

# Cellphones raise kids' risk at crossings, study finds

Ben-Gurion University researchers say calls impact everyone's street-crossing behavior, but children are more affected

BY SHOSHANNA SOLOMON | August 28, 2016, 12:17 pm |

**A**s children go back to school, equipped with their backpacks, sandwiches and cellphones, parents should be aware that the use of mobile devices has been found to affect their children's ability to cross the street.

Researchers at Ben-Gurion University of the Negev have determined that a child pedestrian's ability to safely cross the street is hindered more during a cellphone conversation than an adult's. The study was published recently in the journal *Safety Science*.

"Although many children carry cellphones, the effect that cellphone conversations have on children's crossing behavior has not been thoroughly examined," Prof. Tal Oron-Gilad, head of BGU's Department of Industrial Engineering and Management, said in an emailed statement. "Over a third of the road traffic deaths in low- and middle-income countries are among pedestrians. This high level of involvement is particularly meaningful for child pedestrians as the proportion of child pedestrian fatalities is significantly high relative to adults."

These findings must be taken into account when training young pedestrians for road safety, Oron-Gilad said, and, with children going back to school, public awareness of the issue must be raised.

The study was conducted at the BGU Virtual Environment Simulation Laboratory, a traffic research facility that enables researchers to measure pedestrian reactions to virtual reality scenarios. The lab's pedestrian dome simulator consists of a 180-degree spherical screen aligned with a highly accurate three-projector system large enough to immerse a participant within its circumference.

The simulator experiment was conducted in a virtual city environment with 14 adults and 38 children who experienced street-crossing scenarios paired with cellphone conversations. The subjects were requested to press a response button whenever they felt it was safe to cross while the researchers tracked their eye movements.

"The results showed that while all age groups' crossing behaviors were affected by cellphone conversations, children were more susceptible to distraction," said Oron-Gilad.

The more demanding the conversation, the slower the reaction of participants to crossing opportunities; participants also chose smaller, and thus more risky, crossing gaps and allocated less visual attention to the peripheral regions of the scene, the research showed.

The ability to make better crossing decisions improved with age. The most prominent improvement was shown in the choice of "safety gap"; each age group held out for a longer gap to cross in than the younger one preceding it.