

New study shows wearable technology also contributes to distracted driving

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A new study by Murtuza Jadliwala, assistant professor of computer science at The University of Texas at San Antonio, examines wearable technology and whether it affects drivers' concentration. Jadliwala and his collaborators discovered that while a driver texting with a wearable device can marginally reduce their level of distraction, it ultimately makes texting while driving just as dangerous as with an ordinary cell phone.

"Dr. Jadliwala's research on evaluating the influence of technology on consumer safety and privacy is timely and significant," said Rajendra Boppana, chair of the UTSA Department of Computer Science. "His work on [wearable technologies](#) is a great example of impactful research driven by experiments, an approach highly valued by computer scientists."

More than a quarter of car accidents reported each year are attributed to some form of distraction among drivers, often the result of talking or texting while driving. Nine people are estimated to die every day in the U.S. from distracted driving and

330,000 injuries occur each year because of texting while driving, which is also the most common cause of death in teenagers.

Jadliwala worked with Jibo He, associate professor of psychology at Wichita State University and Jason S. McCarley, professor of psychology at Oregon State University, to create a safe environment where distracted driving could be measured.

"We recruited about 20 volunteers on a university campus," Jadliwala said. "They used a driving simulator in a laboratory that included a three-screen display, a wheel and pedals."

Student volunteers were tasked with "driving" in the simulator, using either a smart phone or Google Glass. Jadliwala and his collaborators sent the participants text messages and challenged them to drive safely while receiving and responding to the messages. The simulator recorded deviations in the steering wheel and whether the volunteers drifted out of their lane.

"We found that the Google Glass distracts the driver slightly less," he said. "But that also gave the participants a false sense of safety."

Because the wearable [device](#) responded quicker and used voice-activated controls, the drivers noticed the increased efficiency but also were more likely to engage with the device, which negated the marginal safety difference between the smart phone and the wearable device.

While Google stopped producing Google Glass in 2015, wearable technology is becoming increasingly popular. Jadliwala noted that wrist wearables such as Apple Watch has been very successful and that more modern head-mounted displays like Google Glass are in development.

"It's important to keep asking these questions as

[technology](#) becomes a bigger part of our everyday lives," he said. "A [wearable device](#) feels more accessible because it's on your body, which is why it's important to study how it could impact tasks like driving."

More information: Jibo He et al, Does wearable device bring distraction closer to drivers? Comparing smartphones and Google Glass, *Applied Ergonomics* (2018). [DOI: 10.1016/j.apergo.2018.02.022](#)

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