

Older drivers adapt their thinking to improve road hazard detection

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A recent study finds that older drivers showed adaptive responses

according to the amount of traffic in a driving scene when identifying road hazards. Although younger drivers are faster and more accurate at identifying driving hazards than older drivers, older drivers were capable of adapting their response criteria to help them identify road hazards when the amount of traffic in a driving scene increased.

"This work shows that [older adults](#) are still adaptive, displaying mental flexibility in responding to changes in their driving environment," says Jing Feng, an assistant professor of psychology at North Carolina State University and lead author of a paper on the work.

For this study, researchers developed a program called the Driver Aware Task, which allows scientists to study the attention of [drivers](#) using driving images. The Driver Aware Task was used with 16 younger adults (ages 21-30) and 21 older adults (ages 65-79).

Using the Driver Aware Task, researchers compared how sensitive younger and [older drivers](#) are to hazards in driving images, as well as their tendency to miss hazards or have false alarms. Younger drivers showed no difference between the low- and high-traffic situations. However, older drivers shifted the criteria they used to identify potential hazards. Older drivers were more likely to commit false alarms – reporting a hazard when the hazard was absent – in high-traffic situations.

This increase in false alarms is likely because older adults modified the criteria so they were less likely to miss [road](#) hazards.

"Older adults are adapting to changes in their environment, whereas [younger adults](#) are not – possibly because they don't have to," says HeeSun Choi, a former Ph.D. student at NC State and a co-author on the paper. "In other words, there is an attempt by older drivers to compensate for age-related change. This flexibility is a good thing. For

example, it means there is potential for training that could help older [adults](#) adapt to changing driving conditions."

The paper, "Adaptive Response Criteria in Road Hazard Detection Among Older Drivers," is published in the journal *Traffic Injury Prevention*.

More information: Jing Feng et al. Adaptive Response Criteria in Road Hazard Detection Among Older Drivers, *Traffic Injury Prevention* (2017). [DOI: 10.1080/15389588.2017.1373190](https://doi.org/10.1080/15389588.2017.1373190)

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