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The Flashing Right Turn Signal with Pedestrian Indication: Human Factors Studies to Understand the Potential of a New Signal to Increase Awareness of and Attention to Crossing Pedestrians

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Current Situation

The Florida Department of Transportation (FDOT) has placed a high priority on understanding the nature of pedestrian injury and fatality incidents and on developing interventions that will make Florida's roads safer for pedestrians.

Research Objectives

Florida State University researchers studied drivers' understanding and response to a new type of flashing turn signal which includes a pedestrian indicator (also known as flashing pedestrian indicator, or FPI). This signal includes a right-turn indicator in which a flashing yellow turn arrow alternates with an image of a pedestrian.

Project Activities

In task one of the project, participants in three age groups, younger (21-35), middle-aged (50-64), and older (65+) drivers who had never seen the FPI, were presented with the FPI and other signal states and asked for the meaning of the presented signal. Sessions were conducted both in a simulator setting and online. Participants were asked to respond first to open-ended questions about what they saw and then multiple choice responses. Participants were surveyed on their impressions of the FPI before and after its meaning was explained to them. Accuracy was the focus of this task, not speed, to provide a basic characterization of what the FPI meant to younger, middle-aged, and older drivers.

In task two of the project, drivers in three age groups were asked to choose the correct action of a right-turning driver in response to the FPI and other signal states. In both scenarios, those including an FPI and those without, the walk signal was active for pedestrians crossing the side street. Participants were assessed both for accuracy and for reaction time. In some scenes, a pedestrian was in the crosswalk that would intersect with the path of a right-turning driver, and sometimes, the crosswalk was empty.

These tasks demonstrated a very high level of intuitive understanding of the FPI in all age groups and that it increased driver awareness of pedestrians.

Project Benefits

This project demonstrated the ready understanding and effectiveness of the FPI, indicating that the FPI can be an important tool in making pedestrians safer on Florida's roads

For more information, please see dot.state.fl.us/research-center



State A

State B

The flashing pedestrian indicator alternates between a turn arrow and an image of a pedestrian.