

Importance of vehicle features and in-vehicle technology in the purchase decisions of older drivers'

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Abstract

Advances in vehicle technology may assist older drivers to remain driving for longer and improve the rate of crashes involving older motorists (Yannis, Antoniou, Vardaki, & Kanellaidis, 2010). Therefore, encouraging the adoption of in-vehicle technology by older consumers is vital. An online survey was used to explore the importance placed on vehicle features by older drivers, and to investigate the uptake of advanced vehicle technologies. The study identified vehicle safety features as the most important purchase consideration for older motorists, followed by the manufacturer's credentials. Most would consider reversing cameras, blind spot monitoring and adaptive cruise control essential features in a new vehicle purchase.

Background

Government and motoring groups advocate to all motorists the benefits of vehicle safety features in reducing the road toll and crash risk, together with promoting safety as a priority when buying a vehicle. However, older drivers are more likely to find new technologies challenging compared to the younger population, and may be wary of using them (Vrkljan & Anaby, 2011, Yannis *et al.*, 2010). Therefore, understanding older drivers' perceptions of in-vehicle technology will assist industry and road safety advocates in the promotion of safer vehicles to the older demographic. The current study was undertaken to gain a better understanding of vehicle technologies considered important by older drivers, and which vehicle attributes feature strongly in their purchase decisions.

Method

An online survey was distributed by email to RAA Member Panel participants aged over 65 years (n=1,444), with a sample size of 769 individuals obtained. Respondents included a higher percentage of males (75%), metropolitan residents (64%) and those aged 65-74 (68%). The survey was administered via Typeform (Typeform S.L., Barcelona, Spain). Data were analysed in Microsoft Excel using a combination of descriptive techniques.

Results and Conclusions

Uptake of in-vehicle technologies by the older population was reasonably strong with more than 65% of respondents indicating they have Bluetooth in their current vehicle (Table 1). Technologies such as adaptive cruise control, reversing cameras and dynamic stability control were also relatively common (>40%). Interestingly, while 65% have Bluetooth in their current vehicle, only 49% would consider this technology essential in future vehicle purchases. A similar trend was shown for keyless engine start, rain sensors, hill-start assist control and voice control, in which the percentage of people who consider these features essential in future vehicle purchases was lower than the percentage that have the feature in their current vehicle. Most would consider reversing cameras (67.8%), blind spot monitoring (59.2%) and adaptive cruise control (55.9%) essential in their next vehicle purchase.

When asked to rate the effect of in-vehicle technologies on their confidence and feelings of safety while driving, 20% feel much more confident and a quarter of respondents feel much safer.

Table 1: Percentage of respondents with in-vehicle technology in their current vehicle, compared to the percentage that would consider the technology essential in a future vehicle purchase.

	Current vehicle	Future vehicle
Bluetooth	65.7%	48.9%
Adaptive cruise control	49.9%	55.9%
Reversing camera	46.4%	67.8%
Dynamic stability control	42.8%	45.4%
Navigation / Real-time traffic	37.4%	51.2%
Automatic headlight activation	34.3%	39.7%
Speed alert system	33.4%	54.3%
Key-less engine start	31.6%	28.0%
Rain sensors	26.2%	25.4%
Hill-start Assist Control	23.6%	20.7%
Park assist / distance control	21.4%	40.4%
Electronic differential lock	21.1%	24.3%
Tyre pressure monitoring	19.9%	49.6%
Adaptive suspension	18.0%	22.2%
Auto start/stop	17.9%	19.9%
Brake-pad wear indicator	17.5%	43.9%
Blind spot monitoring	16.2%	59.2%
Voice control	14.5%	12.4%
Lane keep assist	13.6%	40.5%
Autonomous emergency braking	10.5%	35.4%
Fatigue detection	7.4%	44.5%
Emergency response system	7.0%	38.0%
Pedestrian sensing bonnet	6.3%	23.9%
None of the above	3.7%	4.7%
All of the above	1.4%	9.9%
Other	1.1%	1.1%

Safety features are considered most important for older consumers when buying a new vehicle, followed by the manufacturer's reputation, reliability and warranty. The features considered least important overall to the purchase decision are seating capacity and performance. Females placed a greater importance on fuel economy compared to males, while those aged 75+ were more likely to value an automatic transmission. Females and those aged 75+ place a greater importance on ease of parking. Conversely, males and those aged 65-74 placed a higher value on internal storage space.

Conclusion

Results from this study indicate that certain vehicle features are considered more important than others in the purchase decisions of older drivers, with differences in importance observed across gender and age variables. This information could assist targeted campaigns which aim to increase awareness and usage of in-vehicle technology by older drivers.

References

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- Yannis.G., Antoniou. C., Vardaki., S., and Kanellaidis G., 2010. Older Drivers' Perception and Acceptance of In-Vehicle Devices for Traffic Safety and Traffic Efficiency. *Journal of Transportation Engineering*, 136, 5, 472-479.