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FACTORS INFLUENCING DRIVING STATUS IN AN OLDER LATINO POPULATION

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Introduction

With the aging of the U.S. population, the number and proportion of older drivers in the United States is projected to increase (NHTS 2001). A large and growing proportion of the population continue to drive into their eighties and nineties, with persons age 70 and older representing the fastest growing group of licensed drivers in the United States (Glasgow, 2002; Foley, Heimovitz, Guralnick & Brock, 2002). Many of these individuals and their families will be faced with the difficult decision of deciding when it is no longer safe for them to drive a car due to physical, functional or cognitive decline.

Headlines about accidents involving older drivers have raised public safety concerns about the driving performance of older adults. Older adults are among the safest age group of drivers per number of licensed drivers (Cerrelli 1998). However, crash rates per mile driven are double those of middle aged adults for drivers aged 64 to 75, and increase six-fold for those age 85 and older (Janke, Masten, McKenzie, 2003; NHTS, 2001). Older adults involved in a motor vehicle crash are also more likely to suffer significant injury or death (Cerrelli, 1998; Evans, 1988). This increased crash rate and accident-related morbidity among the elderly is not likely due to aging, but rather to medical conditions that reduce both physical and mental abilities. Medical conditions that compromise driving can occur at any age, but are more likely to occur with advanced age. Given the strong association of age with incidence and prevalence of cognitive impairment and dementia, a large number of licensed older drivers are either currently cognitively impaired, or are likely to become demented (Dubinsky, Stein and Lyons 2001; Dubinsky, Williamson, Gray, et al, 1992).

Certain groups of older adult drivers, such as those with vision loss and cognitive impairments, clearly represent a greater potential danger to public health and safety. Impairment of visual acuity is a well-recognized risk factor for impaired driving and increased risk of car accidents (Klein, Klein, Lee & Cruickshanks, 1998). However, it is not always easy to determine what degree of vision or cognitive loss impairs the ability to safely operate a motor vehicle. Driving cessation is associated with an increase in depressive symptoms and has been suggested to be a marker for severity of health conditions (Freeman, Gage, Munoz & West, 2006; Marottoli, et al., 2000). It might be assumed that persons with dementia would stop driving after onset of

cognitive symptoms, but studies have shown that many individuals with cognitive impairment continue to drive (Adler & Kuwolski, 2003; Freund & Szinovac, 2002; Dobbs, Carr & Morris, 2002).

There is a growing body of literature on determinants of driving status in the older population. The population in most of these studies is exclusively or predominantly Caucasian. The growing ethnic diversity of the older U.S. population, however, makes it increasingly important to understand whether older individuals from different ethnic and cultural backgrounds behave similarly in the decision to continue or cease driving. Acculturation, an indicator of current level of contact with the mainstream culture among persons from a different culture, has been shown to influence health behaviors such as alcohol consumption, smoking and physical activity (Masel, Rudkin and Peek, 2006). We hypothesize that cognitive and visual impairments, two age-associated medical problems known to impact driving, are associated with both cessation and reported difficulty driving among elderly Latinos residing in Los Angeles County. Further, similar to other health behaviors, we hypothesize that level of acculturation will also influence driving behavior, such that Latino individuals who are more acculturated will be more likely to be current drivers, or to have driven in the past.

Methods

Study Sample

The sample for this study was drawn from the Los Angeles Latino Eye Study (LALES), a population-based cohort study of adults living within six census tracts in La Puente, California, a residential community in eastern Los Angeles County (Varma, Paz, Azen et al, 2004). The LALES study was designed to evaluate the prevalence and incidence of vision changes and eye disease in this predominantly Spanish-speaking immigrant population from Mexico and Central America. Starting in 1999, an extensive home-based interview, followed by a detailed eye examination, was conducted with each consenting adult resident age 40 or older (N=6122). In November 2001 a cognitive screening component was added to the home interview using the Cognitive Abilities Screening Instrument-Short version (CASI-S), which was completed in English or Spanish, depending on the subject's preference (N=2931). This study focuses on the population 65 years of age and older who participated in the LALES home-based interview and completed the CASI-S (N=421).

Cognitive assessment

The CASI-S is a brief cognitive screening instrument validated in English and Spanish (Teng 1994) which is sensitive for the detection of dementia, but not necessarily mild cognitive impairment. The CASI-S total score (0-33) was used in this analysis as an indicator of overall cognitive status, with higher scores indicating higher cognition.

Driving Status

As part of the standardized home-based LALES interview, subjects were queried on their current driving status and whether they had difficulty driving. Subjects were asked whether they were currently driving and among those who reported to be currently driving whether they had difficulty driving. Those who reported they were not currently driving were asked whether they had given up driving or never driven. Dependent variables in this analysis were current driving status (never, ex-driver, current driver) and reported difficulty driving (among current drivers).

Vision

Detailed eye examinations on all LALES participants who completed a home interview, including visual acuity testing, was performed in a standardized manner at the LALES local eye examination center, or in the home, as described in detail elsewhere (Varma 2004). Two separate measures of vision, visual impairment and visual field loss, from this examination are used in this analysis. Visual impairment, defined as the best corrected acuity in the better seeing eye, was categorized as none, mild (20/40-20/63) or moderate/severe (20/80 or worse). Five categories of severity of visual field loss were utilized, ranging from none to unilateral loss or bilateral loss, as described elsewhere (McKean-Dowdin, et al., 2007)

Other independent variables

Additional independent variables used in this analysis were demographics (age, gender, education), health status, health care utilization, acculturation, function and depressed mood. Subjects reported their general health status on a single item from 1 (excellent) to 5 (poor). Current health status was measured on a scale from 0 to 100 (0 indicating worst imaginable health, 100 indicating best imaginable health).

A summary acculturation index was created similar to that used by other researchers. (Masel, Rudkin, & Peel, 2006; Evenson, Sarmiento, & Ayala; 2004). Eight items from the home questionnaire were used: (1) use of Spanish/English (only English, mostly English, Spanish and English equally, mostly Spanish, only Spanish); (2) preferred language (only English, mostly English, Spanish and English equally, mostly Spanish, only Spanish); (3) able to read (English only, English better, Spanish and English equally, Spanish better, only Spanish); (4) able to write (English only, English better, Spanish and English equally, Spanish better, only Spanish); (5) born in US; (6) ethnic identification (Anglo-American/Native American, American, Chicano/Mexican-American, Mexican/Hispanic/Latin American); (7) seen health professional outside of the United States in the last year; (8) use of traditional folk medicine in the last year. The total acculturation index score in this sample ranged from 8 to 27, with a higher number indicating less acculturation.

Health care utilization was assessed through four variables: current health insurance coverage (yes/no), reported difficulty obtaining medical care, average number of medical visits/year and seeking care from a physician outside the USA (yes/no). Function was assessed by three separate self-reported variables: level of limitation in moderate daily activities (a lot, a little, not at all), limitation in climbing stairs (a lot, a little, not limited), and limitation in work or daily activities due to physical health (yes/no). Emotional health, specifically depressed mood, was measured by self-reported frequency of feeling down-hearted and blue (6-point scale ranging from all the time, to none of the time).

Statistical analysis

The sample of 421 subjects aged 65 and older were divided into the following driving groups: (1) current drivers (n=207), (2) drove in the past, but not currently driving (n=77), (3) never drove (n=137). Among the 207 current drivers, the sample was further divided into those who reported at least moderate difficulty driving (during the day or night, n=52) and those who reported no or minimal difficulty driving (n=155). Univariate analyses compared these groups on the independent variables listed above. Multilevel categorical variables were grouped for analysis into dichotomous variables (e.g., activity limitation a lot or a little into limitation versus no limitation). Analysis of variance (ANOVA) was used to test differences in means of continuous variables and chi-square tests were used to assess group differences in proportions for categorical variables.

To determine statistically independent factors related to current driving, the sample of 284 subjects who had ever drove (207 current drivers, 77 subjects who drove in the past) was used to derive a multivariate logistic regression model. The dichotomous dependent variable was stopped driving (yes/no). Independent variables selected for possible inclusion in the model were variables that differed between groups on univariate analysis at $p < 0.20$. Independent variables that were statistically significant at $p < 0.05$ were retained in the multivariate model. The same logistic regression procedure was used to determine statistically independent correlates of reported difficulty driving (among the 207 current drivers). All statistical analyses used Statistical Analysis System (SAS, Version 9.0) software.

Results

Demographics

A similar proportion of the population over 65 reported currently driving ($n=207$, 49%) as not driving ($n=214$, 51%). The 214 persons who reported not currently driving included two groups; a majority who never drove ($n=137$, 60%) and those who had stopped driving ($n=77$, 40%) (Table 1). Current drivers had significantly more years of education ($p < 0.0001$) and reported better general health status ($p < 0.0001$) than those who had stopped driving or had never driven. Slightly more than half (57%) of current drivers were male, whereas males comprised a little more than a third (36%) of those who stopped driving and a small proportion (12%) of those who never drove. Those who reported never driving were significantly older (mean age 72.7 vs. 70.8) than current drivers ($p < 0.003$). Among non-drivers, those who gave up driving were slightly older than those who had never driven and current drivers.

Driving Status

Persons who never drove reported poorer general health ($p < 0.0001$) and had significantly lower CASI-S scores ($p < 0.0001$) than current drivers. Non-drivers who had relinquished driving had lower CASI scores ($p = 0.05$) but reported slightly better health ($p = 0.03$) than those who had never driven. A greater proportion of former drivers had visual impairment compared to both current drivers and those who had never driven ($p < 0.0001$). The groups also showed significant differences in visual field loss, with 70% of those who stopped driving and 60% of those who never drove having some amount of bilateral visual field loss compared to only 34% of current drivers ($p < 0.0001$).

Current drivers and persons who had stopped driving were significantly more acculturated than those who never drove (both $p < 0.0001$). Ex-drivers were slightly less acculturated than current drivers ($p = 0.07$).

Almost all (95%) of the sample currently driving had health insurance, while only 80% of those who gave up driving and 72% of those who never drove had health insurance ($p < 0.0001$). Current drivers reported significantly fewer visits to a physician or other medical provider in the past year compared to those who gave up driving and those who never drove ($p = 0.007$ among groups). A significantly larger proportion of persons who never drove reported seeing a physician outside the US in the past year compared to those who gave up driving or current drivers ($p < 0.0001$).

Difficulty in driving

A quarter (52 of 207) of the current drivers reported moderate or greater difficulty driving (Table 2). Age, gender, education, visual impairment and visual field loss, and cognition did not differ between those who reported difficulty driving compared to those who reported minimal or no difficulty driving. Compared to persons who did not report difficulty driving, those who reported difficulty driving rated their general and current health significantly worse,

were significantly more likely to have consulted a physician outside the US, and were significantly more likely to have reported physical limitations and depressed mood.

Multivariate Models

From multivariate logistic regression models, variables independently associated with stopping driving and self-reported difficulty driving are displayed in Tables 3 and 4, respectively. Age, limitation in climbing stairs and depressed mood were each positively associated with stopping driving, while male gender, higher CASI-S score (less cognitive impairment) and having health insurance were associated with a lower likelihood of stopping driving (Model 1). When vision variables were added to the model, visual impairment (but not visual field loss) was significantly associated with driving cessation (Model 2). With adjustment for visual impairment and field loss, age, limitation in stair climbing and depressed mood were not significantly associated with stopping driving.

Difficulty driving—Among current drivers (n=207), those who reported poorer general health were more likely (OR=1.92 per unit of general health scale) to report difficulty driving (Table 4). Limitation in activity due to physical health was associated with a 2.24 higher likelihood of difficulty driving. After inclusion of these two variables, no other factors were significantly associated with difficulty driving (Model 1). Drivers with any visual impairment were more than twice as likely (OR=2.34) to report difficulty driving and those with any visual field loss were slightly more likely (OR=1.17) to report difficulty driving; however these associations were not statistically significant. The relationship between poorer self-reported general health and activity limitations to difficulty driving persisted with adjustment for these vision variables (Model 2).

Discussion

In this population-based study, we report significant differences among older Latinos who continue to drive versus those who never drove or have stopped driving. Among older Latinos who continue to drive, those who self-report difficulty driving also differ from those who drive without any report of difficulty.

A much smaller proportion (49%) of this community-dwelling Latino cohort are currently driving compared to what has been reported among the older population in general, where two-thirds of adults 70 years and older in the United States continue to drive (Foley, Heimovitz, Guralnik & Brock 2002). In this older Latino population those who continue to drive are younger and those who have given up driving are older than persons who never drove. This is similar to the older population at large where driving rates decline with age (Jette and Branch 1992).

Latino males are much more likely to be drivers, either currently or in the past, and conversely Latino females comprise the majority of those who never drove, consistent with data reported in general for older drivers (Foley, Heimovitz, Guralnik & Brock 2002). Overall the population had a relatively low rate of formal education, less than 9 years on average among current drivers and only four years among those who never drove. Less education has been previously reported to be associated with an increased likelihood of both never driving and driving cessation (Dellinger, Sehgal, Sleet & Barrett-Connor 2001; Marotolli, et al., 1997). The relatively lower education level of this older Latino population, in particular among women, is consistent with what has been reported elsewhere among the Latino population, and may also explain in part the lower driving rate compared to the general population of elderly persons (Raji, et al., 2004).

Current drivers in this elderly Latino sample performed significantly better on the cognitive screening instrument than those who had stopped driving. This association remained highly significant in multivariate analyses adjusting for age, gender, vision, and self-reported measures of physical and emotional health. The relationship between cognition and driving status in this older Latino population is what ideally should occur. Those who stopped driving had the lowest scores on cognitive testing of the three groups. However, due to the cross-sectional nature of this study, it is not known if those who stopped driving did so because poor cognitive performance adversely affected their driving or for other reasons. Those who never drove had lower overall cognitive performance than those who continue to drive, but higher cognitive performance than those who stopped driving, suggesting that it is not poor cognition that kept them from driving in the first place. Additionally, there is a well-documented association between education level and performance on cognitive tests. The lower education level of those who never drove could have contributed to poorer performance on the CASI.

Self-reported health is a robust measure of overall health status among the elderly and has consistently been shown to be a good predictor of both function and mortality (Idler & Benjamin 1997). Latino non-drivers, both those who never drove and those who stopped driving, reported poorer health status than current drivers. Current drivers who reported difficulty driving rated their health poorer than those driving without difficulty, suggesting it is health problems that affect driving and ultimately lead to driving cessation. In the multivariate regression models self reported health was not found to be a significant predictor of driving cessation, yet remained a significant predictor of difficulty driving among current drivers. This differs from longitudinal studies that have found driving cessation associated with poorer self-rated health (Antsey, Windsor, Luszcz & Andrews, 2006; Edwards, Ross, Akerman, et al., 2006). Similar to this urban Latino population, these same studies found physical activity limitations were strongly associated with driving cessation.

Older Latinos who never drove were less acculturated than both current and former drivers. Individuals who never drove would be more likely to remain within their local community, be dependent on others for transportation and therefore have less exposure to the larger cultural environment. Because of the cross-sectional study design it could also be that less acculturation led to a lower likelihood of driving.

Functional limitation due to both physical and emotional health problems was commonly reported among this older Latino population. As expected, current drivers reported fewer such limitations than those who stopped driving or those who never drove. This is consistent with findings that driving cessation is associated with increased levels of depression and reduced activities outside of the home (Fonda, Wallace, & Herzog 2001; Marotolli, et al., 2000; Jette and Branch 1992). We also found higher levels of depressed mood among person who had stopped driving in this Latino sample. It is not clear whether these health problems are antecedents to or consequences of driving cessation.

This is the first study to focus on driving characteristics among a population of older Latino-Americans. The major strengths of this study are the evaluation of a multitude of factors potentially related to driving status in a large population-based sample of elderly Latinos. We demonstrate some unique characteristics of this population, such as the low driving rate, compared to what is known about drivers in the older American population in general.

The post hoc nature of this analysis limited our ability to completely address the study hypotheses. As the primary objective of LALES was not to study driving behaviors and variables associated with driving, the LALES database provided only a limited number of driving-related variables for this analysis. Inclusion of other variables, such as age when first drove or obtained a license, history of collisions or citations, along with information on

medication use, would have informed a more comprehensive examination of the characteristics of driving among this elderly Hispanic population. Additional limitations of the study are the cross-sectional design and self-reported driving status. Since the US Latino population is comprised of individuals from a variety of countries and ethnic and cultural backgrounds our findings may not be generalizable to Latino populations from other backgrounds or those living in less urban locations (Weinick, et al., 2004).

The role of acculturation and driving has not been examined among any population group, to our knowledge, and is an area of research that warrants further examination. Acculturation is an ongoing process that may impact various behaviors, including driving and decisions as to when one should stop driving, differently over time. For example, acculturation may provide further explanation for the gender differences observed in driving, particularly as it relates to the age at which an individual first learns to drive. Economic status as a determinant of access to the purchase of an automobile is another unexplored variable that could have affected driving status in this population.

Health professionals and others caring for the growing older Latino population need to be aware of differences in driving status among this population and both the similarities and differences of older Latinos from the general older population in the US. They need to recognize that significant numbers of Latino patients may never have driven and others have stopped driving, leaving them dependent upon others for transportation and all the implications this has for health and well-being. Among the factors that should alert those caring for older Latino patients regarding potential difficulty driving or the likelihood of ceasing to drive are female gender, low education, reduced cognitive status, visual impairments, and poor physical health or function. As with the older population in general, there is a need for increased awareness of cognitive decline and vision particularly as these impact driving.

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Table 1

LALES Subjects Aged 65 and Older by Current Self-Reported Driving Status (n=421)

	Drives Now (N=207)	Stopped Driving (N=77)	Never Drove (N=137)	P value
Age, years	70.8 (4.9)	74.2 (7.4)	72.7 (5.8)	<.0001
Male	118 (57%)	28 (36%)	17 (12%)	<.0001
Education (highest grade)	8.9 (4.1)	5.7 (4.5)	4.0 (3.7)	<.0001
CASI-S Score (0-30)	28.5 (3.0)	25.5 (4.6)	26.5 (4.2)	<.0001
Visual Impairment*				
None	199 (96.1%)	48 (63.2%)	106 (77.4%)	<.0001
Mild	6 (2.9%)	17 (22.4%)	21 (15.3%)	
Moderate	1 (0.5%)	6 (7.9%)	7 (5.1%)	
Severe	1 (0.5%)	5 (6.6%)	3 (2.2%)	
Visual Field Loss				
None	91 (44.4%)	11 (15.7%)	24 (18.2%)	<.0001
Unilateral Mild	41 (20.0%)	10 (14.3%)	24 (18.2%)	
Unilateral Mod/Severe	2 (1.0%)	0 (0%)	3 (2.3%)	
Bilateral Mild	45 (22.0%)	21 (30.0%)	42 (31.8%)	
Bilateral Mod/Severe	26 (12.7%)	28 (40.0%)	39 (29.6%)	
General Health (1-5 scale)	3.1 (1.0)	3.5 (1.0)	3.6 (1.0)	<.0001
Current Health (1-100 scale)	78.25 (19.19)	71.84 (25.30)	63.99 (29.76)	<.0001
Acculturation Index	16.0 (7.0)	17.6 (6.7)	21.5 (5.7)	<.0001
Has Health Insurance	198 (95.6%)	62 (80.5%)	99 (72.3%)	<.0001
No Difficulty Obtaining Medical Care	198 (95.6%)	74 (96.1%)	131 (95.6%)	0.98
Average Number of Medical Visits/year	4.6 (3.9)	6.6 (7.2)	6.3 (7.2)	.007
Consults Physician Outside US	8 (3.9%)	6 (8.0%)	26 (19%)	<.0001
Any Limitation in Moderate Activities	96 (44.3%)	37 (62.7%)	76 (55.4%)	.05
Any Limitation Climbing Stairs	106 (51.1%)	42 (70.0%)	101 (73.7%)	<.0001
Limitation in Activities due to Physical Health	60 (29%)	23 (29.9%)	50 (36.5%)	.03
Limitation in Activities due to Emotional Problems	51 (24.6%)	20 (26%)	61 (44.5%)	.003
Depressed Mood	30 (14.3%)	15 (29.3%)	29 (21%)	.032

Numbers in table are mean (SD) or n (%). P value from ANOVA for continuous variables, chi square for categorical variables

Visual field loss; n=407 subjects with data

* Visual impairment using best eye; n=420 subjects with data

Table 2

Self-reported Driving Difficulty Among LALES Current Drivers Aged 65 and Older (n=207)

	No Problem (N=155)	Difficulty (Day or Night) (N=52)	P Value
Age, years	70.7 (4.8)	71.2 (5.1)	0.49
Male	90 (58%)	28 (54%)	0.59
Education (highest grade)	8.9 (4.2)	8.7 (3.9)	0.74
CASI-S Score (0-30)	28.5 (3.2)	28.3 (2.7)	0.73
Visual Impairment			
None	151 (97.4%)	48 (92.3%)	0.10
Mild	2 (1.3%)	4 (7.7%)	
Moderate	1 (0.6%)	0 (0%)	
Severe	1 (0.6%)	0 (0%)	
Visual Field Loss			
None	71 (46.1%)	20 (39.2%)	0.20
Unilateral Mild	33 (21.4%)	8 (15.7%)	
Unilateral Mod/Severe	1 (0.6%)	1 (2.0%)	
Bilateral Mild	34 (22.1%)	11 (21.6%)	
Bilateral Mod/Severe	15 (9.7%)	11 (21.6%)	
General Health (1-5 scale)	3.0 (1.0)	3.6 (0.8)	<0.0001
Current Health (1-100 scale)	80.0 (18.0)	73.0 (21.8)	0.02
Acculturation Index	15.9 (7.0)	16.3 (6.9)	0.69
Has Health Insurance	147 (94.8%)	51 (98.1%)	0.32
No Difficulty Obtaining Medical Care	150 (96.8%)	48 (92.3%)	0.17
Average Number of Medical Visits/year	4.7 (4.0)	4.2 (3.5)	0.34
Consults Physician Outside US	3 (1.9%)	5 (9.6%)	.013
Any Limitation in Moderate Activities	61 (39.4%)	35 (67.3%)	.002
Any Limitation Climbing Stairs	75 (48.3%)	31 (59.5%)	0.16
Limitation in Activities due to Physical Health	35 (22.6%)	25 (48.1%)	.0005
Limitation in Activities due to Emotional Problems	31 (20%)	20 (38.5%)	.0075
Depressed Mood	18 (11.6%)	12 (23.1%)	.042

Numbers in table are mean (SD) or n (%). P value from ANOVA for continuous variables, chi square for categorical variables

* Visual impairment using best eye; n=207 subjects with data

Visual field loss; n=205 subjects with data

Table 3

Multivariate Logistic Regression: Significant Correlates of Stopped Driving (vs. Currently Driving).

Variable	Model 1 (without vision variables)		Model 2 (with vision variables)	
	OR (95% CI)	p-value	OR (95%CI)	p-value
Age (per year)	1.08 (1.02-1.15)	0.013	1.05 (0.98-1.13)	0.15
Male (vs. female)	0.27 (0.13-0.57)	0.0006	0.23 (0.10-0.52)	0.0004
CASI-S	0.85 (0.77-0.95)	0.003	0.86 (0.77-0.96)	0.008
Has health insurance	0.19 (0.05-0.64)	0.007	0.14 (0.04-0.52)	0.003
Limitation climbing stairs	2.05 (1.00-4.20)	0.049	1.73 (0.79-3.79)	0.17
Depressed mood	2.56 (1.13-5.81)	0.024	2.42 (0.99-5.92)	0.053
Visual impairment				
Mild			5.53 (1.45-20.98)	0.01
Mod/Severe			13.23 (1.45-120.30)	0.02
Visual field loss				
Unilateral			1.91 (0.63-5.76)	0.25
Bilateral mild			2.05 (0.74-5.66)	0.17
Bilat. Mod/sev			2.84 (0.92-8.78)	0.07

Model 1: n=207 current drivers; n=51 stopped driving

Model 2: n=205 current drivers; n=49 stopped driving

p-trend for visual impairment =0.001; p-trend for visual field loss = 0.07

Unadjusted odds ratios for: Visual impairment: Mild (OR=11.74; 95% CI(4.40-31.37)); Moderate/severe (OR=22.80, 95% CO 4.89-108.26)).

Visual field loss: Unilateral (OR=1.92, 95% CI=(0.76-4.88)); Bilateral mild (OR=3.86, 95% CI=(1.71-8.70)); Bilateral moderate/severe (OR=8.91; 95%CI=(3.91-20.27)), p-trend<0.0001

Table 4

Multivariate Logistic Regression: Significant Predictors of Self-Reported Difficulty Driving Among Current Drivers

<u>Variable</u>	<u>Model 1 (without vision variables)</u>		<u>Model 2 (with vision variables)</u>	
	OR (95%CI)	p-value	OR (95% CI)	p-value
General health rating (1-5 scale)	1.92 (1.27-2.89)	0.002	1.89 (1.26-2.85)	0.002
Limitation in Activities due to Physical Health	2.24 (1.10-4.54)	0.026	2.03 (0.99-4.18)	0.054
Any visual impairment			2.34 (0.47-11.60)	0.30
Any visual field loss			1.17 (0.59-2.31)	0.66

Model 1: n=155 no difficulty driving; n=52 difficulty driving

Model 2: n= 154 no difficulty driving; n=51 difficulty driving

Unadjusted odds ratios for:

Any visual impairment (mild-severe): OR=3.15, 95% CI=(0.76-13.06); p=0.11

Any visual field loss: OR=1.33, 95% CI=(0.69-2.52), p=0.39