Pertanika Proceedings 1 (6): 211 - 214 (2025)

PERTANIKA JOURNALS

PERTANIKA PROCEEDINGS

Journal homepage: http://www.pertanika.upm.edu.my/

Instrumenting Road Transport Policy for Sustainable Mobility of Older Drivers

Nur Farhana Mohammed Noor[1], Siti Anom Ahmad[1,4,*], Tengku Aizan Hamid[1], Zumilah Zainalaludin[1], Fakhrul Zaman Rokhani[1,4], Norsidah Ujang[2], Irwan Syah Md Yusoff[3], and Siti Aisyah Nor Akahbar[1]

[1]*Malaysian Research Institute on Ageing, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia*
[2]*Department of Landscape Architecture, Faculty of Design and Architecture, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia*
[3]*Department of Resources Management and Consumer Studies, Faculty of Human Ecology, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia*
[4]*Department of Electrical & Engineering, Faculty of Engineering, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia*

ABSTRACT

The age-related deterioration of driving skills can elevate the accident risk and lead to voluntary driving restrictions, which can limit their autonomy and social participation. This study examines Klang Valley's older drivers' travel characteristics and challenges. A community survey was conducted, comprising 497 older people from all Klang Valley municipalities. The majority are actively driving. Most are men, Chinese, with secondary education, working, and from a high socioeconomic class. They most frequented the malls/markets and hospitals. Their main difficulties are limited parking and expensive fees, besides poor road layout, maintenance, lighting, and safety.

Keywords: Mobility, older adults, older drivers, transportation, travel behavior, trip characteristics

ARTICLE INFO

Article history:
Received: 30 September 2025
Published: 28 November 2025

DOI: https://doi.org/10.47836/pp.1.6.034

E-mail addresses:
gs60178@student.upm.edu.my (Nur Farhana Mohammed Noor)
sanom@upm.edu.my (Siti Anom Ahmad)
aizan@upm.edu.my (Tengku Aizan Hamid)
zumilah@upm.edu.my (Zumilah Zainalaludin)
fzr@upm.edu.my (Fakhrul Zaman Rokhani)
norsidah@upm.edu.my (Norsidah Ujang)
irwansyah@upm.edu.my (Irwan Syah Md Yusoff)
a_aisyah@upm.edu.my (Siti Aisyah Nor Akahbar)
* Corresponding author

INTRODUCTION

The age-related decline in driving skills can lead to decreased capacity and confidence while driving, ultimately impacting their safety, autonomy, and social engagement (Rosli et al., 2020), which raises concerns among the public (Ramayah, 2024). Policymakers should prioritise addressing the needs of older drivers. Given this context, this study examined their driving characteristics, needs, and the challenges they encounter.

e-ISSN: 3083-9475
© Universiti Putra Malaysia Press

METHODOLOGY

The Consortium on Mobility and Transportation in an Ageing Society (CoMTAS) aims to address issues of older adults' mobility and transportation. A cross-sectional study was conducted with 497 randomly selected older adults aged 55 years and above from Klang Valley through cluster sampling. A self-administered questionnaire was utilized for the community survey, which encompassed sociodemographic, socioeconomic, household characteristics, living environment, health, and disability status, as well as travel modes, demands, patterns, and barriers. Descriptive statistics were employed to scrutinise the travel characteristics of respondents who primarily drive to their destinations. Additionally, multiple logistic regression analyses were performed using SPSS version 26 to identify significant factors influencing the decision to continue driving, while adjusting for baseline characteristics.

RESULTS AND DISCUSSION

Of 497 respondents, 60.0% were actively driving, 12.3% had ceased driving, and 27.3% never drove. Older drivers are mostly from the age group 55 to 59 (68.2%), male (85.0%), Chinese (83.1%), had secondary education (69.8%), still working (74.3%), from a high socioeconomic group (95.2%), live with children (62.9%), had comorbidity (58.6%), had musculoskeletal pain (58.7%), had functional impairment (57.2%), and not using walking device (61.6%).

The majority of respondents primarily traveled by car (54.6%), followed by those using both car and motorcycle (29.7%), and motorcycle only (19.7%). On average, they made 5.93 (± 3.737) trips per week and spent RM 650.45 (± RM 961.08) on transportation each month. Most trips occurred in the morning (74.5%), with malls or markets being the most common destinations (65.0%). City roads and highways were the most frequently used routes (55.0%), with familiarity being the main reason for their road preferences (77.3%). The most commonly used navigation app was Waze (50.0%). Additionally, many respondents had public transport facilities near their homes, particularly taxi stands (58.7%) and bus stops (51.3%). The summary of travel characteristics of respondents who drive is presented in Table 1.

Being male (aOR:1.554, p=.005), having primary education (aOR: 1.915, p=.02), and using public transport (aOR: 1.619, p=.001) have positive association with the likelihood to continue driving as a mode of transportation among respondents while having back pain (aOR:-1.911, p=.005) was negatively associated with the likelihood to continue driving as a mode of transportation among respondents.

The majority of older car drivers reported issues with parking, with 67.3% agreeing that parking is often insufficient and 57.6% noting that parking spaces are frequently located far from building entrances. Additionally, 56.3% cited poorly maintained roads as a concern, while 48.6% pointed out that roads are often narrow and poorly designed.

Table 1
Travel characteristics of respondents who drive

Variable description % per category	1	2	3	4
Mode of transport (1=motorcycle only, 2=car/van/SUV/mpv only, 3=both motorcycle and car, 4=lorry) The average number of trips per week: 5.93 ± 3.737 Average monthly transport expenses: RM 650.45 ± RM961.08	19.7	54.6	29.7	0.7
Travel time (1=morning, 2=afternoon, 3=evening/night)	74.5	67.8	36.6	
Common destination (1=mall/market, 2= relative/ friends' house, 3=service centre such as bank, etc, 4=healthcare facilities,)	65.0	56.3	55.3	54.7
Frequently used route (1=city road, 2=highway, 3=federal road, 4=state road)	55.0	55.0	38.7	36.0
Characteristics of road preference (1=familiarity, 2=less busy, 3=wide lane, 4=shortcut route)	77.3	59.0	49.0	37.3
Use navigation application (1=Waze, 2=Google Maps, 3=others, 4=none)	50.0	43.4	6.0	30.0
Availability of public transport facility near home (1=bus stop, 2=bus station, 3=train station, 4=taxi stand)	51.3	26.8	21.1	58.7

Many also expressed frustrations with high parking fees, with 55.3% considering them too expensive. Similarly, among motorcyclists, 49.2% highlighted poorly maintained roads as a major obstacle, and 43.8% agreed that narrow and poorly designed roads pose significant challenges. Additionally, 40.6% of motorcyclists reported feeling unsafe due to the risk of accidents. Figure 1 highlights the summary of obstacles faced by respondents when using the road.

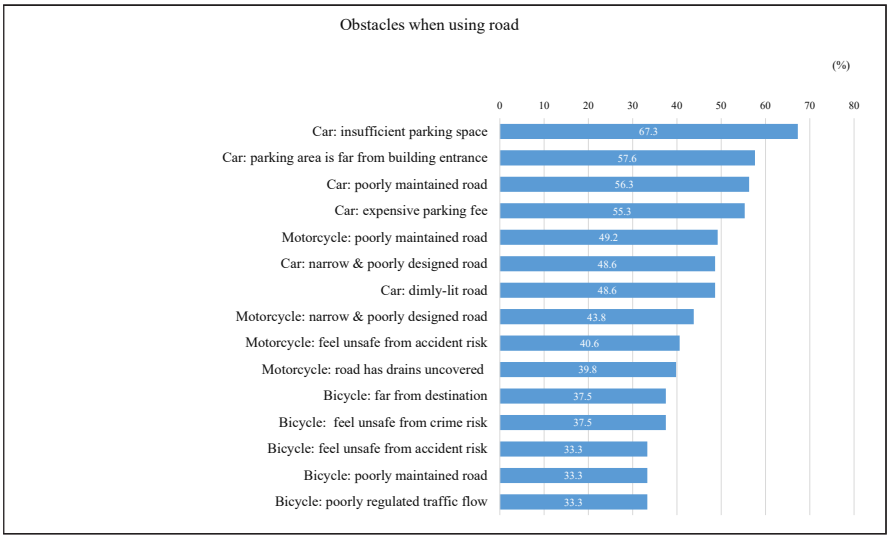

Figure 1. Summary of obstacles faced by respondents when using the road

Similar findings have been reported by Ang et al. (2019), Rosli et al. (2020), and Nordin et al. (2024). This study makes a significant theoretical contribution to the understanding of older drivers' travel characteristics by highlighting the crucial role of infrastructural elements, such as road conditions, lighting, and parking facilities, in shaping older drivers' safety, convenience, and comfort. Additionally, the study reveals that older motorcyclists and cyclists often feel unsafe due to risks related to crime and accidents, introducing a new dimension to the theoretical discourse on creating elderly-friendly road environments.

CONCLUSION

Integration of actual insights from older drivers into policy development can help to anticipate and effectively respond to their difficulties. This study found that it is crucial to advocate for age-friendly road infrastructure to reduce driving difficulty. Future transport policies should prioritize improving road design, width, surface conditions, lighting, and safety, as well as parking availability and affordability, to strike a balance between addressing safety concerns and meeting the mobility needs of older drivers.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to all individuals and institutions who provided invaluable support, guidance, and cooperation throughout the research process. Special appreciation is extended to the study participants for their time, willingness, and valuable insights, which greatly enriched the findings of this research. The authors also acknowledge the contributions of colleagues, research assistants, and staff involved in data collection, management, and analysis. Their continuous assistance, constructive feedback, and dedication were instrumental in ensuring the successful completion and quality of this study.

REFERENCES

Ang, B. H., Lee, S. W. H., Oxley, J. A., Yap, M. K. K., Song, K. P., Kamaruzzaman, S. B., Chin, A. V., Tan, K. M., Khor, H. M., & Chen, W. S. (2019). Self-regulatory driving and riding practices amongst older adults in Malaysia. *Transportation Research Part F: Traffic Psychology and Behaviour, 62*, 782-795. https://doi.org/10.1016/j.trf.2019.03.014

Nordin, N., Masuri, M. G., Dahlan, A., & Nurhidayah, N. (2024). Driving requirements for older people in Malaysia: A thematic analysis. *Environment-Behaviour Proceedings Journal, 9*(27), 265271. https://doi.org/10.21834/e-bpj.v9i27.5607

Ramayah, U. (2024, November 25). Syarat tambahan lesen memandu kepada warga emas? Kerajaan tidak akan terburu-buru–Anthony [Additional driver's license requirements for seniors? The government will not rush–Anthony]. *Astro AWANI.*

Rosli, N., Ambak, K., Shahidan, N. N., & Sukor, N. S. A. (2020). Driving behaviour of elderly drivers in Malaysia. *International Journal of Integrated Engineering, 12*(8), 268-277. https://doi.org/10.30880/ijie.2020.12.08.026