



Florida Department of Transportation Research

Validity and Usability of a Safe Driving Behavior Measure for Older Adults

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Florida leads the U.S. in number of people over 65, now 18%, rising to 27% by 2030. Also likely to rise are crashes involving over-65 drivers. Most older adults modify their driving behaviors in response to age-related changes; however, at-risk older drivers not identified as such are most likely to be involved in crashes or receive citations.

Some states define when to limit an older driver's privileges, but removing these privileges has many negative effects on an older adult's mental and physical health. As Florida's Safe Mobility for Life Coalition implements its Aging Road User Strategic Safety Plan, it becomes crucial to accurately measure older driver's behaviors to identify unsafe driving and reduce its effects while maintaining their independence and quality of life. A comprehensive on-the-road driving evaluation is considered the gold standard, but it can be expensive, complex, unavailable to many older drivers, and must be administered and validated by a Certified Driving Rehabilitation Specialist (CDRS), of which there are about 500 in the U.S.

As an alternative, University of Florida researchers developed the Fitness-to-Drive Screening Measure (FTDS), a free Web-based tool, ready to use by CDRSs, occupational therapists (OT), other health care professionals, and caregivers and family members of older adults.

The researchers used three measures to establish FTDS's validity: face validity, content validity, and construct validity. Focus groups of OTs, CDRSs, and family members examined the FTDS and determined its face validity, meaning that, from their perspective, the test appeared to measure what it was intended to. Expert reviewers set the FTDS's content validity index at 84 percent. Rasch analysis determined construct validity.

Key to use of the FTDS was understanding its subjectivity and its relationship to comprehensive driving evaluation. Rater reliability and rater effects (leniency or severity) were measured for



The multiple signals, signage, and motion at an intersection can pose challenges to older drivers.

caregiver groups. For older drivers, researchers found a statistically significant, but poor, correlation of the FTDS with the on-road driving test; for family members, correlation was good.

Researchers tested the usability, appearance, and acceptance of the FTDS through caregiver focus groups to determine if they could understand and interpret the FTDS summary, which classifies drivers into one of four main groups, provides personalized examples of real-world driving challenges, recommends logical next steps for the caregiver, and suggests general health and fit-to-drive strategies. In addition to the information the summary provides to caregivers and drivers, it also informs researchers about the use and usefulness of the FTDS, leading to further refinements.

Findings of this project suggest that the FTDS may help families and caregivers identify at-risk older drivers, help OTs identify an entry point for intervention or referral, and help CDRSs develop realistic intervention goals that promote safe driving fitness. Researchers believe that the FTDS could be used by stakeholders identified through the Safe Mobility for Life Coalition's Prevention and Early Recognition emphasis area, thus supporting the coalition's mission to reduce the crash, injury, and fatality rates of aging road users on Florida's highways by improving their safety, access, and mobility.

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