

MOUNTAIN-PLAINS CONSORTIUM

RESEARCH BRIEF | MPC 17-322 (project 407) | March 2017

Cell Phone Use Diminishes Self-Awareness of the Adverse Effects of Cell Phone Use on Driving



the **ISSUE**

When people drive, they frequently engage in secondary tasks such as eating and grooming. One of the most common and dangerous activities behind the wheel is talking or texting on a cell phone. More than 100 million motorists in the United States are estimated to use cell phones while they drive. This is a major public safety issue because of the heightened crash risk associated with cell phone use. Most users actually believe they can drive safely while using a cell phone; and when it comes to driving safely while distracted, they regard themselves to be more capable than others. Our findings indicate that this overconfidence is one of the strongest predictors of drivers' usage of cell phones behind the wheel.

An important reason why drivers may be overconfident about their ability to drive safely while distracted and why people more generally overestimate their ability to multi-task effectively is diminished monitoring. Drivers generally monitor their performance to ensure they are driving safely. However, when they are distracted by the mechanics of using a phone and their conversations, they may be less cognizant of the errors they are making and how badly they are driving.

the **RESEARCH**

The study examined the effects of multi-tasking on self-monitoring of driving performance and driver overconfidence. Participants drove in a simulator while either talking or not talking on a hands-free cell phone. Their driving errors and their awareness of their driving errors was recorded. Measures were also taken of their confidence in their ability to drive safely while distracted.



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Project Title

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the FINDINGS

Distracted driving contributed to greater driving errors and a reduced awareness of driving errors. Thus, talking on a cell phone not only diminished the safeness of participants' driving, it diminished their awareness of the safeness of their driving. Driver confidence was unrelated to driving performance when participants talked on a cell phone.

the IMPACT

Cell phone use not only impaired the safeness of participants' driving in our study, it impaired their awareness of the safeness of their driving. The driving safety assessments and memory of driving errors of participants who talked on a cell phone were almost wholly uncorrelated (or correlated in the wrong direction) with the actual errors they made. When drivers are talking on a cell phone, they are often unaware of the inconsistencies in their speed, their weaving across lanes, and their near misses with other vehicles. As a consequence, they may persist in believing that they can safely talk or text on a cell phone behind the wheel.

These findings should contribute to a better understanding of the costs of distracted driving and the contributors to driver overconfidence and lead to possible strategies and technologies to reduce the incidence of distracted driving.

For more information on this project, download the entire report at <http://www.ugpti.org/resources/reports/details.php?id=868>

For more information or additional copies, visit the Web site at www.mountain-plains.org, call (701) 231-7938 or write to Mountain-Plains Consortium, Upper Great Plains Transportation Institute, North Dakota State University, Dept. 2880, PO Box 6050, Fargo, ND 58108-6050.



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