

Young Drivers' Attitude toward Aggressive Driving in Presence of Distraction Caused by Passengers

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Abstract

Driver's distraction designated as a major contributing factor in car crashes. To identify its sources, researchers across the world have devoted their efforts to reduce the road fatalities related to distraction by engaging the variety of methods and databases. Through starting a conversation or a monologue, passengers can be identified as a source of in-vehicle distraction. Therefore, this study seeks to compare these two common sources of distraction caused by passengers by analyzing their impact on aggressive driving and investigate the possibility of using the Stroop task test to distinguish the drivers who are more likely to be influenced by such distractors. To address this objective, a group of 15 participants were chosen randomly and asked to complete four tasks including a self-stated personal characteristics questionnaire, an aggressive driving scale questionnaire, a Stroop task test which was conducted in order to determine participants' selective attention and a four-step driving simulation to investigate participants' driving characteristics when exposed to the described distractors. By using the Wilcoxon signed-rank test, it is concluded that in contrast with the reduction of driver's attitude toward lane departure, the driver's tendency to speed disobedience will increase significantly as the distraction level increases. Regression analysis revealed that the Stroop task test average response time is a good predictor of aggressive driving behaviors and these behaviors are more common in the participants with higher Stroop task average response time.

Key words: Stroop test, distraction, driving error, selective attention, aggressive driving

1. Introduction

During the last few decades, driving fatality has been a major cause of death in Iran. For an instant, in 2017 car crashes were responsible for more than 8 percent of total death among Iranians [1]. Over the years, drivers' distraction has been a major contributing cause of