Heightening Awareness about Our Inability to Effectively Multitask

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Background

Everyday people multitask at home and at work. Despite its prevalence, decades of research have shown that there are significant cognitive limitations associated with multitasking behavior, most notably the significantly increased response times (Sanbonmatsu et al., 2013).

Additionally, research has repeatedly shown that there is a general tendency for individuals to believe that they have above average abilities to multitask (McKenna, 1993). In the context of driving, ***multitasking can be fatal***.

Purpose

The proposed research seeks to examine the effectiveness of using a traditional computer-based task-switching paradigm versus a driving simulator intervention in an attempt to enlighten drivers about their actual multitasking skills, thus challenging their previously held beliefs and decreasing overconfidence.

Results

The current results suggest that an online multitasking test alone does NOT reduce overconfidence in one's multitasking abilities.

Paired *t*-tests revealed that mean scores of self-reported multitasking ability compared to other college students, the general population, and self-efficacy did not differ between time 1 and time 2 for both the control group and the experimental group. (See Tables 1 and 2)

Table 1

Comparison of Pre- and Post- Means for the Control Group

Variable	Pre- Mean (*SD*)	Post- Mean (*SD*)	*t* value
MT College Students	54.83 (19.32)	54.43 (22.42)	- .08
MT General Population	56.43 (24.09)	53.74 (21.05)	.54
MT Self-Efficacy	2.87 (.86)	2.78 (.85)	.58

*$p < .05$. **$p < .01$

Note: MT = multitasking, N=23.

Table 2

Comparison of Pre- and Post- Means for the Experimental Group

Variable	Pre- Mean (*SD*)	Post- Mean (*SD*)	*t* value
MT College Students	64.00 (23.43)	58.76 (21.28)	1.54
MT General Population	62.36 (25.29)	63.00 (19.85)	- .23
MT Self-Efficacy	2.48 (1.05)	2.44 (.92)	.21

*$p < .05$. **$p < .01$

Note: MT = multitasking, N=25.

Methods

Participants (*N* = 200) will be randomly assigned to one of four conditions: 1 - control, 2 - online multitasking test, 3 - driving simulator, and 4- online multitasking test + driving simulator. All participants initially complete a questionnaire assessing perceived multitasking ability and overconfidence, which is assessed again at one and two weeks later.

Discussion and Implications

The findings of the present research could help bolster initiatives that discourage distracted driving in young adults.

Future directions will seek to expand the findings into the organizational context to inform best practices for driving occupations.

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