The potential role of physical activity on driving performance and safety among older adults

José Marmeleira & Mário Godinho & Peter Vogelaere

The elderly represent the fastest growing driving population. Older drivers have a high crash rate per distance traveled, a high risk of injury or death in traffic accidents, and are commonly found to be 'at fault' in crashes. This reality has focused more interest on issues associated with the fitness to drive and the safety of older drivers. Many older adults depend greatly on their personal vehicle for transportation and suffer a marked loss of quality of life when, as a consequence of no longer being able or permitted to drive, their mobility becomes significantly restricted. The reasons for the deterioration of driving performance that occur during the aging process are multi-factorial and a great deal of research has focused on the identification of those factors. Nevertheless, some studies incorporating training programs have tried, with some success, to improve the driving-related abilities of older drivers. It has been demonstrated that physical activity can promote several skills that are associated with driving performance in older drivers. Few studies, though, have conducted exercise interventions among older drivers intended to enhance their driving-related abilities and promote road safety. In this context, the purpose of this work consists of examining the perceptual, cognitive, health, and physical factors related to fitness to drive in older adults and identifying possible strategies that can enhance their driving-related abilities. Moreover, potential mechanisms underlying the relationship among physical activity, driving ability, and road safety are discussed.