

## A Study into Supporting Safe Driving and Active Life for the Elderly (2)

### Safe driving awareness and support after giving up driving

Tamami Shiba <sup>1)</sup> Kiyoko Jikumaru <sup>2)</sup> Junko Torii <sup>1)</sup> Yoko Nakahira <sup>1)</sup> Mie Okuda <sup>1)</sup> Kiyoko Makimoto <sup>3)</sup> Michie Nomura <sup>1)</sup>  
<sup>1)</sup> Department of Nursing, Ehime Prefectural University of Health Sciences  
<sup>2)</sup> Faculty of Nursing, School of Medicine, Nara Medical University  
<sup>3)</sup> Department of Nursing, Graduate School of Medicine, Osaka University  
 This study was supported by KAKENHI(No.21592866).

### Introduction


Car accidents caused by elderly drivers with lowered cognitive function have started to draw attention in local communities. Early detection of individuals with lowered cognitive function has been implemented, and regulating driving by individuals with dementia is progressing. However, a psychological support system for these elderly drivers has not been proposed. Moreover, transportation support system for those who gave up driving is also essential.

### Purpose

To identify safe driving awareness of the elderly and necessary support after they give up driving.

### Methods

The questionnaire was distributed by the chairperson of the senior citizens' club. Answering the questions was deemed as agreement to participate in the study. A Chi-square test was used to test statistical significance. The study was conducted after being approved by the Ethical Review Board at the author's organization. **Among the 207 respondents in the first report, 143 elderly drivers, 101 men (70.6%) and 42 women (29.4%), were further analyzed, regarding their frequency of driving, presence or absence of offenses and accidents, awareness of safe driving, and perceived support necessary after giving up driving (Table1).**



	Mean±SD or n (%)	
	Men (n=101)	Women (n=42)
<b>Age</b>	<b>74.2±5.0</b>	<b>72.7±4.6</b>
65-74 year old	54(53.5)	33(78.6)
≥ 75 year old	47(46.5)	9(21.4)
<b>Type of vehicle</b>		
car **	99 (98.0)	28 (66.7)
motorcycle **	13 (12.9)	17 (40.5)
agricultural machines	4 (4.0)	0 (0)
<b>Frequency of driving</b>		
almost everyday	75 (78.1)	29 (72.5)
several times per week	20 (20.8)	9 (22.5)

## Results

**Result1 : Circumstances of driving and intention of driving after returning driver's license (Table2)**

	Mean±SD or n (%)	
	Male (n=101)	Female (n=42)
<b>Q1. Feeling danger while driving</b>		
Frequently	8 (7.9)	1 (2.4)
Sometimes	64 (63.4)	25 (59.5)
Never	26 (25.7)	14 (33.3)
<b>Q2. Driving infraction within the last one year</b>		
Presence	12 (13)	1 (2.5)
<b>Q3-1. Do you have an accident 65 years old and later ?</b>		
Yes	21 (21.6)	5 (11.9)
No	76 (78.4)	34 (87.2)
<b>Q3-2. Are you driving after the accident?</b>		
I'm still driving	20 (20.8)	4 (9.5)
I refrain from driving	0	1
I stopped driving	0	0
<b>Q5. What do you do after returning your driver's license in the future?</b>		
I'll stop driving	84 (91.3)	36 (94.7)
I'll drive	8 (8.7)	2 (5.3)

**【Circumstances of driving】**

Q1: **Ninety-eight (71%) elderly drivers answered that they sometimes feel danger while driving.**

Q2: The elderly who reported a driving infraction within the last one year was 13 (9.8%), including 5 for ignoring a sign and 3 for speeding offenses.

Q3: **The number of people who had a near miss or had an car accident after reaching 65 years of age was 26 (19.1%).**  
Of those, 24 continued driving even after the accident; and one refrained from driving; and one had no answer.

**【Intention of driving after returning a driver's license and its background】**

Q4: **Ten elderly drivers responded that they would drive around their house even after returning their driver's license.**  
Of these ten, three respondents had driving infractions (overspeed, ignoring a sign, driving against traffic) in the past year, and had a near miss 65 years old and later or actually had an accident. Above said 3 elderly are currently driving almost every day. They are living with their spouse, children or grandchildren. They answered that they required car for doctor/hospital visit, shopping, work etc.

**Result2: Safe driving practice in elderly drivers**

Females scored significantly higher in 7 out of 10 items (\*\*p < .001). (Figure 1)

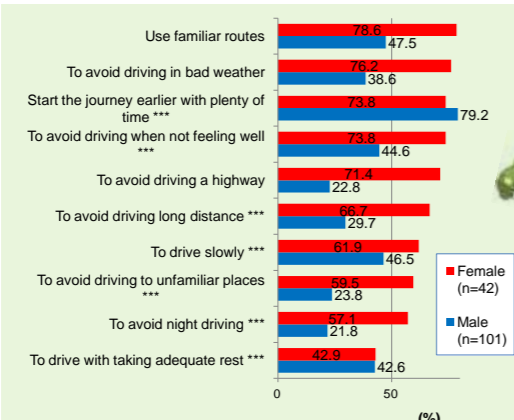


Figure 1 Safe driving awareness of the elderly (%)

**Result3: Necessary support after giving up driving**

Younger respondents reported higher needs for public bus service than older ones (\*p < .05). (Figure 2)

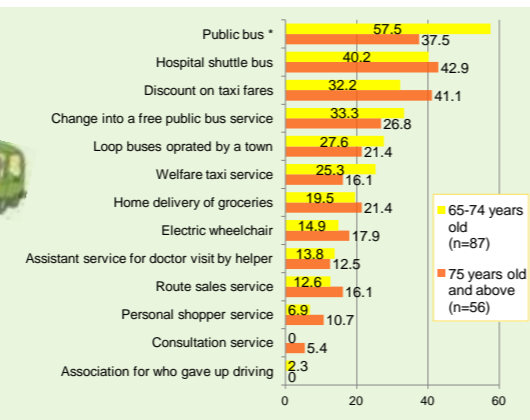


Figure 2 The forms of support after giving up driving (%)

### Discussion

This study revealed the experience of traffic near miss and accidents among elderly drivers. Safe driving practice and support necessary after driving cessation were also examined, and found gender and age differences in practice and perceived support. These findings are useful for road safety education and development of the support system for those give up driving. In addition, return of driver's license due to aging and lowered cognitive function may lower self-esteem in the elderly, and may cause social withdrawal because of loss of their roles. Therefore, developing and implementing support system to maintain independence after driving cessation is necessary.