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AGE, HEALTH, AND DRIVING ABILITY: PERCEPTIONS OF OLDER ADULTS

by

CELESTE E. SELWYN

Under the Direction of Jaye L. Atkinson, PhD

ABSTRACT

This paper presents the results of a focus group study exploring older individuals' perceptions of older drivers. The study extends the stereotype research of Joannis, Gagnon, and Voloaca (2012b), further investigating the terms used to describe older drivers. Also explored were the ways older adults perceive age versus health in their considerations of driving. Three focus groups (N=24) were conducted with former and current drivers, 64 years and older, living in Asheville, North Carolina. Participants showed positivity in their descriptions of older drivers as "slow" and "cautious" and believed they adapted their driving behavior as aging demanded. Participants showed heterogeneity in their acceptance of the health issues that threatened their continued driving ability. The importance of context in understanding stereotypes of older adults is illustrated. Results are discussed in terms of ingroup/outgroup theory in line with the proposed model.

INDEX WORDS: Older drivers, Stereotypes, Aging, Adaptation, Driver cessation, Focus groups

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CELESTE E. SELWYN

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

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2014

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DEDICATION

This work is dedicated to my husband, who lovingly personifies "Helpmate" and to my mom, who illustrated the value of going back to school.

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I gratefully acknowledge the support and help of Dr. Jaye Atkinson, who started as teacher/mentor and then became a friend. Thanks also to Candace Kemp, who has graciously demanded more of me all along and to Miriam Konrad, who helped me brainstorm with great enthusiasm. I am also grateful to all the faculty and staff of the Gerontology Institute, who touched my life in so many positive ways.

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1 CHAPTER 1: INTRODUCTION

According to the U.S. Census Bureau (2010), the population of those in this country 65 or older is approximately 40 million. In the current decade, that number will grow to 55 million, representing an increase of 36%. Further, the fastest growing population group is those age 85 years and above, whose ranks will increase to 6.6 million by 2020 (AOA.gov, 2009). Many older Americans now and in the future will be drivers.

Many of those over 65 have grown up behind the wheel of a car and indeed, American's love their automobiles and the "freedom of the open road" (McKnight, 2000, p. 25). Figures from the recent past indicate that among those 70 years of age and older, 80% of women and 90% of men possessed a drivers' license (Marottoli et al., 2000). However, the numbers of older drivers on the road and the numbers of miles driven by older drivers are expected to more than double in the next decade (Dellinger, 2012; Foley, Heimovitz, Guralnik & Brock, 2002; Gantz, 2002; Rosenbloom, 2004).

Baby boomers, the post war cohorts born between 1945 and 1964, represent the fastest growing segment of drivers on American roads. According to D'Abrosio, Coughlin, Pratt and Mohyde (2012, p. 23), "There is nothing in the lifestyle of baby boomers—in their work, their use of medical services, or shopping or leisure activities—that suggests that their demand for transportation will decline drastically as they reach retirement age." If projections hold, a quarter of the cars on American roads will be piloted by drivers 65 and over by 2030 (Dellinger, 2012).

Yet increasing age brings health decline for many and this decline may eventually lead to driving cessation (Foley, et al., 2002; Marotolli, et al, 2000). This is a "chicken and egg" scenario as health declines are known to lead to driving cessation and "generally, health declines more sharply following driving cessation" (Edwards, Lunsman, Perkins, Rebok, & Roth, 2009,

p. 1290; see also Marottoli, et al., 2000). Older persons seem to correlate loss of driving ability with loss of independence and freedom (Shope, 2003). Thus for many, driving cessation equates to a “major stressful life event” (Davey, 2007, p. 54).

This stressful event in individuals’ lives also has documented costs to families and governments. Driving cessation is “among the strongest predictors of depressive symptoms in older people” (Davey, 2007, p. 50). Depression can hasten decline; depression “leads to increased medical expenditures” (D’Abrosio, et al., 2012, p. 19).

There are other costs involved as well. Older citizens who drive are significantly more likely to participate in activities outside their homes (Davey, 2007; Marotolli, 2000). Thus the removal of these older drivers from circulation also lessens their impact as consumers and as part of the workforce, both as employees and volunteers (D’Abrosio, et al., 2012; Kim & Richardson, 2006). It may thus be imperative that societies work to extend the driving lifetimes of their aging populations.

1.1 The Problem

Unfortunately, safety issues in this population are often misunderstood and generally viewed not through the window of fact but through an on-going mirage of stereotypical considerations: old people drive too slowly; they cannot see over the steering wheel; they are more dangerous than everyone else; they should not be on the roads threatening the rest of us (Joanisse, Gagnon, & Voloaca, 2012b).

According to the U.S. Department of Transportation (DOT), “Older drivers are stereotyped by popular culture as incapable of driving safely. This is incorrect, and hampers the dissemination of accurate information” (2013, n.p.). In addition, the actions of older adults may well be affected by how they comprehend and value these same stereotypes. “The process of age

stereotypes becoming self-relevant for individuals is facilitated by their encounters with a plethora of societal cues, usually pejorative, that indicate they are old” (Levy, 2009, p. 334).

Steele and Aaronson (1995) found that negative stereotyping creates an inherent threat to well-being and that individuals essentially incorporate these stereotypes into their actions. This *stereotype threat* has been found to affect older drivers negatively, making them question their skill levels and undermining their confidence (Joanisse, Gagnon, & Voloaca, 2012a).

1.2 The Proposed Study

Previous studies identify stereotypes of older drivers through research involving younger age groups. Absent are studies involving older adults' perspectives. The overall aim of this thesis is to understand how drivers older than 65 perceive older drivers, how they distinguish between age and health when considering driving ability. It is hoped that findings from the study will further the literature on older driver stereotypes and aid in the dissemination of information leading to better understanding and acceptance of the older driver across age groups.

The thesis contains five chapters. Following this introduction, Chapter 2 reviews the literature to identify the established health and safety risks posed by older drivers and to compare these with commonly held stereotypes of older drivers. The chapter also outlines the theoretical framework. Chapter 3 details the research questions, research methods, and analyses. Chapter 4 presents findings of the study and how they address the research questions. Chapter 5 discusses the findings in terms of the past literature by offering overall conclusions, identifying limitations of this study and directions for future research.

2 CHAPTER 2: LITERATURE REVIEW

2.1 Roots of Older Driver Stereotypes

Allport defined stereotypes and stereotyping in 1954, saying that people form beliefs about the world by organizing and categorizing the details of interactions with others. A stereotype, he said, “is an exaggerated belief associated with a category...its function is to justify our conduct in relation to that category” (p. 191). Thus a stereotype generalizes characteristics of a group, sometimes negatively, sometimes positively but usually with little regard for the traits of individuals.

The term, “ageism” was first identified in 1969 by Robert Butler. He defined ageism as “a process of systematic stereotyping and discrimination against people because they are old” (Butler, 1993, p. 76). This process has come to be understood more broadly as prejudice, either positive or negative, toward any group because of age (Palmore, 1999). As study after study validated the existence of ageism, Kite, Stockdale, Whitley and Johnson (2005) concluded that, “Perhaps it is time to get [sic] aside the question of whether ageism exists and continue to explore when and where the consequences are most severe” (p. 259).

2.1.1 *Social identity theory*

The study of stereotyping has been based, in part, on the hypothesis of Allport’s seminal book, *The Nature of Prejudice* (1954). Allport believed that humans psychologically separate contacts into in-group (those with whom they can identify) and out-group members. This hypothesis, known as Social Identity Theory, also posits that such psychological grouping leads to defining differences and thus to stereotyping (Allport, 1954).

In-group preference appears to develop from an early age. Infants, raised by females, are known to prefer looking at female faces and also to prefer the faces of members of their own race

(Dunham, Baron & Banji, 2008). Seefeldt and Ahn (1990) found young children distinguish between younger and older faces and show negativity toward the older (cited in Harwood, 2007). This inherent visual preference extends to 4-6 year olds who show a preference for members of their own ethnicity (Dunham, et al.). It is therefore thought that “implicit in-group preference emerges as soon as an in-group, out-group contrast is acquired” (Dunham, et al., p. 250).

Harwood, Ryan, Giles and Tysoki, (1997) cite a comprehensive meta-analysis by Kite and Johnson (1988) that specifies that younger adults find older adults to be a distinct out-group. Middle-aged adults also identify older adults as an out-group, according to Hummert, Garska, Shaner, and Strahm (1994). They also found that middle-aged adults differentiate more types of older adults than do the young. It appears that, as people age, “their definitions of ingroup/outgroup categories based on age also change” (p. 248).

Thus while inherent preference may be evident from a young age, learned behavior clearly plays a part in in-group/out-group dynamics (Dunham, et al., 2008). Social schema are knowledge structures particular to a society and include implied rules on what to believe and how to behave in particular social situations. Older adults, by virtue of their longer lives and both accumulated and generational experience, are considered more influenced by social schema (Blanchard-Fields, 1996).

Tajfel (1981) expanded upon Social Identity Theory, suggesting the criteria for in-group/out-group sorting are fairly minimal and that people’s natural bias leans toward the more known group. This group identity was also part of the basis of self-identity. In order to feel positive as a member of a group, an individual must categorize his in-group using positive qualities. Thus, people feel better about themselves if they feel good about their group identity (Chasteen, 2000).

This distinction pertains to involuntary membership of a group like “older adults” or “automobile drivers.”

It could be assumed, therefore, that older adults identify closely with other older adults. However, ingroup/outgroup categorization by older adults is multifaceted, perhaps partially as a facet of the social schema they have internalized (Levy, 2009). Older adults differentiate even more characteristics of their age group than do younger or middle aged adults (Hummert, et al. 1994). This expanded view of their peers may also be a reflection of their density of life experience, which provides “richness” to their views on aging (Heckhausen, Dixon & Baltes, 1989). Further, the old are more positive about their aging than are the young (Chasteen, 2000; Harwood, et al., 1997; Heckhausen, et al). Thus within their own age group, older adults tend to identify with those they perceive as more vital and to have negative reactions to people who have more negative characteristics, apparently appreciating positive qualities of youth (Kite, et al., 2005). Indeed, if people do not identify with a particular group, they are not likely to behave as group members (Hogg, 2006).

How might Social Identity Theory pertain to older driver perceptions? According to Joannis, et al., (2012b), younger drivers often rate individual older drivers as equal to or better drivers than their own peers. Studies have shown that young adult’s positive interactions with older individuals can lessen the effect of previously held stereotypes (Hernandez & Gonzalez, 2008). Yet young people believe older adults, as a group, may be less competent and cognizant behind the wheel (Joannis, et al., 2012b). These distinctions are in line with Allport (1954) who believed that positive contact with out-group members leads to a lessening of negative stereotypes. Conversely, he said, negative contact with out-group members leads to stereotyping

of the entire contact group. Older drivers as a group appear to be a distinct out-group for young people and are judged rather harshly, perhaps on the basis of a few negative contacts.

2.1.2 Othering

An adjunct theory to Social Identity Theory considers that othering leads to marginalization of particular groups; that is, “by talking about individuals or groups as other, one magnifies and enforces projections of apparent difference from oneself” (Johnson, et al., 2004). Such magnification of differences may further alienate younger drivers from those older.

Othering may also be one reason older drivers tend to rate their own driving reflexes as better than their peers (Matthews & Moran, 1986). These older adults may prefer to place themselves outside the grouping of older drivers, emphasizing their own individuality. This difference may speak to a recognition that age and its variables can have an effect on driving ability and a desire to see one’s self in a grouping of “good drivers” as opposed to “older drivers.” However, older drivers who have a history of traffic accidents tend to rate themselves as less capable than their peers (Matthews & Moran, 1986). It may be that these older drivers know they have never been “good” drivers. It may be that they project a negative grouping of themselves as “older drivers” or “dangerous drivers.” Perhaps these drivers simply recognize authentic declines in health and abilities.

2.2 Stereotypes of Older Adults

Palmore (2005) believes stereotypes of aging are most likely to be negative. While there is some scholarly disagreement toward this blanket statement, there is much recognition that older adults are looked upon as less physically and mentally able than their younger counterparts (Castelli, 2005; Kite, et al., 2005; Robinson, Gustafson & Popovich, 2008). This study considers only those stereotypes concerning the physical and cognitive attributes of older adults.

2.2.1 *Stigma*

Widrick and Raskin (2010) said, “When people display attributes that conflict with societal values, a stigma is attached” (p. 376). Stigmatization, categorized by negative judgment of others, offers another channel for stereotyping. In the case of age and older adults, the values in conflict are often associated with youth and beauty and by extension, health (Widrick & Raskin). Indeed, Kite (1996) has suggested that qualities of agency, i.e. what we understand as the capacity to act, are most often attributed to the young. This connection between agency and youth may be particularly important when considering perceptions of an activity as task oriented as driving. Luken (1987, cited in Widrick & Raskin), believed that “specific situations have the potential to generate stigma about the aging population” (p. 376). Older adults as drivers provide just such a unique situation.

2.2.2 *Young adult attitudes*

Slotterback and Saarnio (1996) examined young adults’ attitudes toward older adults by asking study participants to complete a sentence stem. For example, given the open-ended statement, “I think old people are...” participants were asked to add descriptors (p. 565). These open-ended tasks led to the conclusion that “attitudes about the physical attributes of older adults were overwhelmingly negative” (p. 566). This finding is supported by the Kite, et al. (2005) meta-analysis, especially in their finding that, perceptions of “attractiveness and physical ability” decrease with age (p. 245).

2.2.2.1 *Physical traits*

This negative bias toward the older adults’ physical abilities can be considered in greater depth by identifying traits associated with older adults. Hummert et al. (1994) identified specific positive and negative stereotypes of older adults by asking study participants (n=240) to describe

the typical elderly adult. The descriptors generated by members of young, middle age and older adult age groups were then coded and quantified, resulting in a list of 97 traits. Consequent grouping of these traits by participants led to seven stereotype categories of which four were found to be negative. Within the negative stereotypes, participants identified categories consistent with physicality, including “severely impaired.” Among the list of traits identified under “severely impaired” were feeble, sick and slow moving. A further look at these categories finds other characteristics to include “tired, forgetful, slow moving, feeble and dependent” (Hummert, et al., 1994, p. 246). It may also be noted that only younger adults in this study added created the category, “Vulnerable.” to the formerly recognized groupings of Hummert, et al. This category apparently reflects the way young adults perceive physical loss and feebleness in those older than themselves.

Consequent stereotype work has utilized this list of traits (see Kite, 2005) though physical stereotypes are also delineated in a variety of other ways. In studies of stereotype priming, subjects are often given a stereotype and studied for their reaction to the stereotype. When provided with the trait itself, (e.g., slow walking, other trait) participants generate descriptive words such as careful, cautious, helpless, and withdrawn (Bargh etc., 1996 as cited in Levy, 2003). Studies of handwriting have been used to search for physical stereotypes with findings that “handwriting may serve to give others a misleading sense of an older individual’s actual cognitive and physical condition” (Levy, 2003).

While not specific to young adult perceptions, Mauntner (2007) performed a computer collation of terms used in common media, searching for the word “elderly.” She found “disabled,” “care” and “sick” to be within the top 10 correlates. Poon and Knight (2009) used the words “aging, elderly, seniors, slowness and wrinkles” to determine that in conjunction with

sad mood, older adults may pay more attention to physical symptoms if aging stereotypes are internalized.

2.2.2.2 Cognitive traits

The Slotterback and Saarnio (1996) study found positivity in the cognitive and personal-expressive categories. Comparing young adult views of their peers and older adults in the personal-expressive category, older people were considered more positively than young people because they were given credit for wisdom and cumulative knowledge. In the cognitive category, while neither young nor old were considered as positively as those of middle age, there was an overall positive finding toward the cognitive abilities of older adults. It seemed that while older adults are believed less competent in memory skills or speed of processing information, it is believed that common sense and cumulative knowledge may cover these gaps. Parallels may be found in the Hummert, et al., (1994) literature. The trait, forgetful, may be seen to reflect negatively on the cognitive status of older adults. Yet the young adults in this study also described older adults as “healthy, alert, capable and independent” (p. 245). In their 2005 meta-analysis, Kite, et al., found that younger study respondents were not statistically biased against the cognitive competency of older adults.

2.2.3 *Older adult attitudes*

Older adults have a more enhanced view of their age group and its members than do the young (Chasteen, 2000; Heckhausen, et al., 1989; Hummert, et al., 1994). Heckhausen, et al., found that older adults “viewed adult development as increasingly multifaceted” (p. 119). Older adults thus identify more heterogeneity within their age group than do younger people. They break down the typical stereotypes found by the young into more detailed lists of characteristics

or traits (Hummert, et al, 1994). Given this more diverse image of older people, these adults may have a broader comprehension of aging and its stereotypes.

Older adults are also fairly optimistic and positive toward aging and toward their perceptions of health (Blazer, 2008). A recent study by the American Association of Retired Persons (AARP) discovered that over 45% of people 40-90 years old felt that others would describe them as younger than their actual age. They also professed that 33.7% of people their age (ages undisclosed) were perceived as older than themselves. These older adults overwhelmingly believe (69%) that physical issues do not keep them from doing things they want to do (AARP The Magazine, 2014).

2.2.3.1 Physical traits

Few studies have considered the opinions of adults over 55 when delineating stereotypes of aging. Recognizing this gap in the literature, Hummert, et al. (1994) solicited older adults (n=40, mean age 70.9) as well as younger and asked them to list traits of older adults. Within the negative categories of the Hummert, et al. study, older adults listed many of the same traits younger subjects listed. However, older adults grouped those traits more specifically, thus developing more categories. One of their groupings is “mildly impaired.” They included within this category, many of the traits younger adults noted as severely impaired. Essentially they see those same traits as less debilitating. In their descriptions of severely impaired individuals, older adults noted only “feeble,” as a component of this in concurrence with younger adults. Older adults see positivity in terms of “healthy”, “active” and “skilled.”

Horton, Baker, Cote and Deacon (2008) discovered older adults determined their own physical prowess according to comparisons with others seniors. In the Horton, et al. study these adults believed they were atypical of older adult stereotypes if they judged themselves to be in

good health. One subject decided, “I’m not a senior yet because I still feel fairly active” (p.1005).

2.2.3.2 Cognitive traits

Within the severely impaired category generated by the Hummert, et al., (1994) study, older adults seem to echo the concerns of younger adults when it comes to cognitive abilities of some older adults. Similar descriptors are found, such as forgetful, slow-thinking and senile. Yet positive traits exist, too, such as “alert, intelligent and capable” (Hummert, et al.). More recently, in Horton, et al.’s study, (2008), one older adult participant suggested driving a car was evidence of being mentally healthy. “The ones I know [Seniors] are alert. They drive cars” (p. 1005).

2.3 The Older Driver

The older adult in the United States, generally considered to be those 65 and older, travels primarily by private vehicle (Dobbs, 2012). Given the affluence of American society and in particular of the aging baby-boom generation, more individuals than ever can afford an automobile and utilize that travel option. Further, automobile driving, once a male dominated activity, is now seeing the addition of baby-boom women who have often been active drivers their entire lives (Davey, 2007). As they age, women will make up a larger proportion than ever of the drivers on the road, in particular of the oldest-old groups. They may eventually outnumber male drivers (Foley, et al., 2002; Gantz, 2002; Rosenbloom, 2004).

There are also racial and ethnic patterns of interest in the population of older drivers. Minority elderly will increase from 20% to 23.6% of U. S. population by 2020 (U. S. Bureau of Census, 2009). As driving populations reflect greater numbers of older drivers in general, so will the population of minority drivers also increase (Raymond, Knoblauch et al., 2001). Yet,

according to Dobbs (2012), 46% of non-white elders are without licenses to drive while this is true of only 16% of white elders.

The importance of these figures to studies of stereotyping is obvious. Individuals are rarely classified under one set of traits alone. There are, for instance, known stereotypes specific to women and to ethnicities. In effect, this may well lead to a layering of stereotypes. Asoved, Long, and Voller (2009) surmise that “multiple types of intolerance are unique and interrelated constructs, with some constructs being more highly intercorrelated (e.g., sexism and sexual prejudice; sexism and racism) than others (e.g., ageism and sexual prejudice)”, (p. 2346). Whether one stereotype becomes schema on which the other is based is an interesting line of study. It may well be that older adults are judged under a barrage of confusing social stigma.

2.3.1 Issues of the older driver

There is a direct correlation between increasing age and illness, leading to increases of reported illness within the older and oldest age groups (Alvarez & Fierro 2008). These health declines, including those affecting functional ability and cognition, impact driving as people age (Mann, McCarthy, Wu, & Tomita, 2005; O’Neill, Bruce, Kriby & Lawlor, 2000; Rosenbloom, 2004). According to O’Neill, et al., as people develop health concerns, those concerns seem to turn into driving concerns. Indeed, in these scholars’ study examining the self-recognized need to quit, “health concerns were cited as the primary cause among over 1 in 4 older people who give up driving.” (O’Neill, et al., p. 51).

2.3.1.1 Physical health

Some researchers predict an increase in health and functionality for the next generation of older drivers, believing them to be a more active and thus a healthier cohort (Foley, et al., 2002). Others believe decreases in physical activity and increases in obesity will have the opposite

effect (Dobbs, 2012). Specifically, “52% of baby boomers are sedentary and 30% are obese,” and these statistics have increased over the past ten years (Horton, et al., 2008, p 998). Both sedentary lifestyle and obesity are associated with higher incidence of chronic disease (Dobbs, 2012). Further, lack of physical activity is associated with functional decline (Horton, et al.).

Functional mobility, such as the ability to scan for traffic, press pedals and steer can affect driving skills and thus the ability and willingness to drive (Dobbs, Wodzin & Vegega, 2005). Issues of mobility related to fractures, back pain, muscle weakness, and/or arthritis have been shown to increase accident risk and to hasten driving cessation (Mann, et al., 2005). Decreases in flexibility may limit one’s range of motion and thus the ability to maneuver a vehicle.

Sight and hearing issues are also relevant to sustaining the ability to drive. There is evidence that sight-limiting diseases, like glaucoma and macular degeneration, limit driving and that those with cataracts tend to drive less (Mann, et al. 2005; Ragland, Satariano & MacLeod, 2004). Perhaps due to sight limitations, older adults have been found to look at the road differently than the young. Older adults tend to watch the lines and markings rather than other vehicles thus narrowing their field of vision and processing movement data differently (Dukic & Broberg, 2012). A recent study found a correlation between the dual challenges of sight and hearing loss, stating that driving with “dual sensory impairment” is consistent with “a higher motor vehicle crash rate” (Green, McGwen & Ousley, 2013, p. 252). In this study, while neither vision nor hearing challenges alone accounted for higher accident rates, the combination did.

2.3.1.2 Cognitive health

Older drivers “record greater perceived mental demands associated with driving” (Bunce, Young, Blane, & Khugpath, 2012). Self-reported concerns include apprehension about driving

and decreased confidence (Gardezi, et al., 2006). In general, as people age, they “experience problems of information processing” (Gantz, 2002, np). There often seems to be too much going on and thus too great a mental workload for older drivers (Bunce, et al.)

Reaction times and motor response times are often markedly slower as people age. This seems to come from a mixture of age-related declines that include sensory and motor functions. However, central processing changes in brain function seem to be the major contributor (Dobbs, Wodzin & Vegega, 2005). There is a direct correlation between the Mini Mental Status Exam (MMSE) and reaction time, also pointing to cognitive causes. Further, Kantor, Mauger, Richardson and Unroe (2004) reported strong correlations between reaction time and driving leading to increased error rates while driving.

Dobbs, et al. (2005), in a meta-analysis of older driver health, found that dementia rates increase with an aging population. Given the projected demographic increases, some scholars consider this to be a grave threat to others on the road. The prevalence of Alzheimer’s alone is projected to increase 4-fold by 2050, with an estimated 1 in 4 of every person over 85 living with the disease (Mental Health, 2000; About Alzheimer’s Disease, 2014). However, Alvarez and Fierro (2008) find little threat, remarking that each person’s aging is an individual track and there are “substantial individual differences existing” within these statistics (p. 59). O’Neill, et al. (2000) found little incidence of dementia in a survey of 112 drivers and former drivers over 65.

2.3.1.3 Psychoactive medication

Psychoactive medication use is prevalent in as many as one in five older drivers (Dobbs, 2012; O’Neill, et al., 2000; Mental Health, 2000). These drugs include typical prescriptions for high blood pressure and heart disease, arthritis, diabetes and pain. It is not just that older drivers may have health issues, but the treatments for those issues may lead to complications for driving.

Indeed, both Dobbs and O'Neill, et al. point not to normal sensory and motor declines of aging as concerns for those on the roads, but rather to this link between disease and drug impairment.

2.3.2 *Crash risk*

There is disagreement in scholastic circles about how to measure the crash risk of older drivers. Crash rates do increase for people beginning in their 50s and hitting a peak in the late 80s. It can be documented that these older drivers have an "increased risk of crashing per mile driven" (Foley, et al., 2002, p. 1284). However, there is a "short distance bias" found in these markers. In any age group, the further one drives the lower the crash rate. Thus there is an increase of "crash risk per unit of distance" (Langford & Koppel, 2006). Older drivers as a group, drive markedly fewer miles annually than younger drivers. The miles driven statistics are further skewed by the fact that the oldest drivers (85+), whose crash rates increase markedly, drive the shortest distances (Ross, et al., 2009). Once you control for driving distance, older drivers show no more crash risk than middle age drivers (Langford & Koppel, 2006).

These miles driven by older drivers are also different than those of younger drivers. First, they are less likely to be highway miles, and second, they are in known communities on more familiar routes. Both of these delineations are correlated with lowered accident rates in older age groups (Dellinger, Kresnow, White, & Sehgal, 2004; Hauer, 2012).

There are however, accident categories in which older drivers are found to be more often at fault. Primarily, these are accidents involving failures at intersections, left turns and left mergers (Dobbs, 2012). Older drivers also have higher rates of accidents involving failure to heed stop signs and signals (McGwin, Jr., & Brown, 1998; Musselwhite & Haddad, 2010). The Insurance Institute for Highway Safety (IIHS) found that drivers over 75 account for more vehicle damage claims than those 35-75 (Q&A, #8).

2.3.3 Fatalities

In both scholastic and more public circles, the “crash per mile driven” discussion continues to focus on driving related death rates. It is accurate that accident rates of older drivers involving a mortality increase with age (Dobbs, 2012; McGwin, Jr. & Brown, 1998). However, of importance are the types of crashes in which older drivers are involved. When compared with drivers younger than 75, older drivers are less likely to contribute to the mortality of other drivers, pedestrians, bicyclists and motorcyclists (IIHS.org, 2013). Thus, older drivers, through their own frailty and comorbidity issues, are much more likely to lose their own life in an accident than to take another person’s (Dellinger, et al., 2004; Hauer, 2012; IIHS.org, 2013). This situation is directly opposite mortality rates for teenage drivers, who are much more dangerous to themselves and to those in other vehicles than are seniors (Gantz, 2002).

Both the youngest and oldest drivers are at highest risk of injuring their passengers. In the older population, this may well be understood again as a frailty issue; older drivers most likely transport other older adults (Dellinger, 2004). Overall however, the trend is toward lowered crash rates and fatalities across the board for this age group. “Nationally, the fatal crash involvement rate for drivers 70 and older declined from 1997 to 2008 and did so at a faster pace than the rate for drivers 35-54 years old. The reductions were strongest among the oldest drivers (age 80 and older)” (Q&As, n.d., #2).

2.3.4 Self-regulation

Much research has addressed the topic of whether older drivers self-regulate their driving; that is, do people at some point recognize their declines and cease driving accordingly? The answer seems to be a qualified yes, but this is not definitively associated with lowered accident risk (Ross, et al., 2009). Most often, those who do choose to stop driving have poor

self-rated health and cognitive function. This overall perception of health is more likely to signal cessation than specific medical conditions or sensory function, such as poor eyesight (Anstey, Windsor, Luszcz, & Andrews, 2006).

Older drivers are known to practice “risk avoidance” which is correlated with decreased accident rates in the older population in specific driving categories. Musselwhite and Haddad (2010) interviewed older drivers and discovered that they are aware of challenges but feel they “adapt their driving skills and behavior” (p. 184). These older adults noted that they gave up driving at busy, stressful times, in bad weather, and at dark.

Older adults are also unlikely to be involved in accidents involving speed, drunk driving, night and adverse weather conditions, or driving while fatigued (IIHS.org., 2013; McGwin, Jr., & Brown, 1998). In all these categories, fewer crashes are seen in the older age groups as compared to both young and middle aged drivers (IIHS.org). Older drivers simply choose not to add risky behaviors to their driving capabilities (McGwin, Jr., & Brown; Ross, et al., 2009). However, not all older drivers self-regulate their driving including some with high degrees of cognitive impairment (Q&As, nd.). “Researchers now understand that increased crash risk is not an issue of age per se but rather an issue for a small group of older adults with functional and cognitive difficulties” (Ross, et al., 2009, p. 164).

2.3.5 Psycho-social aspects

Cessation of driving is an interesting marker for older adults and a difficult one for which to determine causation. Whether one’s health declines and so one ceases driving or whether driving ceases and then one’s health declines, is dependent on the many variables of individual cases. However, health issues are the number one reason cited for self-determined driving cessation (O’Neill, et al., 2000). When health decline makes travel difficult and/or keeps one

from leaving the house, *transportation disability* becomes an unwelcome reality (Dellinger, 2013, p. 31). “Generally, health declines more sharply following driving cessation” (Edwards, Lunsman, Perkins, Rebok, & Roth, 2009, p. 1290; Marottoli, et al., 2000). Thus cessation of driving is associated with risk of entry into long-term care (Edwards, et al.; Freeman, Gange, Munoz, & West, 2006).

Not having access to transportation is associated with loneliness and isolation, and both of these are known to sponsor a host of other illnesses and declines (Dobbs, 2012). There is a higher reported incidence of depressive symptoms in those who have ceased driving (Dobbs, 2012). In fact, driving cessation is “among the strongest predictors of depressive symptoms in older people” (Davey, 2007, p. 50).

Thus there are reasons why people drive longer than their health and abilities should allow. The psychosocial consequences of being either without transportation or dependent on someone else for one’s transportation needs are well documented. “Access to a car improved perceptions of quality of life, and...those with such access were consistently more likely to participate in social activities, especially outside their homes” (Davey, 2007, p 50). It was the everyday things that made a real difference, according to Davey’s study; having transportation to the doctor is important, but so is the ride to church, to visit a friend, or simply to get out of the house.

Indeed, older persons seem to associate loss of driving ability with loss of independence and freedom (Shope, 2003). For many it equates to a “major stressful life event” (Davey, 2007, p. 54). Women may make this transition more easily than men. Women give up driving at younger ages than men and give up driving of their own volition (Davey, 2007). Yet men are more likely than women to see declines in out-of-home activities (Marotolli, 2000). This gender

difference is generally understood to be a product of less highly developed social networks, which to some degree, can take the place of, or lessen the impact of no longer driving (Davey; Foley, et al., 2002; Shope).

2.4 Stereotypes of Older Drivers

An episode of the television show, *South Park*, chronicles the adjournment of a senior center meeting. A character runs down the road yelling, ““Get off the streets! Old people driving!”” (Lambert, Seegmiller, Stefanucci & Watson, 2013, p. 306). Such negative attitudes are pervasive when describing older drivers. Driving cautiously would seem to be a positive trait and yet we equate that trait to the older driver, often in a negative manner. A young woman, driving a newborn for the first time, recently commented that she had “become a granny-driver.” When questioned on her meaning she replied, “Oh, it’s all good. I just mean I drive very slowly and cautiously” (K. S. Layton, personal communication, May 2012).

Davies and Patel (2005), found that while younger drivers are considered more aggressive drivers (by college age study participants) and may be seen, in a given scenario as driving too fast, older drivers may be judged to drive too slowly. This confirms studies from much earlier, wherein the young are believed to drive too fast and aggressively by the old while the young find older drivers to be slow and cause accidents (Nelson, Evelyn & Taylor, 1993). In a study examining driving speeds of older drivers, “community attitudes” were quoted with the finding that “the public” believed some accidents were caused by slow driving and that those accidents were more likely to be caused by older drivers (Horberry, et al, 2004). These authors could make no determination of speed as an actual safety measure but believed public opinion portends an actual problem. In fact, while there is a slight risk of accident associated with

driving slowly, “most crashes related to speed involve speed too fast for the conditions” (U.S. Department of Transportation, 2013).

In an American Demographics survey on attitudes toward aging, adults of all ages were asked how they felt about driving and older people. Sixty percent of those surveyed believed adults over 65 were a danger on the road and should be rigorously tested before obtaining or renewing a driver’s license (Fetto & Gardyn, 2000). Martin, Balding and O’Neill (2005) studied media reports of accidents involving older drivers and found “that 58% were demeaning of older drivers” (p. 368). Overall, according to the DOT “Older drivers are stereotyped by popular culture as incapable of driving safely” (2013, n.p.).

2.4.1 Accident Scenarios

Traffic accident scenarios have been found to be a productive research tool where age is a factor. The setting is considered to focus on stresses, particularly competency issues, associated with older adults (Harwood, et al., 1997). The work of Paolini, Harwood and Rubin (2010) further explains how younger adults might react to older adults in accident scenarios. They found that during negative encounters, young adult participants (N=240) were more likely to find age salient than when contact was more positive.

Harwood, et al. (1997) studied conversational vignettes between drivers and bystanders, following an accident. They found that mental competence was more likely to be questioned in older drivers. “In particular, health, mental competence, vision, and slow reactions were seen as the likely causes of an accident involving an older driver” (p. 186). Indeed, when evaluating causal attributions of accident video, it has been found that where an older driver is involved, young people are concerned not about the driver’s conduct but “about their capacity for driving” (Ng, Giles, & Moody, 1991, p. 269). For instance, while younger drivers consistently rate

themselves as equal to older adults in driving skill, they rate themselves higher in driving reflexes, perhaps pointing to perceptions of decline with aging (Matthews & Moran, 1986). “Even in the absence of information to indicate that the older driver is in frail or poor mental and physical condition, individuals are disposed to accept that they probably are” (Nelson, et al., 1993).

However, specific health issues seem also to be a focus of older drivers when asked for perceptions of their age group. Older drivers express concerns about vision and thus competence to drive. Musselwhite and Haadad (2010) used focus groups, interviews, and driver diaries to gain insight into how older adults feel about “driver needs and issues” (p. 183). Of primary note to the participants were vision changes that caused issues with driving and other driving skill changes due to age. Concerns about “age-related limitations” also surfaced in the perception study of Nelson, et al., (1993). Older drivers agree with the young that they should restrict their driving after dark, on strange roads, and in unknown places.

Perhaps of most importance, in a study using driving scenarios to examine implicit memory and implicit word associations, Lambert, et al., (2013) determined that there is a stereotype of older drivers as dangerous drivers. Their work, involving both younger (18-30 years, n= 107) and older adult groups (61-89 years, n=52), found that both younger and older drivers associated old age with dangerous driving. Lambert, et al. believe there are associations made between the words old, danger, and driving that portend deeply held negative attitudes and stereotypes.

2.4.2 *Driver stereotype studies*

Joanisse, et al., (2012b) tested for the existence of older driver stereotypes in two different experiments. In the first experiment, researchers used film clips of drivers. They asked

adults (between the ages of 17-54 years old) to watch and decide how typical was the driving behavior of younger, middle aged and older drivers (while scenarios portrayed known safety behaviors of both older and younger drivers, no driver could actually be seen in any film). In this part of the study, participants were asked to consider a younger driver to be 17 years of age, a middle aged driver to be 45, and an older driver to be 70. Results were definitive in that older driver “unsafe” behaviors were highly likely to be considered “representative” of that age group. In other words, young-middle aged adults presented with an unsafe driving scenario, which they attributed to an older driver, were quick to generalize that behavior to all older drivers. Yet Joannis, et al., state that, “in reality, these [unsafe] behaviors are exceedingly rare in the older driver population” (p. 806). This generalization of traits is illustrative of the accepted definition of stereotyping.

While participants in the Joannis, et al., (2012b) study did not attribute all unsafe behaviors to all older adults, there was a clear delineation between what was assumed to be older versus younger driver activity. These delineations were also clear in an older study by Glendon, Dorn, Davies, Matthews and Taylor (1996). In their study of perceptions of accident risk, young adults credited those older with making wiser choices and having better judgment of accident risks. However it should be noted, that “older drivers” in this study were drivers in their fifties, much younger than examined in more recent studies.

In their second experiment of the 2012b study, Joannis et al. used the same group of study participants to judge how representative the film scenarios were of typical older drivers. For this questionnaire, age groups were further defined to distinguish between the younger (16-21 years), middle-aged (35-55 years) and older (70 years and older) drivers. Findings from this second experiment corroborated the first experiment “pointing to the existence of older driver

stereotypes” (p. 806). Participants in the second group were also asked to describe the main features of older drivers. The chart of these findings (Appendix A) shows the primary stereotypes found to be “over cautious, uncomfortable behind the wheel, and unsafe and dangerous” (p. 802). Of interest, from the diaries of the Musselwhite and Haadad (2010) participants are the words they use to describe what they feel while driving. These include, “anxiety,” “tiredness,” “stiffness,” “distraction,” “driving at slower speeds,” and “reaction time” (p. 185).

While the Hummert, et al. (1994), negative stereotype traits (which include, but are not limited to, incompetent, feeble, slow-moving, slow-thinking, inflexible, and ill-tempered), come from the realm of communication literature, it is easy to see parallels between their trait identification and those identified in the Joannis et al. (2012b) study delineating driver stereotypes (overcautious, unsafe, dangerous). The words used by participants in all these studies, further illustrate Social Identity Theory (Allport, 1954) by pointing out differences identified as intergenerational or intergroup differences. Aging drivers are noted as different from younger drivers, often without regard for individual driving prowess or individuality in the aging process. “There is a tendency to treat the older driver community as one homogenous group rather than look at an idiographic level for differences between drivers.” (Musselwhite & Haddad, 2010, p. 182.)

Missing from the studies reviewed were the opinions and viewpoints of those older than the participant groups of 17-55 years of age. The overall aim of the current study was to understand how drivers 65 and older perceive older drivers and how they distinguish between age and health when considering driving ability. Specifically, this study addressed the following research questions:

RQ 1: How do older adults perceive drivers in their age group?

RQ 2: How do older adults perceive age as it pertains to driving?

RQ 3: How do older adults perceive health as it pertains to driving?

3 CHAPTER 3: METHOD

This thesis used qualitative methods. This type of methodology is considered particularly valuable in describing "how a phenomenon is understood and experienced" by the participants surveyed (Trochim & Donnelly, 2008, p.143). Such a phenomenon might include the differences in perceptions between younger and older drivers as sought in this study. Qualitative methods of interviewing or observation allow an understanding of how people think and interact which are difficult, if not impossible to measure numerically.

Specifically, focus groups were used to address the overall research aim and accompanying research questions. Morgan (1996) defined focus groups as "a research technique that collects data through group interaction on a topic determined by a researcher" (p. 130). He also stated that most focus groups follow a standardized research design of open-ended questions, prepared and utilized in the discussion by the researcher. The same procedures must be in place within each different focus group, though by its discursive nature, the groups will diverge depending on the direction of individual conversations. A semi-structured approach allows for follow-up questions.

Strengths of focus group research lie in the ability of researchers "to obtain detailed information about attitudes, opinion, and preferences of selected groups of participants" (Trochim & Donnelly, 2008). It has also been found that a "group effect" exists which allows individuals to contrast and compare their experiences and viewpoints within the focus group, possibly allowing for more nuanced answers than might be found in individual interviews (Carey, 1994).

A focus group approach was particularly suited to the current study as it sought to explore highly nuanced distinctions between age, health and stereotypes that might otherwise be hard to quantify.

3.1 Recruitment

Adults 65 and older were sought for participation in this study. They did not have to be current drivers or to have ever driven. Three focus groups were formed under the auspices of two large Continuing Care Retirement Communities (CCRCs) and a local community center located in Asheville, NC.

The first CCRC is home to over six hundred, full-time residents with a median age of 78. These residents are from over 17 states and range from the very active to residents needing full-time skilled nursing. Approximately 450 residents live independently. This facility, due to the cost of living there, represents a high socio-economic segment of the population. Participants were recruited via their in-house newsletter, circulated by the Programming department. A flyer was also posted on the in-house bulletin board where the residents look for their daily events calendar. Word of mouth also helped recruit these participants as resident friends of the student P.I. suggested participation to their friends.

The second CCRC hosts approximately 1200 residents on two different campuses, also in a variety from private homes to full nursing care. The median age is 78 years. This facility is home to a more mixed socio-economic profile than the first center as it incorporates some income assisted housing. Recruitment was similar to that at Deerfield, with articles in the newsletter and the same flyer and signup sheet posted on the facility's activities board.

The third group, participants of a local recreation center, live independently and come from highly varied socio-economic backgrounds. Ages at the center range from young twenties in some classes to over 85 years. Recruitment at the center utilized the same flyer and sign-up sheet but differed in that the P.I. was given the opportunity to address a luncheon group of center participants, personally inviting participation.

These differing facilities thus provided a somewhat diverse sample of the older population in Asheville. It is projected that the finished work will be shared with these participants in public forums following completion of the project.

3.2 Participants

Each of these three sites hosted one focus group. A flyer posted at each facility invited individuals in each community to participate in academic research in the form of a moderated discussion seeking their opinions about older drivers; these to take place on a specific date at their facility. The flyer directed interested persons, 65 and over, to a signup sheet at each facility. The signup sheet had space for up to 12 participants, an upper number dictated by focus group protocol. Phone numbers were included, allowing the researcher to clarify interest and answer any questions and concerns before the meeting date. Of the original 27 who signed up, three did not appear. No one was turned away; one individual 64 years old was included.

The three focus groups thus convened contained a convenience sample of adults between the ages of 64 and 96, (N=24, *M* age 83 years). The sample included 16 women and 8 men. All participants were Caucasian. The sample's educational level was 17 years. Most were current drivers. One participant had never driven; two were former drivers. The overall self-rating of the health of these older adults was good (n=14) to excellent (n=8) with 2 rating their health as fair.

3.3 Materials and Procedures

The student P.I. first asked all participants to sign a consent form explaining the nature of the research (See Appendix B). Participants were also told that the consent form was an official form which had been subjected to review and acceptance by the Internal Review Board of Georgia State University and that the study was thus being held to strict academic research standards. Sections dealing with potential benefits or hazards were explained and participant's right to leave the session at any time was emphasized. A separate short form was also distributed to collect basic demographic information, including gender, age, driving experience, level of education attained and each participant's rating of their overall health (See Appendix E). This form also asked if the participants are current drivers, former drivers or have never driven. To facilitate discussion within the group and identification of speakers, participants were given a placard on which to write their name (first name only) to place in front of them before the session began.

Open-ended discussion questions for the current study were focused primarily by the research questions seeking the various ways older drivers characterize other older drivers. (Appendix D). Questions/discussion points were also derived in part from the comments collected by Joannis et al. (2011) in their study of older driver stereotypes (Appendix A). These questions addressed other specific interests of the research pertaining to health and stereotypes.

All focus group discussions were audio recorded, notes were taken by the audio technician, and written transcriptions were generated by the student P.I. Names of participants were then altered to maintain anonymity. The list of generated names was keyed to a list of the century's top names as determined by the Social Security Administration though no duplication of actual names was allowed.

3.4 Analysis

The content of the transcripts from each focus group was analyzed individually, searching for themes of importance to the participants, for themes matching the literature and for those matching the research questions. Some themes were self-evident either due to their immediacy following questions or to the amount of time participants dwelt on them. Other themes developed as the transcripts were then collated between groups; grouping like answers led to thematic clarification. While it is difficult to count the nods and other forms of physical verification of participants around the room, these were documented at the time by the audio technician and noted by the interviewer and lent weight to the development of the identified themes.

From these themes, some keywords also became evident. For instance, in answer to the first question posed concerning older driver characteristics, participants literally began each focus group discussion with the words, "slow" and "cautious." While the previous review of the stereotype literature might have led to an expectation of these descriptors by younger subjects, the importance expressed in the use of the same words by older adults is definitive. How these older adults used those and other repeated words increased the ability to identify items of importance to this older cohort.

4 CHAPTER 4: RESULTS

The content of the focus group discussions was structured by the three research questions. Results of those discussions are presented in this chapter according to the particular research question they sought to answer. Conversational themes are also delineated and all answers are collated from the three different groups. Thus while participant quotes are presented verbatim, the order of the results may vary slightly from the original discussions.

4.1 RQ1: How Do Older Adults Perceive Peer Drivers?

In order to address RQ1, participants were first asked for their images and/or descriptions of the older driver. They were also asked what makes a good older driver and then, a poor older driver. Table 4.1 diagrams the types of answers recorded:

Table 4.1 Perceptions of Older Drivers (in order of concern)

Slow and Cautious	"They want me to go faster" "I may be 5 miles per hour below the speed limit and not 5 mph above" "I think for the responsible senior citizen he is more cautious" "I am much more cautious than in my early years."
Physical descriptions	"Couldn't judge distance" "Stiff necks. You have to be able to turn your neck." White haired, "Q-tips" "You wonder can they see...over the wheel"
Evidence of Poor Driving	"Very often there are scratches on the right front bumper" "After she drove over so many curbs..." "I still don't know where the fenders are which causes me concern."
Experience	"I've driven through blizzards and I've driven through hurricanes" "She drove a tank for Patton"
Cognitive	"Focus" "Just being alert" "Don't pay attention" "It's [driving in traffic] scary"
Stereotypes	"It will be assumed it was our fault" "My husband thought he was profiled when he took his driver test" "I've heard if you have a cane they will make you take a test"

4.1.1 *Slow and cautious*

In all three focus groups, the very first word used to describe older drivers was "slow," and it was echoed around the rooms:

Slow. I wish I had a bumper sticker that says, "I'm old. Please be kind." People beep at me; they want me to go faster. I don't make the turn fast enough. Just be more kind. (Sandra, age 86)

I was going to say slow but she said it first. (Margaret, age 85)

Everybody...complained about how he drove all the way to [town] at 20 mph and it was a one lane road. (Ashley, age 84)

I think for the responsible senior citizen he is more cautious, I do not drive as fast as I used to and frequently I may be 5 miles per hour below the speed limit and not 5 mph above ... (Robert, age 86)

As in the comment above, the theme of "slow/slower" was tied very closely to themes of "caution:"

Cautious. Caution. I am much more cautious than in my early years. I don't speed anymore. Slow down. Be careful. (Richard, age 89)

Our participants voiced many different reasons for their caution. They obey the laws and speed limits and are more patient than other drivers:

Part of it is that we are not in a hurry to get any place any more. (William, age 85)

I agree. No hurry leads to being more cautious which I believe is good. (Robert, age 86)

Other descriptors of some older drivers included they do not drive at night and that they limit their driving to known roads and routes. These adaptations can be seen as further illustrations of cautious driving.

Several participants also linked caution and driving more slowly to either a fear of accidents or the experience of having had an accident:

Just plain more cautious doing everything because we have had the experience of having an accident or seeing others have accidents. We just have more experience about that. (Donna, age 84)

However, noting the heterogeneity of their peers, they were also concerned that excess speed was an issue for some older drivers:

I get nervous when I drive with my daughter who is 65 because she drives too fast. (Mary, age 90).

I worry about some old people driving quickly and too fast. (Sandra, age 86)

4.1.2 *Physical*

Perhaps helping to explain why these older drivers feel they are more slow and cautious, physical issues were described as illustrative of slow driving and as limits to vision or mobility:

I watched a woman take 15 minutes to get out of the parking place. Couldn't judge distance. (Margaret, age 85)

Can't move too well. Stiff necks. You have to be able to turn your neck. Seeing some people getting into a car, you can tell you they are stiff. (Carol, age 74)

Physical descriptions were also prevalent in the discussions, with the participants describing drivers who had white hair or who were height challenged:

We used to call them Q-tips with the white hair and they're driving like this (mimics looking up from below) and you wonder can they see, can they see over the wheel. (Patricia, age 70)

I can't see the right front fender on my new car, a Camry. The way it's built and my height, even with the seat as high as it will go, I still don't know where the fenders are which causes me concern. (William, age 85)
He has shrunk. (All laugh as this was from his wife, Donna, age 84)

I'm so little it probably looks as if the car is driving itself. (Patricia, age 70)

4.1.3 *Evidence of Poor Driving*

When talking about older drivers, damage to automobiles was often noted. Poor driving comments included those that identified damage to the cars of older drivers:

Very often there are scratches on the right front bumper. If you walk down a parking lot, you will see a lot on the right front bumper. (Robert, age 86)

After she drove over so many curbs I decided I wasn't going to drive with her anymore. Her car had many scratches and dings so she had it refinished so it looked pretty good, but after a week it was all scraped up again. (Jennifer, age 80)

Instances of poor driving also included crash risk comments:

We had a friend who had three accidents within six months. We're glad he quit driving. (William, age 85)

These older drivers were not only concerned about the damage others might inflict but about

challenges they felt as well. Concerns about backing up were mentioned by several. This example combines caution and backing:

You are more careful when you back out to make sure you don't hit anything.
(Barbara, age 88)

This driver had a different style for backing out of parking lots:

All you can do is stick your tail out and hope somebody will stop. (Linda, age 70)

4.1.4 Experience

Study participants touted experience and skill as positive indicators of older drivers.

James explained that he had no choice but to drive to his eye doctor even though he had broken the lenses of his glasses:

Well, I've driven through blizzards and I've driven through hurricanes and I can do this too. And I did. (James, age 64, age 64)

Other older adults connected their driving skills to their previous employment, noting that the experience had positive impacts on their ability to drive well:

[You are competent] if you've driven for years in your occupation. I personally feel very competent driving on interstates or anywhere else. I have driven [to and from work] in snow, mud, interstates, and winding mountain roads, in all conditions.
(Ashley, age 84)

Yeah, she is a good driver. She drove a tank for Patton. (William, age 85, speaking of his wife Donna, age 84, who laughed and said, "I did drive tanks but not for Patton".)

4.1.5 Cognitive

Participants said they now felt a greater need to "avoid distractions" and to "focus".

Their comments also ranged from concerns about inattentiveness to forgetfulness, perhaps as a harbinger of greater cognitive challenges. These comments are in response to a question about what makes a poor older driver:

They don't pay enough attention to what's going on around them. (James, age 64)

Many of these people who do drive get lost, and they may drive a long time trying to get back home again. (Donna, age 84)

Anxiety and a lack of confidence to deal with the increased processing load of driving were also detailed:

...there are so many more cars on the road, it's scary. (Mary, age 83)

Holding onto the steering wheel for dear life, white knuckles. Crossing lanes. Missing traffic signals or traffic signs. (James, age 64)

4.1.6 *Stereotyping*

In each focus group participants voiced concerns about how they were viewed as drivers. These older drivers noted that other drivers sometimes see them as too slow and perhaps overly cautious:

My son calls me a sissy driver. Too cautious some times. (Dorothy, age 80)

I drive slower and more cautiously yet you are singled out because you aren't going over the speed limit like most drivers do. They come up so close behind you and you know they are itching for you to either speed up or get over to the side or pull off and let them go by. (Robert, age 86)

Even without evidence of speed infractions, older adults may feel judged on the basis of age:

Oh Yeah, I hear remarks. Hey Grandpa get off the road. Maybe they're doing the right speed, doing the right thing, but the young ones are saying, Grandpa get off the road. (Mary, age 83)

This viewpoint was not restricted to how those outside the group might perceive them. In response to another participant's comments on driving at the speed limit or lower came the response,

Oh, you're one of those ... (Linda, age 70)

This comment was met by general laughter from the other participants who seemed sympathetic to the possibility that 'slow' was sometimes 'too slow'.

These older adults were not laughing when they detailed what one referred to as 'profiling' by authority figures. They felt unfairly judged on a number of fronts:

We older drivers have a perception that if we are involved in a wreck it will be assumed that it was our fault. (Daniel, age 90)

My husband thought he was profiled when he took his driver's test. He had his cane and looked pretty gimpy when we went in there. So they said he had to take a driver's test. He had his hearing aids, but his tester had a high-pitched voice and he couldn't understand her. She said to stop and he didn't, so she didn't pass him. He was distraught. But he passed the next time. He had a tester with a lower voice. (Sandra, age 86)

I have heard that if you have a cane they will profile you and make you take a test. (Daniel, age 90)

4.2 RQ2: How Does Age Affect Driving?

When asked directly how age affects driving, the participants listed only a few of the physical issues outlined in the literature on older drivers. They referenced far more cognitive issues than physical issues, but they acknowledged that the aging process includes physical and cognitive changes.

Table 4.2 Age Descriptors (in order of concern level)

Age-related Issue	Comments
Adaptation	"Don't drive at night" "Plan routes, no freeways" "Save errands for helper" "Drive less" "We give up things" "More cautious, slows you down"
Cognitive	"Less Brave" "Get distracted, have to focus" "I recently made two driving decisions that were poor." "Reaction time is slower"
Vision	"Why don't they do a test for night driving?" "Anti-glare coating on my glasses" "I'm having eye surgery next week"
Physical	"Twist our heads to check out of the rear windows of our cars" "I get tired of sitting now" "I think it [age] slows you down..."
Driver Testing	"Now I'm being threatened...and I never had an accident" "My husband felt profiled" "They should take everyone's license at 80"

4.2.1 Driving changes/adaptations

In considering how age affects driving specifically, it was interesting to see how many of these older adults spoke of the ways in which they have adapted their driving or compensated for driving less. Their recognition of physical/cognitive changes, while forcing their adaptations, was less important to them than the fact that they successfully deal with those changes.

Adaptation became the primary theme in answer to how age affects driving:

You don't drive at night. (William, age 85)

I plan my route and don't do thruways. (Sandra, age 86)

Adaptation was clearly the new reality of their lives. Several spoke positively about the changes

they have initiated:

Have lunches out and come home before it's dark. It seems like you gravitate toward that. It seems more pleasant than coping with traffic at concerts. (Helen, age 82)

I know my limitations and frankly enjoy it more. You're not in that hurry anymore. (Robert, age 86)

Yet another frail older driver (at 88 she was under-weight, moved slowly, and demonstrated grip weakness in her attempt to open her water bottle, all indicators for frailty) was defensive in volunteering this specific change; "letting" someone else drive was not her preference:

I have a [helper], who comes on Tuesdays and Thursday and I let her do a lot of my driving. I save errands for those days...Lots of times I make my appointments on those days when I have someone who can drive me there. (Barbara, age 88)

Many of the participants spoke wistfully about the losses they felt as their driving patterns changed:

Age affects driving. I drive a lot less than I used to. I've had this new car for almost two years and it has 6,300 miles on it. We used to take long vacations and drives and we don't do that anymore. (William, age 85)

We give things up as we get older. We give things up and eventually you give up driving and its part of the progression of aging. (Sandra, age 86)

4.2.2 Cognitive

Themes of adaptation also led to concerns about cognitive issues and driving. Participants recognize cognitive changes in the way they now approach their driving. . Increasing traffic on the roads and larger, faster moving highways were a concern. The idea of anxiety was voiced as 'fear' or a lack of bravery:

I was braver when I was younger. I commuted from Bethesda to Washington DC every day. (Dorothy, age 80)

I gave up my membership at Sam's Club because of eight lanes converging into one. I didn't have the bravery for it. (Helen, age 82)

Others of these older adults were concerned about distractions and their ability to concentrate on driving:

When I'm driving and people are talking to me I get distracted. I have to focus and can't be distracted. I need to pay my full attention to my driving. (Sandra, age 86)

I would quit if I couldn't concentrate on things any more. (Carol, age 74)

While it is not illegal to talk on a cellphone while driving in North Carolina, this driver believed such behavior would be unsafe for her:

I used to multitask all the time when driving. I was always on the cell phone. However, now...I won't answer the phone unless I can pull off the road. (Patricia, age 70)

Cognitive function was specifically mentioned in two comments, one relating to concerns about decision-making and the other to confusion:

I recently made two driving decisions that were poor. One was definitely poor, the other I'm not so sure about. It definitely gave me pause. It was atypical for me to do that, to recognize that I made a bad decision on driving. (William, age 85)

To me it has to be stressful, if say you're an older driver and you don't know if you're going straight [the right way]. I mean...most people I drive with they know where they're going but there are worse ones on the highway. (Mary, age 83)

Robert voiced a concern that older adults might not be able to recognize their own cognitive decline and combined it with wondering who should be responsible to judge an older driver's capacity to drive::

You don't know if your abilities are the same. If I felt I was endangering somebody else I think, with my life values, I would say it's time to quit, to hang it up. But whether or not I am going to have the capacity to judge whether or not I am an endangerment, then we are have to depend on friends or someone, to say, "look this is what you have to look at". And if not friends, it is going to be the government. (Robert, age 86)

While slowing reaction time is a reality of aging, the only participant to mention this concern was one of the older adults in the study:

Reaction time is slower. Younger people have faster reactions. (Karen, age 92)

This concern did meet with nods of agreement around the room but was not otherwise noted as an issue.

4.2.3 Eyes/vision

Changes in eyesight seemed to be an accepted reality of these older adults. When asked what makes a poor older driver, "poor eyesight" was a very specific answer. Almost all our participants admitted to wearing glasses and/or having problems with vision and driving:

Why don't they do a test for night driving? I went out to drive at night and I couldn't see well. (Susan, age 79)

Others mentioned issues with automobiles and compared visibility in cars they drove.

Robert questioned whether car design or age was the real issue:

Visibility in old cars was bad, and my Mercury Marquis had a huge hood. Is it part of old age that we just now see how limiting it [car design] is? (Robert, age 86)

4.2.4 Other physical/mobility

Asked how age affects driving, few specific physical issues were mentioned. The following quotes address the physical issues of mobility, tiring easily and moving more slowly:

I think most of us [older drivers] don't think that clearly about it. We just accept the limitations that our age has place on us. And we don't think about it as much as we ought to, like how far can we twist ours heads to check out of the rear windows of our cars. (William, age 85)

I have cut down on long drives...for hours. I do that very little now. I get tired of sitting now. (David, age 96)

Well, I think it [age] slows you down...I think it makes you more cautious. (Patricia, age 70)

4.2.5 Driver testing

In each of the three focus groups formed for this study, participants eventually diverged into discussing licensing for older drivers, including concerns about what attributes should be

considered and how testing should be accomplished. It is interesting that the issue should be so pervasive in these conversations.

I know it would be hard for those over 80 to stop, but I think you should give up your driver's license at age 80. (Carol, age 74)

This statement was met with quite vocal and nearly unanimous disapproval by the others in the room:

I disagree. I don't think age has anything to do with your ability to drive at all. (William, age 85)

Chronological age is not the best. There is such a huge variation in ability, physical health, all of that. I do believe that at some age you should be retested just to be sure. (Dorothy, age 80)

Some people should never have been driving at all. (Helen, age 82)

There was general laughter and agreement to this last statement, further illustrating that these older adults do not generally believe age should be definitive in driver testing. However, the oldest of our participants seemed to be placing some limits on their own continued testing:

I'm 90 now and don't need a test until I'm 95 and that's too long. It should be three years. (Daniel, age 90)

David's response to this was said humorously and met with seemingly understanding laughter around the room:

My license expires when I'm 100. I don't think they will give me a new one (David, age 96)

Yet one older female had her own story to tell, seemingly ignoring her own driving issues:

I got a driver's license about a week ago. I did everything perfectly. Then I got a notice from the state for more information and I don't understand it all...I was being tested on my driving but I was so busy keeping my eyes on the road I missed seven signs, speed signs. (Barbara, age 88)

The disconnect between 'doing everything perfectly' and 'missing seven signs' may explain the

state's concerns and why this older driver was being asked to go for further assessment.

4.2.6 Examples for and against driving age limits

Not only did some of the participants separate chronological from driver testing but they also seemed to agree that age is not the determining factor in whether or not one can drive safely. They had stories to illustrate their beliefs. One such theme illustrated that those in the room knew older drivers who were safer than some younger drivers:

I think it's easy to over-generalize. I had cousins visit, one who is pushing 80, and he did all the driving all hunched over, but he drove from Wilmington to Asheville no problem... maybe more bathroom stops (Laughter). (James, age 64)

My Mom had macular degeneration and rode with 90 year olds who could drive really well. But she avoided some younger drivers who couldn't drive at all. So its not chronological age. (Dorothy, age 80)

One participant, supported by the laughter of the group, detailed good versus bad drivers as being undefined by age:

A good driver is somebody you don't recognize on the road. You go "That schmuck over there is a bad driver!" (Laughter). Good drivers play by the rules and know how to accommodate to difficult situations. It's the bad driver who causes the problems regardless of their age. (James)

The oldest member of the groups spoke proudly and humorously of his own prowess behind the wheel:

A slow poke was ahead of me so I overtook him. Blue lights flashing. I gave him my license and registration. Where you going? To a labor day picnic. How old are you? I said 96. You know you were doing 62 in a 45 mph road? No? Don't do it again, and he let me go. (David, age 96)

This comment was also followed by the laughter of the group. There was general support for this older driver within his peer group. Several in the room felt compelled to describe him as exceptionally healthy and able.

However, one of these stories referenced a concern that age might have been culpable

in an accident:

My aunt died at 96 and wasn't then driving but she never agreed that she couldn't drive. She caused an accident and swore it was not her fault. The guy she hit will be in a wheel chair for the rest of his life, but she never took responsibility. (Patricia, age 70)

Patricia noted that the driving of this older aunt was a family concern before this terrible accident happened.

4.2.7 Medication

Participants in these focus groups did not seem to tie medication usage to age. It was mentioned only once in answer to this research question:

Most of them are on medications too...They fall asleep...They hit the gas instead of the brake and that's how they crash into stores and something like that. (Mary, age 83)

4.3 RQ3: How Does Health Affect Driving

When asked directly about how health affects driving, participants had a long list of issues to discuss. Some were personal health concerns; many of these conditions were attributed to drivers other than themselves.

Table 4.3 Health Descriptors (in order of concern level)

Type of Health Issue	Comments
Vision	"Macular degeneration", "Glaucoma" "Cataracts" "Anti-glare coating", "night vision" "Blind" "Depth perception"
Cognitive	"Dementia", "Alzheimer's", "Getting lost" "Response, reaction time" "Need to focus" "Distraction", "Alert"
Arthritis/ Mobility	"Stiff, neck, back, hands" "pain", "ache" "Having a cane" "Need to move well enough"
Medication	"9 drugs, different kinds of drugs" "Taking something that could effect driving" "Two kinds of eye drops" "Different tolerance for drugs" "Warnings on operating machinery, etc."
Neuropathy	"No feeling in feet"
Parkinson's	"Reflexes slow, transfer foot on pedal"
Hearing	"Poor Hearing"
Stroke	"TIAs" (as causative of accident)
Heart Attack	(as causative of accident)
General	"People not feeling well" "Putting off surgery" "Doctor has no idea how I drive"

4.3.1 Vision

Vision was the most commonly mentioned issue concerning health and driving by these older adults. Vision concerns took the form both of stories about others and more personal worries. Macular degeneration was mentioned several times:

I had a friend. The husband had Alzheimer's and she had macular degeneration and they teamed up to drive. Cars are so important. (Sandra, age 86)

Eyesight particularly is a problem. We know lots of people with macular degeneration or glaucoma. That really limits what they see and they have to stop driving sooner than someone in the same age group. (Donna, age 84)

My ophthalmologist did a glare test and quickly determined I needed an anti-glare coating on my glasses. It would be risky to drive at night without the coating on my glasses. (Dorothy, age 80)

4.3.2 Cognitive

Participants discussed cognitive ability in a progression of terms from vague skill loss to medically diagnosed dementia:

I have to focus and can't be distracted. I need to pay my full attention to my driving. (Sandra, age 86)

Helen seemed to think confusion and/or short-term memory might be indicative of dementia:

What about dementia? If you don't remember the movie you talk about you might not remember where you are. (Helen, age 82)

However, diagnosed dementia led to more specific concerns:

My wife has dementia and that's why I stopped her driving. She had no accidents but you don't want her to hurt anyone else... My judgment is it is response and reaction time. We didn't have close calls and she probably still is a pretty good driver, but the response time isn't there... The response time is the key indicator. (Robert, age 86)

There were interesting descriptions of symbiosis of vision and dementia:

When my father was fading off from dementia he would often go across the yellow line and oncoming cars would honk at him. I watched how my mother reacted to that. They had a cooperative method of getting down the road. She [nearly blind] told him where to go and he sat behind the wheel. (William, age 85)

4.3.3 Arthritis/lack of mobility

Other health concerns included arthritis and lack of mobility. This was a category where there were multiple agreeing nods and voices of assent around the room:

Arthritis affects driving. We're stiffer, we ache. At times my hands are so stiff I shouldn't drive. My neck always hurts, my back always hurts. I keep the seat heater in my car on year round to deal with the pain. (Jennifer, age 80)

Mobility. People need to be able to move well enough. There are blind spots and you have to be able to turn your neck. You have to watch this. Arthritis is a big one and it is more common in older people. (Carol, age 74)

Both of the participants who had ceased driving had health related issues:

From my knees on down in both legs I have no feeling. I can't feel any pedals so I am a danger. It's neuropathy so there you go... no one told me, I said I don't want to get into an accident that would be harmful to myself or to someone else so I said, Alright, I'm out. (Joseph, age 76)

I have Parkinson's disease and the doctors pointed out to me that my reflexes are slow and I should quit driving. This didn't appeal to me until one event that was almost a serious accident occurred. I couldn't transfer my foot from the accelerator to the brake quickly enough. I do not drive and haven't for six months and will not drive again...It took scaring myself to quit; the doctor wasn't enough. (Sympathetic laughter from the other participants accompanied this story). (Charles, age 79)

4.3.4 *Relationship between health and driving*

Asked specifically for the relationship between health and driving, these older adults were adamant that it was different for different people. Of interest is the mention of medication usage:

It varies by people and what kind of health problems you have. (William, age 85)

Jennifer is not 96 and yet she has more physical problems with pain in neck, hands and back and David [at 96] doesn't have that. Age does not determine how good a driver you are or whether you can continue driving. (Donna, age 84)

Of interest is the mention of medication usage by the two youngest participants:

I think it's incredible. You are on different kinds of medicines. You are seeing doctors. Things are changing and it becomes difficult... Some people have different tolerations for medications and some shouldn't drive. (Patricia, age 70)

I agree but there are a lot of health warnings, don't drive the car or operate machinery after taking this medication. I am on nine medications and two kinds of eye drops and that doesn't deter me from driving at all. (James, age 64)

Yet asked what would make them stop driving, the same driver reported:

It would be health problems, and right now it would be vision. One eye is bad right now and hopefully it will get better. If not, that is what will be the health issue that

would stop me driving. (James, age 64)

While this participant recognized that vision issues might some day end his driving, his casual acceptance of his actual current status seemed to belie his ability to discern when he might no longer drive safely.

Summary of Findings

Older adults in the current study tended to view older adult drivers in a mostly positive light. While recognizing and noting stereotypes of older drivers, they valued being "slow and cautious." Where study participants did speak negatively of older drivers, they spoke in the third person. Someone else might be unsafe, they seem to say, but not themselves.

In their perceptions of age as it pertains to driving, these older adults again showed positivity in their responses. They had concerns about aging and driving but believed adaptation was the important consideration, an adjustment for which they took a prideful ownership. Their adaptations accounted for most of the changes they delineated in their own driving. While they credited most other older drivers with making the same types of changes in order to continue driving safely, they recognized the heterogeneity of the older adult population.

Study participants detailed specific health symptoms and conditions but these were generally spoken of in the third person. Study participants knew of people with health issues that should keep them from driving, recognizing the severity of some specific health problems that should cause driving cessation. Yet where they recognized their own issues, few found them definitive in discerning driving ability.

Perceptions of aging, health and driving ability from these study participants include an emphasis on positivity, pride in adaptation while recognizing heterogeneity in their peer group, and realism concerning health issues to a point; less certain is how they respond to their own

health issues as drivers. Their responses are in line with theories of in-group/out-group classification as well as principals of othering. Further discussion of these findings and comparisons with current theory and the literature are found in this study's concluding chapter.

5 CHAPTER 5: CONCLUSION

Focus group methodology was utilized in the current study to gauge older adult perceptions of older drivers. Older adults in the study were both complementary and concerned about their driving abilities and those of their peers. Their remarks were thoughtful and their perspectives differed from those of younger adults as delineated in the literature review. Three research questions specifically sought perceptions of older drivers, of age and driving, and of health and driving. Discussing each of the three research questions in turn, this chapter places these conversations within the scholarly context. This chapter also addresses the implications of this research as well as limitations, strengths, and directions for future research.

5.1 Perceptions of Older Drivers

Many of the findings of the current study parallel those of past research. When asked to describe the main features of older adult drivers in their 2012b study (Joanisse, et al.), young participants (mean age 20.46) listed "drive too slow" as one of the primary traits. This descriptor was later grouped within like terms in a category labeled, "overly cautious and uncomfortable behind the wheel." (Joanisse, et al., 2012b, p. 802, see Appendix A). These descriptions were argued to be stereotypical descriptions of the older driver. The older drivers in this study also listed slow and cautious as their top descriptors of older drivers. Yet there appears to be a difference in perception. While the young participants in the Joanisse et al. study also mention caution as a positive trait, it takes a secondary roll to their concerns that older drivers are over cautious. Slow and cautious, however, are both primary and distinctly positive attributes in the minds of these older adults.

This difference in perception echoes findings in a study by Kua, Korner-Bitensky and Desrosiers (2007). Older adults were asked whether they thought their driving habits had

changed, and "a common theme amongst participants was being more cautious on the roads" (p. 28). In fact, only once in the current study was the qualifier "over-cautious" used to describe older adult drivers, this by one of the youngest participants.

5.1.1 Ingroup/outgroup perception

It may be noted that this youngest participant referred to older drivers as "they." Yet an even older participant (84) illustrated this same separation:

Many of these people who do drive get lost, and they may drive a long time trying to get back home again. (Donna, age 84)

When speaking of older driver behaviors in the third person, a separation occurs, no matter the age of the speaker. This language appears to delineate the speaker's behavior from that of the older driver they are using as an example.

Throughout these focus group sessions participants personalized their responses or even switched from one pronoun to another, including themselves in their answers:

Their reactions have slowed down a lot so maybe we are doing the right thing by slowing down. (Sandra, age 86)

This quote may be taken as a particularly interesting illustration of in-group/out-group referencing (Levy, 2009; Mathews & Moran, 1986; Tajfel, 1981). Those whose reactions are slower seem to represent an out-group while "we are doing the right thing by slowing down" becomes an in-group scenario in which the speaker includes herself. This perception by older adults that their personal behavior is positive rather than negative is in line with the theory of "othering" (Johnson, et al., 2004). Since these older adults are definitely aging, it behooves them to place themselves within a group of safe and cautious drivers and for that personification to be a positive consideration. Their emphasis on experience as drivers also delineates them from younger drivers in a subtle but definitive example of in group/out group theory.

5.1.2 *Dangerous drivers*

This idea may be further borne out by the words the current participants did not include in answers to focus group questions. Joannis, et al. (2012b) participants listed "unsafe and dangerous" as a category of descriptors of older adult drivers. Behaviors in that category included, "uncontrolled" and "hazard." Lambert, et al. (2013) determined that there is a stereotype of older drivers as dangerous drivers. However, only once did a descriptor like these appear in the answers of our older participants. When asked directly what characteristics describe a poor older driver, the emphasis on safety and caution extended to those who do not cease driving when they should and were thus dangerous. Participants also relayed stories of other older drivers who had multiple accidents, reflecting that they were happy when those drivers stopped driving. They did not however, consider any of their own behaviors hazardous.

Yet older drivers in the current study were well aware that they may be seen by others as a potential threat. Further, out of no particular question, members of each of the three focus groups at some point mentioned concerns over driver testing and how they might be judged as drivers.

According to theories of stereotype threat these older driver's concerns about stereotyping and what they view as profiling of older drivers could pose an actual threat to their abilities to remain confident in their skills (Joannis, et al., 2012a; Levy, 2009; Steele & Aaronson, 1995). Unhappy with their treatment by local driver testing officials, there is the potential that these older drivers might perform less well during testing. The perceived threat might essentially predestine a poor outcome, (even loss of license) not necessarily indicative of their actual ability.

5.1.3 *Evidence of poor driving*

It is interesting to note the different ways younger adults and these older study participants spoke about the vehicles driven by the older generation. Younger adults in the Joannis, et al., stereotypes study (2012b) had only positive things to say about older driver's cars. Other than the minor parallel of "their cars are too big for them, hard to park", remarks about cars included "their cars are always clean" (p. 808, see Appendix A). Our older participants were far less positive in their comments about automobiles. Similarly, they did note design issues that could include car size; they found some automobiles hard to see out of and partly because of that, hard (noted as slow) to park.

Yet these older adults particularly noted damage to cars as clear signs of someone's inability to drive well, a factor not considered by the younger adults of the Joannis, et al (2012b) study. The Insurance Institute for Highway Safety (IIHS) found that drivers over 75 account for more vehicle damage claims than those 35-75 (Q&A, #8). Apparently, while considering them threats to other persons, the more realistic vehicle damage of older drivers is not something of which the younger cohort are aware.

5.1.4 *Physical descriptors*

The physical characteristics of older drivers described in the current study are similar to those reported by younger participants. An inability to see out of the car due to driver stature is echoed as a concern by both the younger drivers of Joannis, et al. (2012b) and the older drivers from the current study.

Most interesting from our participants is the description of "Q-tip" drivers, who are found to be not only too short to see over the steering wheel but white headed.

It is perhaps difficult to deny that white hair is most often age related and as such it

becomes an easy way to delineate those who are older. Nussbaum, et al. (2005) confirm this, further stating that ageist stereotypes may be "triggered by biological aspects of ageing such as physical (e.g., gray hair)...cues" (p. 289).

"Slow moving" was found to be characteristic of older adults in the Hummert, et al. (1994) study. While primarily noted in relation to driving speed, the current study participants also mentioned drivers who moved slowly, both in their personal movements and in their ability to back up their automobile. Younger adults surveyed by Joannis, et al. (2012b) mentioned slow body movement in relation to reflexes and reaction time. Yet once again, older adults in the current study seemed to believe moving more slowly was primarily a positive trait.

5.1.5 Cognitive descriptors

Older adults used some descriptors of cognitive function, believing good older drivers "focus" and "stay alert." Indecision and concerns about dementia were mentioned as markers of poor older drivers. Some of these concerns took the form of getting lost while driving. Another participant referenced fear and confusion in the older driver behaviors he believes to be typical of poor older drivers.

Joannis, et al., (2012b) found negativity in the cognitive stereotypes outlined by their younger participants. Older adults in the current study, seem more concerned than negative, again separating themselves into seemingly healthy versus unhealthy drivers. These observations, concerning both physical and cognitive descriptors, while perhaps stereotypical, become part of the more general conversation considering distinctions of age and health.

5.2 Perceptions of Age and Driving

The older adults in the current study expressed concerns about aging drivers and being aging drivers in a number of ways. They were clearly aware that their lives and abilities were

changing, and they work to adapt to those changes. They worry about future testing/decisions concerning their abilities; they viewed continuing to drive as both an ongoing process of gradual change and as a threatened entitlement.

5.2.1 *Adaptation*

These changes were rarely identified as specific to physical decline except in a very abstract fashion. Asked about age and driving they discussed very few health related issues. Instead, the central theme was the adaptations they make to remain safe drivers. It may be that aging drivers maintain a comfort level in their driving skill by this process of adaptation.

This finding is similar to findings by Musselwhite and Haddad (2010) whose participants voiced concerns about driving skill changes due to age. In that study, older adults noted that they were aware of challenges associated with aging but that they felt they "adapt their driving skills and behavior" (p 184). The older adults in the current study noted that they no longer drive at night (almost 100%); they drive known, local routes; they avoid stressful times like rush hour and inclement weather; and they drive more slowly. This finding is in line with accident statistics showing older adults are less likely to be involved in accidents in all of those categories (IIHS.org., 2013; McGwin, Jr., & Brown, 1998).

These older adults discussed aging and driving in more personal terms than they did while describing older drivers. They did not remove themselves from the topic; many voiced awareness either of their own changing status or a concern that they might not recognize changing abilities. Others refused to consider that they might be a hazard on the road. One participant outlined a long licensing fight with the Department of Motor Vehicles (DMV). His doctor had told them he was not safe to drive but having appealed, he was back on the road.

5.2.1.1 Married Couples

Of interest are the several stories describing interdependency among married couples. Their particular adaptations involved using the skill sets of one to offset the deficits of the other. Whether a vision challenged passenger can safely direct a memory-impaired driver is a question for further study. It may well be that people with partners have more options to continue driving. In assisted living accommodations it has been observed the marital partnership appears to allow "certain couples the potential to compensate for and sometimes overcome communication barriers related to functional impairment if they are able and willing to work together" (Sandhu, Kemp, Ball, Burgess, & Perkins, 2013).

One current study participant illustrated the positive effect of this marital partnership in remarking that he and his wife shared the driving. This, he felt, kept them both from getting overly tired and thus made them both more safe on the roads. Coincidentally, having a partner may also be helpful in determining when one or the other should cease driving; a constant companion may be able to give valuable input into judging decreasing skills.

5.2.1.2 Gender Differences

While one participant, the youngest woman (Patricia, 70) suggested women are more "realistic" about their driving skills, this was not given credence or even a response by the group. Indeed few differences were observed in the way the women and men spoke of their driving. Some small emphasis may have been seen from the women, using terms like "less brave" to describe a new temerity yet some men also described a lessening of confidence in some of their skills.

Lack of gender difference in this study might also be attributed to the study sample. As an educated, highly mobile and perhaps cosmopolitan group (retired mostly from the Eastern

Seaboard cities), the women in this study had functioned with great independence and, for the most part, had driven independently for decades. Their sense of their past accomplishments behind the wheel were not noticeably different than those of the men. Personal judgment of current abilities took on the same form of questioning, adapting, and in some cases, fighting for the right to continue driving. Comments did not differ by sex of the driver speaking.

Heckhausen, et al., found that older adults “viewed adult development as increasingly multifaceted” (p. 119). Adaptation of driving patterns may illustrate this heterogeneity in that, while everyone voiced some evidence of adaptation, each had a different and individual idea of what was appropriate. This is exceptionally important as it may also illustrate a tendency to disassociate themselves from their aging when assessing their own skills (Weiss & Lang, 2013).

5.2.2 *Driver testing*

The issue of driver testing was obviously important to many of the drivers in the current study. While seemingly comfortable with some testing of older drivers, most were uncomfortable with government making decisions based on chronological age. They recognized the state's need for standardization but believed physical health should be the definitive criteria.

In an American Demographics survey on attitudes toward aging, 60% of those surveyed believed adults over 65 were a danger on the road and should be rigorously tested before renewing a driver's license (Fetto & Gardyn, 2000). While this perception of dangerous older drivers is invalid (DOT, 2013), most older adults in our study believed testing for health issues affecting driving was necessary. In this they seem to mirror the understanding of transportation researchers “that increased crash risk is not an issue of age per se but rather an issue for a small group of older adults with functional and cognitive difficulties” (Ross, et al., 2009, p. 164). The exception, Carol, whose background included teaching older driver safety courses, was aware

that people do not plan for the day when they can no longer drive. She believed that setting an age limit of 80 for older drivers would help them adjust and prepare for the eventual reality of no longer driving.

O'Neill, Bruce, Kriby and Lawlor (2000) found that as people develop health concerns, those concerns turn into driving concerns. Clearly, most participants believed chronological age was not the definitive issue in continued driving ability. Their thoughts on health were much more specifically targeted toward symptomology and disease processes.

5.3 Perceptions of Health and Driving

It has been found that older adults overwhelmingly believe (69%) that physical issues do not keep them from doing things they want to do (AARP The Magazine, 2014). The older adults in the current study echoed this finding. While well aware that their physical health could, and in some cases did, affect their driving, most felt, that having made adaptations, they were perfectly capable of continuing to drive. The exceptions were found in the two who had ceased driving recently and one older adult who was concerned about "whether or not I am going to have the capacity to judge whether or not I am an endangerment" (Robert).

5.3.1 *Perceptions of health*

As found in the earlier stereotypes/perception discussion, asked how health affects driving, these participants answered in two distinct forms: either they discussed the health issues of hypothetical third persons or they discussed their own health issues. Those who spoke in the third person separated themselves from what they saw as more serious health issues thereby also separating them from encroaching driving cessation. This desire to place oneself within a healthier cohort is again indicative of in group/outgroup classification (Allport, 1954; Chasteen, 2000).

The desire to remain a driver was voiced multiple times; *independence* was foremost in their understanding of what would be missing from their lives should they cease driving. This understanding is in line with the work of Shope (2003) who found drivers associated loss of driving ability with loss of independence and freedom. While it is doubtful these participants are aware of all the potential consequences of cessation (Edwards, Lunsman, Perkins, Rebok, & Roth, 2009), they look upon cessation as something to be avoided as long as physically possible.

This may also explain, in part why an overall perception of health is more likely to signal cessation than specific medical conditions or sensory function, such as poor eyesight (Anstey, Windsor, Luszcz, & Andrews, 2006). Perhaps, while one can consider a specific medical issue as surmountable, overall poor health may be harder to justify as a driver.

All but two of the participants reported their health status as excellent or good; those two included a former driver with Parkinson's disease and a woman who had never driven. A few of these older drivers continue to drive with extenuating medical conditions or medical/government stop orders.

5.3.2 *Physical issues*

The variety of health conditions mentioned gives an idea of what these adults are trying to accept. As seen in Table 4.3, their list of medical conditions potentially affecting driving is extensive.

5.3.2.1 Vision

Vision topped their list. Vision was most frequently discussed through examples of those who had stopped driving--or should. Macular degeneration, cataracts and glaucoma were all concerns of this study's participants. Further, they discussed recent changes of the DMV in

North Carolina, which now retests vision on a five-year basis for those over 65. They seemed to approve of this change with some even questioning whether it was often enough.

As found by Mann, et al. (2005) and Ragland, Satariano and MacLeod (2004), there is evidence that sight-limiting diseases limit driving and that those with cataracts tend to drive less than more sighted drivers. One driver in the current study expressed his belief that the worsening of his eye issues would signal cessation on his part; yet this he said while continuing to drive with extreme vision challenges. As described by Anstey, et al., (2006) this driver may judge his overall health as good and thus his vision issues, though profound, do not seem challenge enough to keep him from driving.

5.3.2.2 Cognitive

Study participants voiced many of the same cognitive concerns found by other researchers. They reported apprehension about driving and decreased confidence (Gardezi, et al., 2006). They spoke of "distractions" and "a lot going on," indicative of the "greater perceived mental demands" discussed by Bunce, Young, Blane and Khugpath, (2012). They mentioned reaction times, and worried about driving errors.

These older adults however, seemed most concerned about older drivers and memory loss or dementia. They knew people who got lost while driving and they reluctantly connected their own small memory lapses with these greater concerns. While this worry is believed to be somewhat stereotypical (Alvarez & Fierro, 2008) and the actual incidence among drivers rather low (O'Neill, et al., 2000), there is little doubt that dementia is an issue about which they are concerned.

5.3.2.3 Arthritis and mobility

Functional mobility is known to affect both driving ability and the willingness to drive (Dobbs, Wodzin & Vegaga, 2005). Several participants of the current study admitted to being affected by pain and stiffness. This was among conditions for which they had adopted modifications from "driving less" to driving "with the seat heater on to lessen pain."

While seeming to cope with their current mobility concerns by adaptation, their discussions of physical issues were tinged less with acceptance and more with sadness. Pain and weakness they saw as potentially debilitating and thus as threats to their driving and by extension, their independence. Thus they recognize this very real threat as documented by Mann, et al. (2005) who found that issues of mobility can hasten driving cessation.

5.3.2.4 Medication use

Psychoactive medication use is prevalent in as many as one in five older drivers (Dobbs, 2012; O'Neill, et al., 2000; Mental Health, 2000). However, while the comments voiced in our focus groups concerning medication use seem extensive, most came from only two participants (one of whom admitted to being on 9 drugs and two different types of eye drops). It is interesting and perhaps of some concern that this issue was not more at the forefront of the majority of participant's medical discussions.

Both Dobbs (2012) and O'Neill et al. (2000) believe medication use and/or drug impairment to be perhaps the greatest viable concern about older drivers. The medications they take can impact their driving ability. That this concern was not more prevalent in our discussions may point to a lack of awareness on the part of these older drivers. It is also quite possible that these medications are such an accepted part of their lives that they do not stop to

consider them in the context of driving. They may choose to live in quiet denial of this potential threat to their independence.

5.4 Limitations, Strengths, and Future Directions

Limitations of the current study include both the lack of racial diversity and the lack of educational diversity. Further, focus groups include a (necessarily) smaller sample of the population than is often used for research purposes. Each of these limitations needs further consideration.

All of our participants were Caucasian. This is a reflection of the ethnic makeup of their small, mountain town. Yet the numbers of minority older drivers on the roads is projected to increase in the coming years (Raymond, Knoblauch et al., 2001). Thus the value of their input in studies like this one cannot be disputed. There is also the potential of multiple stereotypes involved in how more diverse focus group might consider older drivers. This multiplicity of stereotypes may lead to "multiple types of intolerance" and thus with the current study, we potentially have left some older driver stereotypes unexplored (Asoved, Long, & Voller, 2009, p. 2346). Further, if as was described by Hummert, et al. (1994), older adults differentiate even more characteristics of their age group than do younger or middle aged, then those differentiations possibly extend to cover differences perceived as racially or ethnically oriented.

The lack of educational diversity is equally limiting. Educationally, our sample was extremely well educated ($M=17$ years). A 2011 study demonstrated a positive link between education level and both late life mobility levels and rate of physical decline (Thorpe & Simonsick). Thus a participant group encompassing less educated individuals could correlate to a less healthy sample, possibly altering some of the views expressed. The current sample is indicative of the types of Continuing Care Retirement Centers (CCRC) in which the participants

live as well as the higher economic level of their surrounding area.

It is also an indicator of post-graduate level educators "paying it back." Several mentioned that, having run studies of their own, they decided to participate based on their own knowledge of how hard it can be to get participants for academic research.

This study's findings are based on a relatively small number of participants. Methodologically, focus group research is justified in this small sample size by the type and depth of information gained ((Troachim & Donnelly, 2008). Clearly however, this study represents a limited segment of American society and more representative samples should be sought for further research.

The strengths of the current study lies in the emphasis placed on the various questions by the participants. When asked how they describe older drivers, these participants responded with stereotypical words and phrases similar to younger adults. These older adults, however, proceeded to describe and define those words and phrases from the viewpoint of their personal realities. In essence, they take a negative idea and give it a positive spin. Addressing this perceived contextual disconnect between generations should be a focus of future research. It might behoove younger drivers to be trained to believe slow and cautious driving on the part of older adults is beneficial. It might benefit these older drivers to seek more awareness of their actual versus perceived skills and abilities.

When asked how age affects driving, our participants place great importance on adapting their driving behavior to fit their current physical circumstances. Demonstrating the resilience of their generation, they take the potential negative of aging bodies and find ways to continue functioning in a positive fashion. It may be that their emphasis on "slow" and "cautious" makes these older drivers among the safer drivers on the road as opposed to the threat the general public

believes them to be. However, these older adults also note heterogeneity within the older driver population, recognizing that not all older adults experience their driving skills or respond to them the same way. It must also be noted, that the high socio-economic status of the majority of these participants (as noted by education level and self-indicated good health) may have given voice to a greater optimism about aging in general. It is possible that a more inclusive study would find less positive reaction to the adaptations necessary to an aging driver.

When asked how health affects driving, it seems that these participants, while realistic about the health issues they face, are perhaps less realistic in their estimation of their personal ability. This potential disconnect between perception and personal reality needs further exploration. Given findings of relative safety amongst the drivers of this generation, the conversation concerning who should make decisions about their driving skills and cessation is one of great importance. Determining actual markers for cessation should also be an ongoing area of study and research. Considering the impacts of cessation, the importance of keeping these older drivers safely on the road should be paramount. Concern should be based on their fragility and self-risk rather than a stereotypical definition of the older "dangerous" driver.

The current study gives voice to the words of older adults ($M=83$ years) who are striving to remain viable participants of the driving public. While the words of these older adults often illustrated findings from former studies about older drivers, most of those studies came from the realm of transportation research. These former studies have asked similar questions for different purposes. For instance, in asking older drivers questions about their driving and abilities, Kua, Korner-Bitensky and Desrosiers (2007) were seeking their acceptance level of a potential driver-training program.

This research highlights the specific ways older adults speak of their driving abilities without confounding purposes. These older adults believe they are slow and cautious drivers and that this is generally a positive characteristic. They recognize their aging but believe they cope well by adapting their driving behaviors. The participants of this study understand that driving ability is a function of health and not chronological age and they believe, for the most part, that they will recognize when health issues preclude their ability to drive. Considering their answers and the ramifications of these research questions within the realm of communication and gerontology furthers our understanding of specific perceptions of and toward older drivers. The importance of those perceptions and our understanding of them can only be emphasized by the burgeoning population of drivers over 65 whose numbers will double within the next decade. It behooves us all to find the realities behind the perceptions of an aging population on the roads.

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APPENDICES

Appendix A: Joannis Stereotype Categories

Categories of Stereotypical Comments of Older Drivers

Category	Comments
Overly cautious and uncomfortable behind the wheel	"Nervous" "Take their sweet time merging into lanes" "Unwilling to drive in unfamiliar surrounding" "Drive too slow"
Dangerous and unsafe drivers	"Uncontrolled" "Ignore traffic laws (definitely in need of refreshers)" "Hazard" "Don't check mirrors or blind spots"
Cautious and obeying rules	"Doesn't drive reckless (with respect to speed)" "Make complete stops" "Cautious" "Very courteous on the road"
Affected by cognitive deficits	"Inattentive" "Judgement not as good" "They do get lost very easily" "Unaware of surroundings"
Affected by perceptual and physical declines	"Slow reflexes" "Hearing-impaired" "Vision-impaired" "Slow reaction time"
Nuisance for other on-road users	"Aggravating" "Stubborn" "Pushy" "Always think that they are right"
General stereotype of the older adult	"Helpful (if stuck)" "White knuckled little old lady that can barely see over her dash" "Disempowered/losing autonomy" "Cute"
Skilful and experienced drivers	"Experienced" "Knowledge of roads" "Park very well" "Less accidents"
Car stereotype	"Their cars are always clean" "Less likely to drive a sports care or muscle car" "Drive buicks, bmws, etc. more expensive consumer sedans" "Vehicle is too big for them (i.e. parking is difficult)"
Heterogeneous group that is falsely stereotyped	"Just because they're old doesn't necessarily mean they're bad drivers" "My grandma is 80 and drives perfectly" "Falsely stereotyped!" "Not necessarily slower drivers (indiv. differences)"
Denying age-related declines	"Denial: many sr's deny that they might process info slower/have difficulty driving" "Don't realize their driving skills are deteriorating until they get in an accident" "Less willing to admit to eyesight problems"
Other	"Adventurous" "Old" "No older over to drive in china"

Joannis et al. (2012) Overly cautious and dangerous: An empirical evidence of the older driver stereotypes. *Accident Analysis and Prevention* (45) p. 808, Table B.1.

Appendix B: Georgia State Consent Form

Consent Form

Georgia State University

Department of Gerontology

Informed Consent

Age, Health and Driving Ability: Perceptions of Older Adults

Principal Investigator: Jayenette Atkinson, P.I.

Celeste E Selwyn, Student P.I.

I. Purpose:

You are invited to take part in a research study. The purpose of the study is to understand how older drivers feel about driving and other older drivers. You are invited to take part because you are over 65 years of age. A total of 24 people from three different places will be needed for this study. This study will require one and a half hours of your time one day in June or July.

II. Procedures:

If you decide to take part, you will talk with others about older drivers. The talk will be led by a graduate student. All of the discussion will be audio recorded. All members of the group will be volunteers from your CCRC/Senior Center and the talks will take place on site. There will be only one meeting for you to attend. Some background information will be gathered from you and your first name will be used. However, you will not be named in the research reports or any published material.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Taking part in this study may help you. You may better understand other older drivers and that you are not alone in facing the changes of older drivers. We hope to gain ideas about how older drivers take part in our changing world.

V. Voluntary Participation and Withdrawal:

Taking part in research is voluntary. You do not have to be in this group. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop taking part at any time. There is absolutely no punishment for not finishing the talk.

VI. Confidentiality:

We will keep your records private as much as we can according to the law. Dr. Jayenette Atkinson and Celeste Selwyn and the other group members will be the only ones who know who you are and what you said. Your information will be stored in password- and firewall-protected computers. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be reported in group form. You will not be personally named. The audiotapes and written reports of the talks may be locked up and kept in a secure place for up to one year.

It is hard to keep things private in a group discussion. The researchers can keep information private in the recordings and reports, and other participants will be asked not to share the information. However, this is not something we can guarantee but there should not be anything in the group discussion that could prove upsetting or embarrassing to anyone taking part.

VII. Contact Persons:

Contact Dr. Jaynette Atkinson (404-413-5668; jla@gsu.edu) or Celeste Selwyn (404-444-9839 or cstel@mindspring.com) if you have questions, concerns, or complaints about this study. You can also call if you think you have been harmed by the study. Contact Susan Vogtner in the Georgia State University Office of Research Integrity (404-413-3513 or svogtner1@gsu.edu) if you want to talk to someone who is not part of the study team. You can talk about questions, concerns, offer input, obtain information, or suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights in this study.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be audio recorded, please sign below.

_____	_____
Participant	
	Date
_____	_____
Principal Investigator or Researcher Obtaining Consent	Date

Appendix C: Demographic Survey Form**Demographic Information Form**

Please complete the following questions about yourself.

First Name (or nickname) _____

Age _____

Gender (check one): Male _____ Female _____

How would you describe your race? Check one:

- _____ White or Caucasian
- _____ Black or African-American
- _____ Asian
- _____ Native Hawaiian or other Pacific Islander
- _____ American Indian or Alaska Native
- _____ Hispanic
- _____ Mixed Race
- _____ Other (Please specify: _____)

How many years of school have you completed? (Example: 12 = high school graduate. Add or subtract years as needed.)

Number of Years: _____

Do you currently drive an automobile? (circle one) Yes No

If NO, have you ever driven an automobile? (Circle one) Yes No

How would you currently rate your health? (Circle one)

Excellent Good Fair Poor

Appendix D: Questions for Focus Groups

Questions for Focus Groups

1. When you picture an older driver, what comes to mind?
2. What attributes make a good older driver? A bad older driver?
2. How does age affect driving?
3. How does health affect driving?
4. What is the relationship between age and health when it comes to driving?
(listen and follow up on physical vs. cognitive)
5. How do other drivers respond to older drivers?
6. What observations/incidents would make you suggest a friend should quit driving?
7. What would make you consider no longer driving?
8. How do you feel about no longer being able to drive?

(follow up on any and all questions from Joannis *Comments* [Appendix A] where appropriate ie., *nervous*, *drives too slowly*, *experienced*, etc.).

Appendix E: Participant Characteristics

Name	Age	Gender	Race	Educ.	Current Driver	Ever Driven	Self-rated Health
Mary	83	F	C	12	No	No	Fair
Patricia	70	F	C	13	Yes		Excellent
James	64	M	C	20	Yes		Good
Jennifer	80	F	C	17	Yes		Good
Robert	86	M	C	17	Yes		Good
Donna	84	F	C	17	Yes		Good
William	85	M	C	21	Yes		Good
Linda	70	F	C	23	Yes		Good
David	96	M	C	13	Yes		Good
Barbara	88	M	C	17	Yes		Excellent
Susan	79	F	C	17	Yes		Good
Margaret	85	F	C	16	Yes		Excellent
Jessica	83	F	C	15	Yes		Ex/Good
Dorothy	80	F	C	19	Yes		Excellent
Richard	89	M	C	16.5	Yes		Good
Joseph	76	M	C	20	No	Yes	Good
Carol	74	F	C	18	Yes		Excellent
Karen	92	F	C	18	Yes		Good
Charles	79	M	C	20	No	Yes	Fair
Lisa	90	F	C	20	Yes		Excellent
Sandra	86	F	C	17	Yes		Excellent
Helen	82	F	C	17	Yes		Excellent
Ashley	84	F	C	16	Yes		Good
Daniel	90	M	C	22	Yes		Good
Totals	M=83 Mdn=81	16/F 8/M	C=24	M=17	No=3 Yes=21	Y=2 N=1	E=9 G=13 F=2