not cause them to change their product purchasing, and participants believed that negative stereotypes of older adults were harmful to people of all ages.

Evidence of Trustworthiness

Q methodology does not have the same issues with validity that other research methodologies may have. The concourse cannot represent what a researcher intends because participants ascribe their own meaning to each advertisement. Q sorts are anchored in self-reference without external standard to which to compare them to estimate their validity (McKeown & Thomas, 1990).

Validity

Validity in a Q study indicates having a representative concourse. Researchers can achieve a representative Q sample by referring to a variety of sources such as focus groups, personal interviews, and literature searches. In my study, the concourse consisted of advertisements drawn from 20 different publications. Two subject matter experts reviewed the research methodology and the Q sample. By interviewing participants after they completed their Q sort, I further enriched the validity by confirming that I correctly understood the participants' views (Brown, 1996). Participants sorted 40 magazine advertisements based upon their perceptions of stereotypes portrayed in the advertisements. Therefore, the sorting process was subjective. Participants judged each advertisement relative to the others by performing the sort. Since Q methodology measures individual opinions about the advertisements, validity is not a consideration (Ramlo, 2015).

Reliability

In a Q study, reliability equates to the repeatability of Q sorts using the same participants and conditions. Q studies tend to be more replicable than other types of strict qualitative or quantitative research using in-depth interviews or surveys (Ramlo, 2015). Studies have revealed negligible effects of time on reliability; studies repeated weeks and even years later had high correlation coefficients (Akhtar-Danesh et al., 2008). Founded on the custom of qualitative research, Merriam (2002) suggested researchers use peer examination to ensure reliability. In my study, two subject matter experts evaluated the concourse and Q sample.

The Q sample selection process could be open to issues of reliability because the Q sample is a selected subset of advertisements from the concourse, which makes it possible that a different sample might produce different conclusions (McKeown & Thomas, 1990). However, a review of the Q sample by experts in advertising and stereotyping can further strengthen the validity (Brown, 1980), which I did in my study.

Generalizability

Generalizability refers to the extent to which researchers can draw conclusions about a population based on information derived from a sample (van Exel & de Graaf, 2005). External validity is another term for generalizability. Q samples are not subject to concerns regarding external validity. Interest in Q methodology is on the perspectives of individuals who had an opinion about the topic (van Exel & de Graaf, 2005). Viewpoints gleamed from Q methodology studies are not generalizable to a larger population. However, the inability to generalize outcomes from Q methodology is not a limitation. Q

methodology provides a basis for new hypotheses about a subject and a basis for continued research.

Summary

To answer the research questions posed, I used Q methodology, personal interviews, and a short questionnaire to explore the perceptions of senior adults on their perceptions of magazine advertisements featuring older adult models. The convenience sample of 30 senior volunteers ages 70 to 85 years resided in an older adult residential housing community in Maryland. Each senior ranked 40 advertisements that depicted different potentially offensive older adult stereotypes. The 9-point scale ranged from most offensive to least offensive.

After empirical examination of the correlated sorts and factor analysis, unique groupings or factors emerged from the data. Three unique factors emerged from the Q sorts, which I termed Pioneers, Unpredictables, and Cupids. Pioneers were offended by stereotypes that highlighted the physical waning connected with aging. Unpredictables and Cupids felt most offended by disrespectful stereotypes or ridicule. An examination of participant data that had a significant effect on each factor revealed commonalities that answered the research questions. Senior adults deemed advertisement stereotypes that portrayed older adults as being sickly or weak to be most offensive. Stereotypes highlighting active lifestyles and loving relationships emerged as least offensive.

Personal interviews revealed senior adults felt concerned with the increasing use of nudity in advertising used to portray their generation. The senior adults also expressed concern regarding a possible link between offensive stereotypes in advertising and their

potentially damning effect to individuals' self-esteem. Findings might imply a generation gap between senior adults and marketing decision makers.

My study has implications for social change by increasing awareness of the negative effects of ageism. Understanding how senior adults perceive stereotypes presented in advertisements may challenge generalizations and facilitate happiness, health, and positive identity formation of the elderly. Chapter 5 includes a discussion of the factor interpretations, implications for social change, and suggestions for future research.

Chapter 5: Interpretation and Recommendations

The purpose of this Q methodology study was to gather and analyze the perspectives of senior adults regarding perceived stereotypes in magazine advertisements featuring older adult models to understand the most important factors that influence their purchasing decisions and which stereotypes they find most offensive and least offensive. Q methodology was the research method of choice for several reasons. Chief among them were the opportunities to contribute maximally to the body of knowledge in this specific area of inquiry, to work toward the eventual development of genuine hypotheses, and to discover multiple avenues for further meaningful research in this field. Researchers have not conducted magazine advertising research among participants ages 70 to 85 years using Q methodology.

My study helps fill a gap in the existing literature regarding the perceived stereotypes of senior adults toward magazine advertisements. The focus of the study was on 30 self-selected senior adults between ages 70 and 85 years. In earlier studies regarding stereotypes of older adults in advertising, all participants older than age 50 years were studied as a singular group, not categorized by age. However, the senior segment, like the young and middle-aged, contains a broad range of individuals. Studying various senior age categories is necessary to have a more balanced viewpoint. The general problem is that many older adult consumers feel dissatisfied with advertising directed toward them and may not purchase products that they could otherwise enjoy. A need exists for a better understanding of the perception of older adult consumers regarding targeted advertisements.

Each volunteer participant reviewed 40 magazine advertisements featuring older adults and sorted each advertisement based on the perceived level of offensiveness.

Empirical examination of the correlated sorts and factor analysis, unique groupings, or factors emerged from the data. Three unique factors emerged from the Q sorts, which I termed *Pioneers*, *Unpredictables*, and *Cupids*. Pioneers were less offended with stereotypes of older adult models when they appeared strong or were doing physical activity or otherwise seemingly defying the limits of their older age. Pioneers felt most offended by stereotypes that highlighted the physical waning connected with aging.

Unpredictables and cupids felt most offended by disrespectful stereotypes or ridicule.

Unpredictables focused on the undesirable physical traits often associated with growing old. Cupids ranked advertising stereotypes as least offensive when they positively portrayed older adults in loving and happy relationships.

The process of Q sorting encouraged conversation between the participant and researcher. I gained trust, and the participants became more responsive. Personal interviews revealed senior adults felt concerned with the increasing use of nudity in advertising used to portray their generation. Senior adults also expressed concern regarding a possible link between offensive stereotypes in advertising and their potentially damning effect to the self-esteem of older adults and the myth perpetrated in advertising that negatively affects the views of younger adults toward the ageing process.

This chapter contains five sections. The first sections include an interpretation of the findings that contain the major outcomes distilled from the results presented in Chapter 4 and study limitations. The next two sections cover recommendations for future

research and descriptions of how this research has the potential to inspire a positive social change. The final section provides a summary of the study.

Interpretation of Findings

A need exists for a better understanding of the perceptions among older adult consumers regarding stereotypes in advertisements. Exposure to stereotypes of aging can dramatically affect the life course outcomes of older adults (Levy et al., 2015). These effects do not contain just laboratory testing situations; they also affect everyday life. Some advertisements featuring senior adults appear to misrepresent reality, and consistent and repetitive messages in the mass media foster ageism. Stereotypes "develop easily, rigidify surreptitiously, and operate reflexively, providing simple, comfortable, convenient bases for making personal sense of the world" (Cortes, 2001, p. 6).

Older adults routinely confronted with negative age stereotypes eventually exhibit physical, psychological, and cognitive behavior consistent with those stereotypes. Perhaps more troublesome is the effect that individuals' self-perceptions of aging, moderated by how well they fit their stereotypical picture of an older adult, have on life course outcomes for older adults, in some cases even affecting their will to live (Levy et al., 2015). The mental health of senior adults is especially concerning given the onslaught of negative age stereotypes not only through the media but also through everyday intergenerational interactions and the age-based expectations from others. These experiences are likely to have detrimental effects on older adults' health and longevity (Levy et al., 2015).

Consequences of ageism and stereotype threats on older adults should be an area of concern not only for researchers but also for society. My study expands the existing knowledge base regarding senior perceptions of stereotypes found in magazine advertisements and confirms similar findings in earlier studies. Advertising is a complex blend of art and science, and consumers develop a unique set of both positive and negative perceptions of advertising during a lifetime. Moss et al. (2013) found that attitudes toward older individuals have improved during the past several decades, and advertising including senior adults has become more positive. However, the findings in this study indicate more improvements are necessary.

A perception gap exists between senior adults and marketing decision makers. Owing to the size and economic power of older adults, marketing decision makers would be unwise to insult older shoppers by using negative stereotypes in advertisements. However, many marketers ignore senior consumers in favor of younger segments of the population (Lumme-Sandt, 2011). Older adults continue to face underrepresentation in magazine advertisements. This finding provides support for the prediction made by Peterson and Ross (1997), who concluded, "Older consumers were not shown as frequently as their younger counterparts, even as compared to their composition of the total population" (p. 705).

Many participants in my study felt dissatisfied with advertising directed toward them and because of the perceived stereotypes presented in the advertisements, some of the participants may not purchase products that they could otherwise enjoy. Some marketing decision makers think older consumers have already established preferences

and are unlikely to switch brands or experiment with new products (Mason et al., 2015). However, in my study, when asked how likely they were to try a substitute or competing product brand, 43% of participants indicated they would. Participants often shared stories about doing new things; several made comments about variety being the spice of life. This spirited attitude indicates that experimentation does not wane with age.

Q methodology provided a way to tap into the abilities of cognitively intact and cognitively impaired older adults. The process and results provided more depth and dimension than measuring pain intensity alone. Participants described the process of Q sorting through a format they could adjust to express their individualized viewpoint as meaningful. Participants were eager to tell their story.

Recognizing that groups of senior adults view stereotypes in magazine advertising differently indicates two important points. First, it seems unwise to draw general conclusions. If different senior adults view stereotypes in advertising differently, then it is also likely that different marketing decision makers also view the stereotypes differently. Presumably, companies for whom marketing firms develop their advertising have employees who also have divergent opinions regarding stereotypes. Second, marketing decision makers should question definitive conclusions regarding stereotypes in advertisements. Even though all three groups of senior adults in my study acknowledged offensive stereotypes in the various magazine advertisements, the existence of different types of perceptions indicates that perceptions of other senior adults may also vary. Research that is more comprehensive is necessary before marketing decision makers should accept such general assumptions.

Q methodology cannot help explain all questions related to senior perceptions of stereotypes in magazine advertising, but reveals how individuals group themselves according to the way they sort a specific set of items (McKeown & Thomas, 1988). In addition, Q sorting invites dialogue and provides a way to hear the individuals. The abductive nature of Q methodology allows researchers to work toward a hypothesis, not from a hypothesis. Perceptions influence individual health and happiness, as well as purchasing decisions.

I identified aspects about stereotypes that participants perceived as most and least offensive. The essence of subjectivity captured richer views on how people perceive the world. An individual's view may not depict what is actually happening but what the individual perceives is happening. This distinction is key to gaining insight into the phenomenon under study. The process was novel and made the individual pause and think about each advertisement. The activity of constructing an individualized Q sort served as a way for the participants to engage actively in telling their story. The process and results provided more depth into the multidimensional aspects of advertising than standard Likert-type scale surveys can reveal.

Marketing decision makers who do target older adult populations often employ clichés and stereotypes in their marketing messages (Coudin & Alexopoulos, 2010). Marketing decision makers have misjudged how sensitive seniors are to their own images in magazine advertisements. Most of the participants stated that the stereotypes portrayed in the advertisements would not cause them to change their product purchasing; however, participants believed that negative stereotypes of older adults were harmful to people of

all ages. Perceptions influence individual health, happiness, and purchasing decisions. Perceptions also influence expectations, which may affect satisfaction levels both positively and negatively (Meisner, 2012).

Seniors are very aware of how marketing decision makers use older models in advertisements, and many participants commented how unusual it is to see older adults in advertisements in general. Participants were outspoken in their dislike for that type of marketing practice and expressed an understanding of how those types of advertisements affected their self-esteem and how young people viewed them negatively. Earlier studies showed that although older adults do appear in advertisements, the advertisements are often for products such as pharmaceuticals or life insurance (Bracken, 2014; Chen, 2016).

My research findings were consistent with the tenets of social identity theory. Social identity theory hypothesizes that members of groups attempt to attain or sustain a favorable distinctiveness in part by making positive comparisons between their group (ingroup) and other relevant groups (out-groups; Tajfel & Turner, 1986). Building selfesteem is a powerful motivational force driving the comparison of oneself as a member of a high-status in-group as opposed to a member of a low-status out-group (Scholer et al., 2014).

Personal interviews revealed senior adults had concerns about a possible link between offensive stereotypes in advertising and their potentially damning affect to individuals' self-esteem. Participants felt offended by stereotypes that highlighted the physical waning connected with aging. They want others to view them as they view themselves: happy, active, and alive, not frail or out of touch with society. Participants

viewed the advertisements that portrayed older adults as being sickly or weak to be the most offensive. Stereotypes highlighting active lifestyles and loving relationships were least offensive. This finding confirmed earlier studies in which researchers concluded that many senior adults feel more youthful than their actual or chronological age and view advertisements more favorably when the advertisements reflect their self-concept (Hoffmann et al., 2012). Self-esteem steadily increases throughout adulthood until old age, when it starts to deteriorate quickly (Chonody & Teater, 2016). Constant exposure to negative advertising messages of older adults offends older adult shoppers and contributes toward ageism (Chasteen & Cary, 2015).

Age is a special social category because individuals invest a lifetime distinguishing their age group from senior adults, only to one day discover they too have become senior adults (Kite & Wagner, 2002). Perceptions of age stereotype threaten the creation of an accepted and favorable social identity (Barber & Lee, 2015). Using magazine advertisements provided an excellent opportunity to measure age stereotypes because of the prevalence of their use in society (Harwood & Roy, 2009).

This researcher repeatedly heard comments from the participants, such as, "No one has ever asked me questions about my own aging before," "I never thought anyone would want to hear from an old lady," "I'm so glad someone wants to hear what I have to say," "So meaningful to be included," "We need to talk about this more," and, perhaps the most telling of all, "We talk. We talk all the time. Nobody's listening." These comments demonstrate that senior adults internalize aging stereotypes and that they are aware that others hold negative age stereotypes toward them as a group. Perceptions of

stereotypes can arise from seemingly harmless activities such as a joke about graying hair or a silly birthday card making fun of the implications of growing old (Gendron et al., 2015). Senior adults clearly have something to say that is of value to marketing decision makers. Senior adults want people to listen to them, and future researchers can continue to give them a voice.

Ageist stereotypes are a social issue with adverse consequences. People grow older every day, and each individual is likely to experience some form of discrimination based on age stereotypes. Offensive age stereotypes threaten the creation of an accepted and favorable social identity for older adults and may distort perceptions of growing older in the minds of younger adults. Understanding the prevalence of ageism can help to create a best practices approach throughout the marketing industry to integrate members of different age groups and promote positive relationships. In addition, insight into how senior adults perceive stereotypes presented in advertisements could help challenge systematic generalizations, facilitate positive identity formations, and lead to a more satisfying quality of life for all members of society.

One of the most surprising findings in my study surfaced when many of the participants commented that fear tactics appear too often in advertising targeting older adults. Such advertisements portray older adults as being burdens to society (Meisner, 2012). Participants agreed that these types of messages caused younger adults to believe that growing old is undesirable and caused unhappiness in those individuals who acknowledge being in their senior years. One participant commented that marketing

decision makers always have a "cure in search of a problem," where the problem is growing old but desiring to remain young.

The key viewpoints uncovered in my study were like those found in earlier publications by Duduciuc (2016), Chen (2015), and Chonody and Teater (2016). The key findings were generally consistent with research that indicated that offensive stereotypes of any group might have potentially harmful or unintended effects (Gendron & Lydecker, 2016; Sharma, 2016). Research conducted by Robinson et al. (2008) concluded that if the presentation of senior adults in advertising messages was not respectful, then it would be hard to believe that younger adults would treat them differently (Smith et al., 2016). Robinson et al. (2003) noted that older adults found most offensive the advertisements that showed them as disconnected from society, ugly, and ridiculed. Advertisements that were informative or addressed real problems that older adults face were least offensive. Older adults also favored advertisements that portrayed them as being smart, energetic, and funny.

Throughout this research process, it was evident that many marketing decision makers realized that extensive attitude changes must take place to correct the negative self-image effects of mature adults to younger audiences portrayed by the media, but few are taking part in bringing about those changes. In the United States, a great value is placed on inanimate objects of days gone by, such as furniture, homes, and cars, but not on older adults. Martz (2010) summarized this ideology in an anthology, where she noted,

You value the earthen vase, each crack applauded for authenticity, a slave's

Freedom Quilt, hand-pulled stitchery a rare tale relinquished, Victorian silver
hairpins with filigreed flowers delicate as unconscious. A collector of ancients
quite proud of your tastes but scornful of curled brown leaves, slight grey webs,
parched desert soil of a woman turned and tuned to her ripening, whose life is
dear as a signed first edition, whose death as costly as a polished oak bed. (p. 76)

Martz described a paradox of beliefs within the United States. Many antique objects
receive the finest care, and many individuals classify them as invaluable. Many collectors
say that these objects, even though they cannot speak, have stories to tell about where
they came from through the ages. The collectors display these objects in glass cases, and
they become conversation pieces. The messages that these actions communicate to
members of the older generation is that they are insignificant compared to collectible

Limitations of the Study

experiences and usually want to talk about them, but not many younger people have the

antiques. Senior adults have many interesting stories to share regarding their life

patience or the time to listen.

The design of the study was effective in answering the research questions, but the limitations within the study pointed to the complexity of Q methodology. People do not always behave in a predictable manner. Subjectivity can lead to compromising validity and reliability. But, for methods such as Q methodology, subjectivity is the hallmark to a better understanding of the phenomenon under study. The current research yielded some

interesting findings, but limitations included creation of the Q sample, participant selection, and data analysis.

A potential bias exists related to the advertisements selected for the concourse or all the advertisements from which I derived the final Q sample. This bias may have been a limitation because I selected the advertisements and the advertisements reflected my interest. Because the research variables were the participants and not the advertisements, this was not a significant issue.

The advertisement selection might have been problematic because it was likely that participants had seen the advertisements prior to participating in the study. All the advertisements appeared in recently published popular newsstand magazines.

Furthermore, several of the advertisements were part of large-scale product marketing campaigns on billboards and television commercials. Even though I tried to select advertisements that were not likely to be the most popular or widely featured, participants might have seen some of the advertisements previously.

In addition, many of the advertisements featured only older male models. It was challenging to find advertisements featuring older adult females. It was even more challenging to estimate the age of many older female models definitively and visually. Older female models in advertisements often appeared to have dyed hair, wore cosmetics and fashionable clothing, or had favorable lighting conditions that masked their true age. I only selected advertisements if I could quickly determine an older adult model's age with reasonable accuracy.

Participant demographics for my study were also a limitation. The participants were a small group of residents from a single community located in the suburbs of a major city known for having expensive homes and a high cost of living. Volunteer participants appeared very social and lived healthy and comfortable lives, which might not be similar to a large percentage of the population of older adults in the United States. The basis of the research findings was the responses of relatively healthy senior adults with resources. The study might not adequately represent the voices of seniors outside this homogenous demographic profile. Despite an attempt to include senior adults who were ethnic minorities, all 30 participants were Caucasian.

It was challenging to recruit senior males for the study, and thus they accounted for only 33% (n = 10) of the total participants. I had scheduled several additional senior males to participate in the study, but they cancelled their appointments for unknown reasons. Therefore, the perceptions of senior women had greater weight in the final analysis. Individuals lower in social status, minorities, and females perceive more stereotypes (Trytten et al., 2012). Members of these identified groups may have been more sensitive to age stereotype. Similarly, participants may have neglected to attribute a stereotype to age because they attributed it to other reasons such as gender or race.

The rigorous use of factor analysis also potentially limited the research. The complexity and technical challenges inherent in factor analysis create room for error in carrying out this statistical method. The search for simple structure within each factor involves making judgments unique to each researcher. Similarly, it is likely that other researchers would not interpret and describe emergent factors in the same way. When

using Q methodology as a research method, like quantitative studies, incorporates a blending of science and art when interpreting the data (Teddlie & Tashakkori, 2009). However, adherence to the design and process in Q methodology brings confidence that the researcher had identified the prominent features of each factor.

Another limitation of my study is common to most social scientific research. Although I achieved the stated purpose of better understanding senior adult consumers to highlight their perceptions of the stereotypes used to portray older adults in magazine advertisements, the study results are not generalizable to the larger population. The results of this work serve as a snapshot of one small part of a much larger consumer market at a point in time. Although the results are illuminating, the changes occurring in the marketing industry are ongoing in many areas. It seems natural for the perceptions of senior adults regarding those changes also to be dynamic. Thus, conducting a similar study at another time or with a similar or different group of senior adults may yield different findings.

I conducted my study while the 2016 U.S. presidential election campaign was culminating. Society was exposed to an abundance of negative media related to the candidates' age and health issues. Exposure to negative political advertisements may have resulted in an increased awareness of older adult stereotypes and therefore influenced some of the participants' perceptions and responses.

Recommendations

Continued research on ageist stereotypes in magazine advertisements can be beneficial to both the marketing industry and to senior adults. Researchers could compare

advertisements from similar products or companies, such as fashion or entertainment, to determine how senior adults' perceptions differ among product sectors and industries. It was challenging to locate sufficient advertisements with older female models in which it was immediately reasonable to assume they were greater than age 50 years. Future researchers may incorporate a wider variety of magazine publications or search international publications for a greater variety of female representation.

Future research can address the limitations of this current study highlighted in the previous section and in Chapter 1. The participants in my study shared similar demographics. Future researchers might select participants from different geographic locations to determine the influence of cultural effects on perceptions of age stereotypes. All participants in my study were Caucasian and resided in a single upscale age-restricted residential community located in the suburbs of a major city. Conducting additional research using more diverse participants may provide a richer and more diverse prospective. Expanding the research internationally could certainly provide additional unique perspectives.

Furthermore, researchers could study different ages to highlight similarities and differences, for example, an age 50-60 years cohort, an age 60-70 years cohort, an age 70-80 years cohort, and an age 85+ years cohort. Researchers have frequently combined all older adults as a singular unified homogenous group consisting of anyone greater than the age of 50 years. However, the senior adult population, like the young and middle-aged segments, includes individuals with a broad spectrum of attitudes, beliefs, and perceptions. Younger age groups are important too. Future research should include

intergenerational studies to reconstruct how media have programmed people to view old age.

It would also be interesting to examine the role of preexisting attitudes toward advertising companies, products, or brands. Researchers could measure such attitudes using existing advertisements or manipulate attitudes using fictitious brands. It is not difficult to imagine that, if participants have positive preexisting attitudes toward a product or brand, perceived stereotypes in the advertisements might offend them less. Using unfamiliar advertisement product or service campaigns in the Q sample might reduce or eliminate any preconceived opinions participants might have of a product or a company featured in an advertisement. Future researchers could examine the following questions: (a) If information from media contradicts a stereotype, what expectancies are senior adults likely to retain? (b) Can stereotyped inconsistent information from the media bring about belief changes? (c) Does the type of program on television influence stereotype acquisition?

From a technical perspective, the time-consuming and intrusive nature of Q methodology administered in the one-on-one interview format may have contributed to the difficulty in finding organizations to participate in my study. Future researchers using Q methodology could administer studies more easily using an interactive web-based computerized format so that participating organizations need not provide a meeting room and so that participants can complete the Q sort at their leisure.

Computer- and interview-based Q sorts were equally reliable and valid (van Exel & de Graaf, 2005). Computer-based Q sorts would also be more effective for obtaining

geographically separate participants. A computerized web-based format for conducting simultaneous multiple Q sorts could be more convenient for participants. Obtaining data in a web-based format would also be faster than conducting sequential face-to-face interviews. As researchers select participants using predetermined criteria in Q methodology, the sampling biases encountered with web-based survey methods are not a factor. For a more penetrating interpretation of the data, researchers could also conduct interviews with participants by telephone after the Q sort.

The 2016 presidential election was especially divisive. Supporters of all candidates had strong opinions, and many negative media advertisements focused on the candidates' age and health-related issues. As participant interviews for my study occurred leading up to and just after the election, it would be enlightening to repeat the study with the same participants several months later to determine any effect from the negative political advertising.

Marketing decision makers should have a greater focus on the unintended consequences of their advertising. Some marketers face criticism regarding the possible unintended negative effect of their actions. If industry decision makers neglect to address the use of negative stereotypes, a chance of isolating a quickly growing senior market of potential consumers is likely. Levels of consumer self-esteem are linked to selling effectiveness. Stereotyping any generation may have potentially harmful side-effects (Chonody & Teater, 2016).

I can disseminate the key findings of this research in marketing trade publications and present them in industry conferences as examples of ageist stereotypes in print to

highlight different aspects of potential negative effects more easily. Pictures have always been the surest way of conveying an idea (Lippmann, 1922). Major online forums are also useful dissemination outlets to reach marketing decision makers. One goal is to generate interest and discussion regarding the potential negative financial effect for companies that continue to advertise their products and services without thorough consideration of offensive stereotypes toward senior adults. A better understanding of the quality-of-life issues that offensive stereotypes perpetuate and the economic loss that occur after alienating a significant market segment would benefit companies in all industry sectors. Consumers age 50 years and older have greater than 40% more disposable income than the average consumer, and the senior adult population is likely to reach 40% of the total adult population by 2025 (U.S. Census Bureau, 2012). The size and growth of the older population should cause marketing decision makers to reexamine the purchasing potential of this consumer segment.

It is equally important to investigate qualities related to positive outcomes associated with advancing age and to make those studies mainstream, not to set them aside in specialized journals of aging. The implications for a more positive research agenda in aging and advertising extend from promoting successful aging to informing programs aimed at preventing elder abuse and to implementing social policy change as society learns to adapt to changing demographics.

My study has implications for social change by increasing awareness of the negative effects of offensive magazine advertisements. Understanding how senior adults perceive stereotypes presented in magazine advertisements may challenge generalizations

and facilitate happiness, health, and positive identity formation. Studying various senior age categories is necessary to establish a balanced viewpoint. The primary focus of many previous studies of stereotypes of senior adults in advertising was all older adults as a singular unified homogenous group consisting of anyone greater than the age of 50 years (Addington, 2013). However, my study indicates that the senior segment, like the young and middle-aged, contains a broad range of individuals.

Exposure to positive stereotypes is much more desirable than exposure to negative stereotypes. Promoting relationships among various age groups is a suggested path toward positive social change. Decreasing age-based prejudice begins with reducing stereotypical thoughts, attitudes, and behaviors. Promoting interactions among members of various age groups is an effective way to forge long-lasting relationships where individuals can benefit from shared experiences.

Implications

My study included individual voices, unique viewpoints, and portraits of senior adults grappling with new and sometimes confusing changes in offensive stereotypes in magazine advertising. This research has valuable practical implications. Studying the perceptions of stereotypes in senior adults is important because perceptions affect purchase decisions and influence expectations that affect satisfaction levels. Insight into the research questions may improve existing advertising practices and inform marketing decision makers.

This research also has valuable social implications by increasing awareness of the negative effects of ageism. Understanding how senior adults perceive stereotypes

presented in magazine advertisements may challenge generalizations and facilitate the happiness, health, and positive identity formation in senior adults. The previous four chapters included the research background, the relevant literature, the Q methodology, and the research findings. This section includes a description of the potential affect of my research on making positive social change.

Stereotypes regarding senior adults are abundant in society, and individuals of all ages are often unaware of how stereotypes of aging shape perceptions. My study serves as additional support regarding the potential harm caused to senior adults owing to the existence of perceived offensive stereotypes in magazine advertisements. Perceptions can become reality, and creating a new reality is one way to change established perceptions. Greater sensitivity begins with increased awareness.

The findings of this research may positively affect product and service satisfaction levels for senior adults, in addition to improving their self-esteem and general quality of life. This research may have its greatest affect through the help of advocacy groups that have age-related issues as their focus. The Gray Panthers is one national advocacy organization whose members include not only older adults, but also young people and middle-aged people. Members of this organization have voiced concern regarding media images of aging. They have mounted a media watch to record evidence of ageism. The group has developed a list of characteristics that it considers stereotyping by the media, such as an expressionless and frail appearance, incoherent speech, and stubborn and rigid personalities.

Promoting positive social change by increasing awareness of the negative effects of ageism is also a positive outcome. Perceived age stereotypes are a barrier to individual goal achievement (Emile et al., 2014). Achieving goals in one domain of an individual's life carries into other domains of an individual's life, such as career success leading to personal and social success (Shawn et al., 2014). Moreover, achievement of a difficult goal positively relates to individual well-being, job satisfaction, personal developmental, and motivation toward future goal achievement (Dougherty et al., 2016). Increasing awareness of ageism can help seniors break down perceived barriers and prevent their achievement of goals, establish a positive self-identity, develop a positive well-being, and enjoy a high degree of life satisfaction (Dougherty et al., 2016).

Examination of participant data that had a significant affect on each factor revealed commonalities that addressed the research questions. Senior adults deemed advertisement stereotypes that portrayed older adults as being sickly or weak to be most offensive. Stereotypes highlighting active lifestyles and loving relationships were least offensive. Using Q methodology allowed the researcher to gain insight into the cultural and economic factors that appear to be driving perceptions of senior adults. The results of my study have several implications for marketing decision makers and for researchers interested in gaining additional knowledge about the marketing industry.

Advertising in the United States is a \$250 billion per year industry (White et al., 2012). Advertising affects what vehicles individuals drive, the clothes they wear, the vacation they take, and the votes they cast. Advertising messages also contain offensive stereotypes (Kay & Furnham, 2013). People see millions of advertisements during the

course of their lifetime. Although they will ignore and not mentally process the clear majority of advertisements, they internally process many of the advertisements (Tian, 2015). Constant exposure to offensive advertising messages offends older adult consumers and contributes toward ageism.

Advertisers must reinvent themselves and constructively review their marketing techniques regarding the diverse elderly population in the 21st century. Although marketing decision makers have initiated some changes and realizations concerning older adults in advertising, more work is necessary to change the public's attitude completely toward stereotyping older adults. The gradual paradigm shift of a small percentage of marketing decision makers in the United States toward older adults is instrumental in making shifts to dissipate the negative perceptions (e.g., weak, inept, crazy, and grouchy) of older adults and respect their needs.

The advertising agency of Ogilvy and Mather has garnered high levels of respect in the media industry. Decision makers at Ogilvy and Mather changed their marketing strategies and no longer isolate older adults in advertising campaigns. Opposing industry standard practices, the leaders of Ogilvy and Mather do not portray senior adults as being a problem or burden to society; rather, they promote the benefits and value older adults provide (Swinnen & Stotesbury, 2012).

Advertising is a global medium within a global economy. The United States is the largest exporter of media content, and the world is becoming a more homogenous global consumer culture. Seeing senior adults presented in a positive light in U.S. media sources

could have a significant positive affect on the treatment of older populations in other countries.

Understanding the prevalence of ageist stereotypes is an initial step in creating an effective approach to reducing stereotyped thoughts, attitudes, and behaviors among age groups and to eliminating the inaccuracies associated with age-expected behavior.

Having a more comprehensive understanding of the perceptions held by older adults_is necessary for advertisers, brand managers, and anyone interested in the field of marketing.

People learn about aging many ways, such as personal contact with senior adults, idle talk, stereotypes, and personal experience. Other sources include books, magazines, movies, and television. It is also important to add advertisements in the list. Advertising can serve as a reflection of culture. Advertising enables individuals to learn about senior adults in addition to how to become a senior adult. Understanding how senior adults perceive stereotypes presented in advertisements could help challenge systematic generalizations and facilitate happiness, health, and positive identity formation.

Conclusion

Marketing decision makers often employ clichés and stereotypes in their marketing messages. Advertisements portray senior adults in many ways, from healthy and rich to lonely and sick. Each representation helps to cultivate the formation of stereotypes. The general problem is that many senior adult consumers feel dissatisfied with advertising directed toward them and may not purchase products that they could

otherwise enjoy. The specific problem is the need for a better understanding of the perception of senior adult consumers regarding targeted advertisements.

The purpose of this Q methodology study was to gather and analyze the perspectives of senior adults regarding perceived stereotypes in magazine advertisements featuring older adult models to have a better understanding of the most important factors that influence their purchasing decisions and of which stereotypes they find most and least offensive. The research questions used in my study were suitable for identifying evidence to use to improve advertisements targeting the senior population. Studying the perceptions of senior adults is important because perceptions affect purchase decisions and influence expectations that affect satisfaction levels.

This research helps fill a gap in the existing literature regarding the perceived stereotypes of senior adults toward magazine advertisements. My study involved examining how a small group of senior adults perceived levels of offensiveness toward ageist stereotypes in magazine advertisements featuring older adult models. My study included the perceptions of three distinct groups of senior adults, and each group viewed the stereotypes portrayed in magazine advertisements from a unique perspective.

Participants felt least offended when advertisements portrayed older adults as happy, healthy, and active. The most offensive advertisements portrayed older adults as weak, sickly, or cartoonish looking. Perceptions of stereotypes in advertisements are dependent upon an individual's vantage point.

The desired effect of Q methodology is to isolate the perceptions of different groups. It also seems simplistic and intuitive, but to my knowledge, researchers have not

studied magazine advertising research using Q methodology with participants ages 70-85 years. Participants were eager to share their stories, and Q methodology provided a way for senior adults to provide more depth to the perceived meaning behind each advertisement. Although Q studies are labor intensive, the data are rich in information. Researchers cannot use Q methodology to explain all questions related to stereotypes, but it worked well when subjectivity was an aspect of the research. Q sorting incorporates dialogue and allows individuals to feel heard. The different points of view gained through this research provide additional avenues of opportunity to improve the quality of life for senior adults and for marketing decision makers to deliver their messages more effectively.

Marketing decision makers, specifically in print magazine advertising, use stereotypes perceived as offensive to senior adults. These offensive advertisements serve to reinforce or shape perceptions that senior adults have about themselves and that society has toward older adults in general. Despite the concentrated spending power the senior adult age cohort wields, changes to reduce or eliminate negative or offensive ageist stereotyping by the marketing industry have been slow to occur.

Different company and product or service advertisements relay informative, entertaining, and persuasive messages to society, but not all messages are accurate representations or psychologically beneficial to senior adults. By viewing the different magazine advertisements, senior adults and all members of society may develop a distorted and unrealistic portrayal of the process of ageing and older Americans. When individuals view nonverbal messages such as magazine advertisements, they may rely on

what they have learned through other forms of media to interpret what message the advertisement is trying to convey. Thus, the information that the public receives from the media may create a bias, especially with regard to older adults. The bias against seniors may affect the way that older people purchase or do not purchase, certain products or services, and how these people feel about themselves and others around them.

Offensive ageist stereotypes affect how older people feel about themselves and how younger people feel about old age and their prospect of growing old. Negative or offensive stereotyping of older adults has produced a societal cost of neglecting and portraying senior adults unfavorably. This practice reinforces ideas that older people are insignificant. More important, this behavior by the media may reinforce negative self-images of older adults, where they may think of themselves as underrepresented and deprecated in advertising. Marketing decision makers could serve the elderly in a positive way by showing senior models in advertising as equal members of society.

Zaltman (2003) wrote, "When it comes to buying, 95% of our decision making takes place in the unconscious mind" (p. 42). Perceptions are unconscious creations used in part of the internal process that evaluates the value and quality of a product or service. Perceptions also shape customers' attitude toward products or services. Therefore, marketing decision makers should strive to appeal to individual perceptions rather than attempt to create lower cost or best-quality products. I hope that many more researchers will join the effort to develop a more thorough and genuine understanding of senior adults who are intelligent, happy, active, healthy, and valued citizens.

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ARE YOU AGE 70 to 85?

VOLUNTEERS NEEDED FOR A STUDY OF STEREOTYPES IN MAGAZINE ADVERTISEMENTS

Your ageing experience is unique, and your input will make a valuable contribution to the understanding how older adults perceive ageing.

I am a student at Walden University and conducting a study for my doctoral dissertation. I am recruiting individuals between the age 70 and 85 years that are able to make their own decisions to participate in study regarding their perceptions of stereotypes present in magazine advertisements.

The primary focus of many previous studies of stereotypes of senior adults in advertising has been all older adults as a singular unified homogenous group consisting of anyone greater than the age of 50. However, the senior segment, like the young and middle-aged, contains a broad range of individuals. Studying various senior age categories is necessary to have a more balanced viewpoint. The general problem is that many older adult consumers feel dissatisfied with advertising directed toward them and may not purchase products that they could otherwise enjoy. There is a need for a better understanding of the perception of older adult consumers regarding targeted advertisements. The focus of this proposed study will be on 30 volunteer participants belonging to a specific age cohort, age 70 to 85 years.

The study requires each participant to view and rank a series of 40 magazine advertisements and answer a few follow up questions regarding their decision-making process. The study will be conducted

at this location, confidential, and is expected to take approximately 45 minutes.

Please contact me to learn more about this study. Afterwards, if you are still interested in participating we can schedule an appointment at a mutually agreeable time. You have no obligation to participate in the study.

Greg Milsom, PhD candidate Greg.Milsom@waldenu.edu

Appendix B: Questionnaire

Pa	articipant code:	
Th	hase I: to be completed prior to the Q sort ne purpose of this questionnaire is to gather general demographic information and to infirm that you meet the criteria for the study.	О
1.	Gender: Male Female	
2.	Race:	
3.	Age in years	
4.	How old do you feel?	
5.	Highest level of education	
6.	How would you describe your religious beliefs	?
7.	Where does your yearly (gross) household income fall within? (circle one) Less than \$10,000 \$30,000 - \$34,999 \$60,000 - \$74,999 \$10,001 - \$14,999 \$35,000 - \$39,999 \$75,000 - \$99,999 \$15,000 - \$19,999 \$40,000 - \$44,999 \$100,000 -\$124,999 \$20,000 - \$24,999 \$45,000 - \$49,999 \$125,000 -\$149,999 \$25,000 - \$29,999 \$50,000 - \$59,999 \$150,000 -\$199,999 \$200,000 or more	
8.	How would you best describe your current living situation (check all that apply)? AloneWith spouse or life partnerWith family member (other than spouse or partner)With friendRetirement communityAssisted living Other: (describe	:)
9.	Have you ever been employed in the advertising industry? Yes No	

Do not write below this line . To be completed by researcher
Phase II: to be completed after the Q sort 10. Why did you select the three most offensive and three least offensive advertisements?
11. Is there any harm or danger to senior adults resulting from the portrayal of older adults in a stereotypical manner?
12. How might younger people be affected from viewing advertising messages portraying older adults in a stereotypical manner?
13. Would any of the advertisements featuring offensive stereotypes stop you from buying the advertised brand?

Appendix C: Sorting Instructions

Each randomly numbered advertisement from the Q sample is printed in color, protected in clear lamination, and measures approximately 5x7 inches. The advertisements are presented to each participant with the following instructions.

INSTRUCTIONS

In front of you is sorting grid and a pile of 40 advertisements featuring older adult models which have appeared in mass circulation, general audience American magazines from 2010-2015.

- 1. Review each advertisement first to be familiar all the images.
 - Review the advertisements again and place them into three piles of approximate equal number. (note: the numbers on each advertisement are for data collection purposes only and in no way indicate importance or placement)
 - Place the advertisements that you do not find offensive in a pile to your right. Place the advertisements that you find offensive in a pile to your left.
 - Place in the middle advertisements that are neutral, you neither find them to be offensive or inoffensive, or you are unsure about.
- 2. Pick the pile of advertisements on your right, those which you do not find offensive.
 - From it, select the three advertisements you find least offensive and place them on the grid under the +4 column. It does not matter which advertisement is at the top of the column and which is at the bottom.
 - From the remaining advertisements in the same *least offensive* pile, select the next four advertisements you find least offensive and place them under the +3 column.
 - From the remaining advertisements in the same *least offensive* pile, select the five advertisements you find least offensive and place them under the +2 slip.
 - Continue sorting advertisements from the *least offensive* pile until you run out of advertisements.
- 3. Pick the pile of advertisements on your left, those which you find offensive.
 - From it, select the three advertisements you find most offensive and place them on the grid under the -4 column.
 - Continue sorting for most offensive in a similar fashion until you run out of advertisements from your *most offensive* pile.
- 4. Pick up the remaining pile of advertisements and place them on the grid under the +1, 0, and -1 column headings.
- 5. Finally, review the placement of all advertisements on the sorting grid and make any adjustments needed to accurately present your views. Remember it is the column placement for each advertisement which is most important, not the row or position within the column.

Thank you for your participation.

Q Sort Log Sheet

Participant	
Code:	

-4	-3	-2	-1	0	1_	2	3	4

Appendix E: Correlation Matrix Between Sorts

Sorts		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	HXK	100	14	10	44	27	33	23	-10	-2	14	35	23	-18	47	44	38	29	41	44	33	20	31	39	34	37	24	31	27	31	25
2	GSH	14	100	6	19	25	1	21	16	30	-21	8	47	24	17	33	14	45	8	38	41	7	23	35	32	28	13	15	19	34	34
3	GQW	10	6	100	29	21	30	4	39	4	0	21	13	7	15	9	26	7	7	11	6	-13	-10	-9	-11	1	5	2	-8	-1	16
4	XZQ	44	19	29	100	30	20	26	29	17	3	50	29	2	36	24	45	18	34	37	46	18	44	53	22	43	19	42	40	25	23
5	KXM	27	25	21	30	100	31	34	24	-20	11	47	6	14	3	16	15	26	-7	39	24	5	26	35	23	35	24	13	26	16	26
6	KLW	33	1	30	20	31	100	-1	14	-26	28	-9	15	-15	24	28	-1	18	6	9	17	18	2	20	14	19	33	29	21	22	37
7	BCS	23	21	4	26	34	-1	100	-4	25	32	26	33	7	33	24	24	23	41	39	39	47	48	47	33	49	29	50	37	17	42
8	GGH	-10	16	39	29	24	14	-4	100	38	-19	8	-10	51	-4	23	7	1	-11	8	14	-23	5	22	10	0	15	-6	10	14	27
9	PKA	-2	30	4	17	-20	-26	25	38	100	-11	-3	7	62	8	17	14	2	28	11	32	-7	26	31	27	4	-1	10	15	24	21
10	HJO	14	-21	0	3	11	28	32	-19	-11	100	-4	11	1	33	15	32	11	46	8	24	47	38	7	16	36	40	20	22	1	24
11	WVX	35	8	21	50	47	-9	26	8	-3	-4	100	20	8	25	34	39	19	16	50	28	11	36	28	8	28	9	15	29	13	0
12	KQR	23	47	13	29	6	15	33	-10	7	11	20	100	-5	39	31	25	33	34	8	44	39	22	34	21	26	28	27	39	19	36
13	FGM	-18	24	7	2	14	-15	7	51	62	1	8	-5	100	-3	27	10	2	9	12	23	-19	24	27	10	-7	14	-14	7	17	0
14	HLT	47	17	15	36	3	24	33	-4	8	33	25	39	-3	100	54	62	53	63	50	54	44	63	53	45	51	56	49	44	48	34
15	JRP	44	33	9	24	16	28	24	23	17	15	34	31	27	54	100	34	45	41	62	53	36	50	54	49	48	59	36	44	50	45
16	JAQ	38	14	26	45	15	-1	24	7	14	32	39	25	10	62	34	100	52	49	54	41	32	46	35	47	63	33	28	44	23	25
17	LPB	29	45	7	18	26	18	23	1	2	11	19	33	2	53	45	52	100	31	60	46	45	48	42	60	57	42	22	51	39	39
18	AQX	41	8	7	34	-7	6	41	-11	28	46	16	34	9	63	41	49	31	100	50	53	58	61	47	38	40	55	51	43	26	21
19	GXR	44	38	11	37	39	9	39	8	11	8	50	8	12	50	62	54	60	50	100	50	46	62	61	53	61	47	48	43	34	24
20	BKB	33	41	6	46	24	17	39	14	32	24	28	44	23	54	53	41	46	53	50	100	55	73	67	48	69	57	59	63	36	38
21	KRG	20	22	-13	18	5	18	47	-23	-7	47	11	39	-19	44	36	32	45	58	46	55	100	50	46	44	62	51	52	54	5	28
22	CDX	31	23	-10	44	26	2	48	5	26	38	36	22	24	63	50	46	48	61	62	73	50	100	66	50	58	62	48	47	43	23
23	JPA	39	35	-9	53	35	20	47	22	31	16	28	34	27	53	54	35	42	47	61	67	46	66	100	47	48	52	58	56	43	47
24	PQR	34	32	-11	22	23	14	33	10	27	16	8	21	10	45	49	47	60	38	53	48	44	50	47	100	61	46	33	50	42	45
25	JBY	37	28	1	43	35	19	49	0	4	36	28	26	-7	51	48	63	57	40	61	69	62	58	48	61	100	46	49	63	35	47
26	CFP	24	13	5	19	24	33	29	15	-1	40	9	28	14	56	59	33	42	55 51	47	57	51	62	52	46	46	100	42	37	39	42
27	HPJ	31	15	2	42	13	29	50	-6	10	20	15	27	-14	49	36	28	22	51	48	59	52	48	58	33	49	42	100	66	35	31
28	QPR XYZ	27 31	19 34	-8	40 25	26	21 22	37 17	10 14	15 24	22	29 13	39 19	17	44 48	44 50	44 23	51 39	43	43 34	63 36	54 5	47 43	56 43	50 42	63 35	37 39	66 35	100 36	36 100	43 33
29 30	HIO	25	34	-1 16	23	16 26	37	42	27	24	24	0	36	0	48 34	45		39	26 21	24		28	23	43 47	42	33 47	42	31	43	33	100
30	пЮ	25	34	16	23	20	3/	42	21	21	24	U	30	U	54	45	25	39	21	24	38	28	23	4/	45	4/	42	31	43	33	100

Appendix F: Unrotated Factor Matrix

		Factors													
Q Sort		I	II	III	IV	V	VI	VII	VIII						
1	HXK	0.53	-0.13	0.36	-0.14	-0.06	-0.12	0.27	-0.26						
2	GSH	0.41	0.43	-0.05	0.19	-0.52	0.13	0.16	0.20						
3	GQW	0.11	0.29	0.56	0.01	0.42	0.03	0.31	0.35						
4	XZQ	0.55	0.20	0.34	-0.33	0.14	0.29	0.19	-0.16						
5	KXM	0.37	0.21	0.57	-0.04	-0.11	0.08	-0.57	0.05						
6	KLW	0.29	-0.16	0.54	0.58	0.23	-0.01	0.00	-0.20						
7	BCS	0.57	-0.07	-0.11	-0.12	0.03	0.45	-0.24	0.16						
8	GGH	0.13	0.75	0.17	0.19	0.33	0.01	-0.12	0.02						
9	PKA	0.23	0.61	-0.56	-0.04	0.16	0.17	0.18	0.03						
10	HJO	0.35	-0.49	-0.08	0.11	0.53	-0.06	-0.23	0.27						
11	WVX	0.40	0.18	0.40	-0.64	-0.08	0.01	-0.08	-0.01						
12	KQR	0.47	-0.07	0.03	0.15	-0.19	0.41	0.44	0.26						
13	FGM	0.14	0.72	-0.36	-0.02	0.29	-0.11	-0.21	0.08						
14	HLT	0.75	-0.18	-0.02	-0.02	0.13	-0.23	0.35	-0.03						
15	JRP	0.71	0.17	0.01	0.16	0.00	-0.29	0.06	-0.15						
16	JAQ	0.64	-0.02	0.08	-0.33	0.11	-0.26	0.19	0.37						
17	LPB	0.66	-0.01	0.04	0.12	-0.37	-0.32	0.02	0.31						
18	AQX	0.68	-0.23	-0.30	-0.17	0.34	-0.02	0.25	-0.01						
19	GXR	0.75	0.08	0.08	-0.27	-0.16	-0.27	-0.15	-0.04						
20	BKB	0.81	0.08	-0.15	0.00	0.02	0.17	-0.01	-0.04						
21	KRG	0.64	-0.52	-0.19	0.02	0.00	0.15	-0.14	0.14						
22	CDX	0.79	0.00	-0.25	-0.22	0.11	-0.10	-0.16	-0.10						
23	JPA	0.78	0.19	-0.09	0.00	-0.04	0.18	-0.10	-0.29						
24	PQR	0.68	0.04	-0.16	0.16	-0.23	-0.24	-0.10	0.11						
25	JBY	0.79	-0.17	0.06	-0.04	-0.14	-0.01	-0.18	0.19						
26	CFP	0.69	-0.12	-0.07	0.28	0.25	-0.23	-0.14	-0.07						
27	HPJ	0.66	-0.22	-0.04	0.01	0.06	0.35	0.03	-0.37						
28	QPR	0.73	-0.07	-0.04	0.04	-0.10	0.22	-0.09	-0.06						
29	XYZ	0.53	0.23	-0.04	0.23	-0.14	-0.24	0.16	-0.36						
30	HIO	0.56	0.11	0.12	0.53	-0.01	0.20	-0.02	0.19						
	Eigenvalues	10.297	2.730	2.098	1.741	1.569	1.394	1.359	1.204						
	% expl.Var.	34	9	7	6	5	5	5	4						