Strategies Young Adults Use to Curb Distracted Driving

Claire Shroder[1], Abby L. Braitman, Ph.D.[2], Keli A. Braitman, Ph.D.[3]

[1]SUNY Geneseo, [2]Old Dominion University, [3]William Jewell College

INTRODUCTION

Distracted driving is a well-established risk for young drivers, as they have disproportionately higher vehicle fatalities relative to miles driven. The US Department of Transportation found that 9% of drivers involved in fatal crashes ages 15-20 were reported as distracted. Although many studies have examined the danger of distracted driving, less is known about countermeasures young drivers use to protect themselves from getting distracted. **Study 1** consisted of focus groups to examine the types of strategies used by young adult drivers, and developed items to measure their use of these strategies. **Study 2** psychometrically examined this new measure by administering a survey based on the generated items to college-aged divers and analyzing the results.

METHOD – *STUDY 1*

Participants

- *N* = 6 students recruited via student announcements (for Amazon gift card) and SONA (for research credit)

Procedure

- Held focus groups through Zoom
- Items made were reviewed by 5 undergraduate research assistants at two institutions, and 2 researchers with expertise in traffic safety

RESULTS – *STUDY 1*

25 items were generated.
Sample items shown in Figure 1.

METHOD – *STUDY 2*

Participants

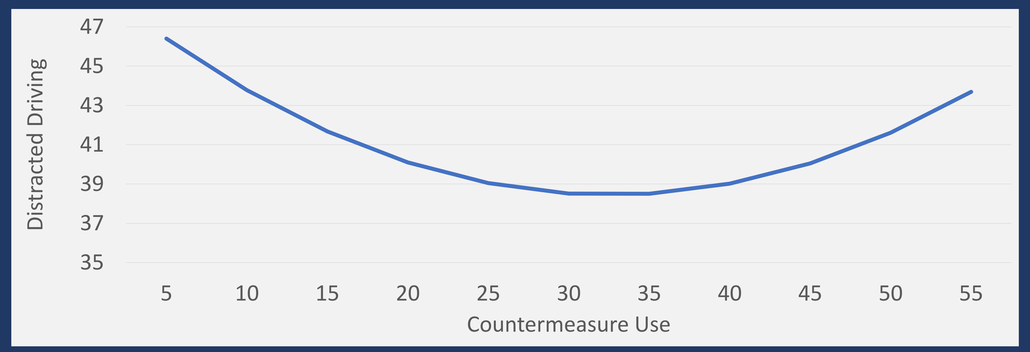
- 173 participants
  - 16 cases excluded due to failing attention checks resulting in 157 responses
- Recruit via student announcements (for Amazon gift card raffle) and SONA (for research credit)

Procedure

- Anonymous online survey

Figure 1. Sample Survey Items

- Pre-create music for driving (for example, phone playlist for driving, bringing CDs)
- Limit passengers
- Pull over to eat, use phone, or other distraction
- Silence notifications
- Put phone out of reach (for example, back seat)
- Type in address to GPS before you start driving
- Have a passenger help with non-driving tasks (for example navigate, send texts for you, unwrap food)



Take a picture to download more information

abraitma@odu.edu

This work is supported by the National Science Foundation under Grant No. 1949760 (PI: Yamani; co-PI Chen).

METHOD – *STUDY 2 Continued*

Materials

Strategies for curbing distracted driving

- 25 items developed in Study 1
  - Ex: Memorize route before trip, Silence notifications
- 4-point response scale: 0 = *Never* through 3 = *Always*

Distracted Driving Behavior

- Adapted Braitman and Braitman (2017) with unique items from other studies
- 21 items (ex: Smoke, eat or drink)
- 4-point response scale: 0 = *Never* through 3 = *Always*

Analysis

- Exploratory factor analysis
  - Scree plot suggested we retain 1 or 4 factors
  - Velicer's MAP suggested 4 factors based on original calculations or 3 based on revised calculations
  - Parallel analysis suggested 25 factors (not informative)
  - χ^2 goodness-of-fit suggested 4 factors was best fitting
  - Cronbach's alpha was best for single factor model (.856)
    - Was unacceptable for some of the multi-dimensional models
  - Interpretation of factor items did not yield orthogonal or meaningful dimensions for the multi-dimensional models
  - 3 items were dropped due to factor loadings less than .32
- There was no significant correlation between distracted driving frequency and use of countermeasures
- Regression suggested both linear (β = -0.23, p = .017) and quadratic β = 0.27, p = .004) countermeasures significantly predict distracted driving
  - Overall, more countermeasure use is linked to reduced distracted driving
  - However, this relationship is strongest for those who use fewer countermeasures, and reverses among those who use higher than average countermeasures

DISCUSSION

The current study showed frequency of countermeasures used was curvilinearly related to distracted driving. Once more data has been collected, it would be useful to reevaluate since the sample size was fairly small. Further research can look into barriers to using these strategies, how personality traits interact with the use of these countermeasures, and examine how the Health Belief Model applies to distracted driving.