

# Personality may dictate how distracted you are while driving

April 12 2016, by Katherine Shonesy

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# DISTRACTED DRIVING



## In Older Adults



Drivers 65 and older account for 17% of all fatal crashes.

Overall, distracted driving is involved in nearly 50% of crashes on U.S. roads.



Does personality affect an older driver's risk for distracted driving?

To find out, researchers at UAB's TRIPLab studied 72 older adults.



This was the first study of its kind.

The "Big Five"



Participants completed a 45-item personality inventory that rated five factors: openness to experience, conscientiousness, extraversion, agreeableness and neuroticism.


What's the correlation?




The researchers correlated those answers with self-reported instances of distracted driving.

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Greater extraversion was significantly associated with self-reported instances of talking on a cell phone and interacting with a phone while driving.




**4**




A 10% increase in extraversion scores was associated with a 20% increase in instances of talking on or interacting with a phone.

**5**

Other personality traits were not significantly associated with distracted driving behaviors.



**6**



The research could point to new ways to increase the effectiveness of educational campaigns, the study authors say.

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Extraverted older adults and conscientious, curious teens may be more likely to engage in risky driving behavior, while agreeable teens are less likely to drive distracted, according to new research from the University of Alabama at Birmingham.

In the study published online this month in *Accident Analysis and Prevention*, the research team said that certain personality characteristics relate to distracted driving tendencies.

Leading the project was Morgan Parr, an undergraduate psychology student in the UAB Translational Research for Injury Prevention (TRIP) Laboratory. Parr worked with Despina Stavrinou, Ph.D., director of the TRIP Lab and an assistant professor in the Department of Psychology in UAB's College of Arts and Sciences, and others to uncover these new findings about the link between personality and distracted driving. Stavrinou has made [injury prevention](#), and unintentional injuries such as those that result from distracted driving behaviors in particular, the core of her work.

"Data tell us that distracted driving is a factor in nearly 50 percent of car crashes, which translates to 1 million injury-producing crashes each year. Ten percent of those crashes result in a fatality," Stavrinou said.

"Understanding which factors influence an individual's likelihood to engage in distracted driving is essential to being able to purposefully address this growing problem. Through this study, we were able to gain new information about why drivers might be participating in distracted behavior, giving us valuable insight that can increase the effectiveness of

educational campaigns and improve driving safety."

## WHICH TEENS are at greatest risk for distracted driving?

UAB research says watch the conscientious ones.

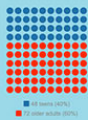
That's one counterintuitive takeaway from a new study by researchers in UAB's TRIP Lab.

Distracted driving is a major problem in the United States.



The UAB researchers wanted to know if personality has an impact on a person's risk for distracted driving.

They studied 120 drivers from two high-risk groups: teens and older adults.



This was the first study of its kind.

### The Questionnaire



Each participant received a 45-item Big Five Personality questionnaire and was asked how often they used their phone to text or make calls while driving.

### The "Big Five"



The Big Five are:

- Openness to experience
- Conscientiousness
- Extraversion
- Agreeableness
- Neuroticism

Texting while driving was significantly associated with three traits:



Greater openness: A 10% increase in openness was associated with a 22% increase in risk for distracted driving.



Greater conscientiousness: a 10% increase in conscientiousness was associated with a 21% increase in risk for distracted driving.



Lower agreeableness: a 10% decrease in agreeableness was associated with a 16% increase in risk for distracted driving.

Why would conscientious kids break the law by texting and driving?

"It may be that these individuals feel the need to respond immediately to text messages from peers, even in a potentially dangerous context, such as driving a car, in order to maintain peers' perception of their dependability."

- Study authors

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While researchers have closely examined the impact of demographics, health, and sensory and cognitive functioning on driving behaviors, the influence of personality on driving behaviors has not yet been a major focus of study. UAB's team sought to take a closer look at that potential link.

"Others in the field have hypothesized that [personality traits](#) may have some impact on distracted driving practices; but no one had taken the next step, which was to test that theory," Stavrinou said. "Before going into the study, common sense and other related research told us that there would likely be some kind of link between the traits and behaviors—we just didn't know exactly how one would dictate the other."

The UAB researchers used one of the most widely accepted models of personality, McCrae and Costa's Big Five questionnaire, to evaluate which traits might correlate to distracted driving behaviors. According to this model, everyone falls within a continuum for each of five factors: openness to experience, conscientiousness, extraversion, agreeableness and neuroticism.

"We targeted two populations that we believe are at risk for potentially dangerous driving practices—teens ages 16 to 19 and older adults ages 65 to 85," Parr said. "While the underlying factors that lead to increased crash risk for the two groups are likely different, one emerging concern for both groups is their use of electronic devices behind the wheel."

Participants included 120 drivers who completed the 45-item Big Five questionnaire assessing their own personality traits as well as the Questionnaire Assessing Distracted Driving, or QUADD, assessing the frequency of their distracted driving behaviors—talking on their cellphones, sending text messages and interacting with their cellphones, all while driving—by reporting the number of times per day they engaged in the risky activities during a two-week period.

## **The Results**

The researchers' hypothesis that higher openness to experience, agreeableness and extraversion would be associated with greater self-reported levels of distracted driving behaviors across both age groups was partially supported.

### **Population 1: Teens**

For teen drivers, openness to experience was associated with an increase in two of the distracted driving behaviors: texting and interacting with a cellphone while driving. A 10 percent increase in openness was associated with a 22 percent increase in risk for distracted driving. This finding may provide partial explanation for prior work finding that individuals high in sensation seeking and impulsiveness—traits often associated with the openness factor—report more driving violations.

Conscientious teen drivers were also more likely to engage in texting and interacting with their cellphone while driving. Because individuals scoring high in conscientiousness typically endorse organized, dependable and even obsessive traits, the research team expected that high scores in this personality trait would result in fewer instances of engaging in distracted driving behaviors; however, a 10 percent increase in conscientiousness was associated with a 21 percent increase in risk for

those distracted driving behaviors.

"It may seem counterintuitive that conscientious teens would be the ones to participate in risky behavior," Parr said. "However, it may be that these individuals feel the need to respond immediately to text messages from peers, even in a potentially dangerous context, such as driving in a car, in order to maintain peers' perception of their dependability."

Contrary to the original hypothesis, teens with lower levels of agreeableness were more likely to report texting and interactions with a phone while driving—a 10 percent decrease in agreeableness was associated with a 16 percent increase for distracted driving.

"The cooperative nature, including respect for rules and authority figures, of individuals who score high in agreeableness may make them less likely to engage in distracted driving behaviors because of their deference to road regulations and concern for safety," Stavrinos said.

## **Population 2: Older Adults**

In [older adults](#), only one personality factor was significantly associated with distracted driving behaviors—extraversion. A 10 percent increase in extraversion scores translated to a 20 percent increase in instances of talking on or interacting with a phone.

Based on previous research suggesting that those high in extraversion are more susceptible to peer influence, the team hypothesized that drivers high in extraversion would be more likely to engage in texting and driving behavior, especially teen drivers who are more often influenced by peer relationships. However, extraversion was associated with an increase in talking and interacting with a cellphone while driving only among older drivers.



With the older adult population's reporting minimal instances of texting while driving, there was no link found between personality traits and that particular distracted driving behavior.

"This study showed us that personality traits are an important factor in understanding distracted driving tendencies. More research into this area will help us become even more clear about how personality traits can predict distracted driving behaviors," Parr said. "With more information, we can tailor our injury prevention efforts to appeal to drivers with specific personality traits that we know are associated with a higher risk of [distracted driving](#) behaviors."

**More information:** Morgan N. Parr et al. Differential impact of personality traits on distracted driving behaviors in teens and older adults, *Accident Analysis & Prevention* (2016). [DOI: 10.1016/j.aap.2016.03.011](#)

Provided by University of Alabama at Birmingham

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