





The 16<sup>th</sup> National and International Conference  
"Global Goals, Local Actions: Looking Back and Moving Forward 2024"  
20 March, 2024

**Introduction**

The demographics of Malaysia are currently showing a historically unprecedented trend, according to data from the Malaysian Department of Statistics. Nowadays, there are more adults in their 60s than kids under the age of five. DOSM estimates there were 9.1% more people in Malaysia in 2015 who were 60 years of age or older than there were under-fives, a difference of 0.6%. Since everyone's ages are different, there is no set age at which someone should stop driving. However, as individuals age, their susceptibility to traffic citations and accidents increases in contrast to younger drivers, as factors such as deteriorating vision, worsening hearing, slower reflexes, and declining health conditions become more pronounced. Ageing also tends to reduce strength, coordination, and flexibility, impacting your ability to control a car safely (Ang, et al., 2019; Anlin, et al., 2017; Butler, et al., 2020; Llanes, et al., 2017; Rosli, et al., 2020). Malaysian Federal Traffic Investigation and Enforcement Department also reviewed that senior citizens and bikers aged 61 and above were involved in 804 road fatalities in 2020, or 17% of the total (Adanu, et al., 2021; FMT Reporters, 2021).

Bukit Aman's Traffic Investigation and Enforcement Department in 2021 stated poor health is one of the causes of road accidents, with diseases such as Alzheimer's and deteriorating eyesight being common problems (Ayamay, 2021). And there have indeed been recent cases of elderly drivers driving against the flow of traffic, however, several groups objected to this proposal, saying that no statistics showed that the elderly are among the highest contributors to road crashes in the country. Despite no statistics on that, it is beneficial to study on the fitness to drive among the elderly based on their driving knowledge, confidence, and practice while they are on the road.

Driving is important to senior citizens to help them to stay independent later in life. It allows them to go to their doctors' appointments, participate in activities they enjoy, go to the grocery store, visit family, and help them maintain morale and a sense of self-confidence (Tandon, et al., 2022). However, as they grow older, their cognitive abilities, vision, physical fitness, attention, and ability to quickly react to sudden changes might be compromised and raise safety concerns. Although there is a suggestion from Bukit Aman Traffic Investigation and Enforcement Department for changes to Malaysian regulations so that senior citizens must go through some screening before having their driving licence renewed, several organizations have since voiced opposition to this idea. However, due to increasing traffic incidents involving the elderly drivers, it is of necessity to impose some screening towards their fitness to drive based on several relevant aptitude test. Hence, the objective of this study is to examine the





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The formula used to determine the sample size (Uma Sekaran, 2003):

$$\text{Sample size (n)} = \frac{N}{1+N(0.01)}$$

N = Number of populations

### Method of analysis

1. Descriptive Statistics
2. Composite Index

### Findings And Results

The mean age of the targeted sample is 64.22 years old (SD = 9.487). A significant majority, 78% of the respondents, reported being married. In general, older drivers self-reported good health at a rate of 70.0%. However, 40% of them indicated having one or more chronic diseases, and 34% reported taking medication for their chronic conditions. The distribution of employment status among the participants reveals that 72% are retired and unemployed, and 28% are still actively employed. It's noteworthy that this data is against the backdrop of the average retirement age in Malaysia. The majority of respondents, 70%, assessed their psychomotor ability as good, with an additional 10% rating it as very good. However, a noteworthy 20% reported self-perceived poor psychomotor ability. This variation in self-assessments highlights the diverse perceptions of psychomotor skills among the participants.

All respondents are currently active drivers, with a notable 44% indicating that they drive every day. Additionally, 26% of older drivers reported driving occasionally, approximately 3-4 times a week. This data underscores the continued engagement of older individuals in driving activities, with a significant proportion maintaining a daily driving routine. The majority of older drivers, a substantial 88%, reported no involvement in accidents over the past five years. In contrast, about 10% of respondents acknowledged having been in at least one accident throughout their driving history. This data highlights a noteworthy contrast in the accident history of older drivers, with the majority maintaining a clean record over the recent five-year period.



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Table 1: Demographic Profile of the respondents

Characteristics		n=%
Gender	Male	66
	Female	34
Race	Malay	82
	Chinese	8
	Indian	4
	Others	6
Marital Status	Single	18
	Married	<b>78</b>
	Divorced	4
Age	60-65	76
	66-70	22
	71-75	2
	76-80	0
	81 and above	0
Employment Status	Employed	56
	Retired	28
	Unemployed	16
Health Status	Very Good	18
	Good	<b>70</b>
	Poor	12
	Very Poor	0
Chronic Diseases	0	60
	1-2	38
	More than 3	2
Taking medication for Chronic Diseases	Yes	66
	No	34
Years of Driving Experience	Less than 5 years	0
	5-10 years	6
	11-20 years	20
	More than 20 years	74



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Characteristics		n=%
Driving Frequency	Daily	44
	Frequently (5-6 times)	18
	Occasionally (3-4 times)	26
	Rarely (1-2 times)	12
	Did Not Drive	0
Self-Rated Psychomotor Ability	Very Good	10
	Good	70
	Poor	20
	Very Poor	0
Accident Experience	0	88
	1-2	10
	<3	2
No of traffic tickets, warnings, or discussions	0	86
	1-2	10
	<3	4

Results for correlations analysis is based on the Pearson correlation coefficients (summarized in Table 2), the following conclusions can be drawn:

This suggests that individuals who rate their psychomotor abilities highly and those who are on medication for chronic illnesses tend to have better driving practices. Accident involvement and number of summonses have a moderate negative correlation with good driving practices. This indicates that individuals with better driving practices tend to have fewer accidents and receive fewer summons. Driving confidence has a weak negative correlation with good driving practices. This could suggest that overconfidence may lead to poorer driving practices. Age, health status, number of chronic diseases, and driving knowledge have very weak correlations with driving practices. This suggests that these factors do not significantly influence driving practices.



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Table 2: Pearson Correlation Analysis

Variables	Pearson Correlation Coefficients	Percentages (%)
Self-rated psychomotor ability	0.343048	11.74
Age	-0.05275	0.278
Accident Involvement	-0.53123	28.25
Health Status	0.028383	0.0807
Number of Chronic Diseases	-0.05291	0.280
Taking chronic illness medication	0.22433	5.03
No of summon	-0.36976	13.67
Driving Confidence	-0.12018	1.442
Driving Knowledge	0.054253	0.294

**Conclusion**

The attitudes of the respondents towards the proposed legislation for mandatory medical assessments before license renewal were also explored. It was found that the majority of respondents agreed with the idea of mandatory assessments, indicating a positive attitude towards the proposed legislation. The correlations between different variables and driving practices suggest that self-rated psychomotor ability, medication for chronic illnesses, accident involvement, and number of summonses have an impact on driving practices. This highlights the importance of considering these factors when assessing the fitness of senior citizens to drive.

In conclusion, the research on the obligation for senior citizens in Malaysia to undergo aptitude and cognitive tests before license renewal has yielded significant insights and generated recommendations for enhancing road safety and the overall well-being of older drivers. The comprehensive aptitude and cognitive test proposed for senior citizens addresses the unique challenges and capabilities associated with aging, providing a tailored approach to evaluating their fitness to drive. The establishment of guidelines and training for healthcare professionals and driving instructors ensures the consistency and fairness of the assessment process, contributing to the credibility and reliability of the tests administered. Moreover, the transparent license renewal process, with defined frequencies and intervals for tests, aims to eliminate ambiguity and confusion, promoting clarity for senior citizens.



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