

Perceptions of Vehicle Driver Safety by Cellular Phone Owners and Non-Owners

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Innovations in wireless technology have made cellular telecommunications inexpensive and pervasive. The ability to communicate with others virtually anywhere has benefits in terms of productivity and sociability and in some cases safety. However, cellular phone use while operating a vehicle has been implicated in increasing the likelihood of accidents. Recent research suggests that use of cellular phones while driving may quadruple the risk of a vehicular accident (e.g., Redelmeier & Tibshirani, 1997). In the past, there has been a tendency to focus on the physical handling of the phone as the primary instigator of accidents. However, the risk may be as large or larger from high cognitive involvement and attention distraction. Part of the reason cellular phone owners use their phones while driving may be their assessability and apparent ease of use while driving. It may also be that perceptions differ between cellular phone owners and non-owners on issues pertaining to cell phone use while driving. Cellular phone owners may believe that they are able to use a cellular phone more safely when driving compared to others; a phenomenon akin to that described as optimism bias (Dalziel & Job, 1997; Dejoy, 1987). Also, it may be that cellular phone owners would be more resistant to cellular phone restrictions than non-owners.

The present study examined the perceptions of cellular phone owners and non-owners on issues relating to vehicle control. Participants completed a survey that asked if they owned a cellular phone, the amount of time they use it, safety beliefs, and the need for new laws. Safety beliefs and the need for new laws were assessed using a rating scale based on 9-point scales having the following numerical and verbal anchors: (0) "Extremely Disagree," (1) "Very Much Disagree," (2) "Disagree," (3) "Somewhat Disagree," (4) "Neutral," (5) "Somewhat Agree," (6) "Agree," (7) "Very Much Agree," and (8) "Extremely Agree."

A total of 330 individuals were surveyed. The sample comprised 221 undergraduate students ($M=21.3$ yrs, $SD=2.4$) and 109 non-students ($M=34.2$ yrs, $SD=13.1$) consisting of 217 males and 113 females. Seventy-two percent ($n=237$) reported owning a cellular phone and using it an average of 74 minutes per week ($SD=152$). Eighty-one percent ($n=191$) of the cellular phone owners reported using it while driving a vehicle.

Non-cellular phone owners ($M=4.72$) more strongly agreed that cellular phone use negatively affects driving performance than cellular phone owners ($M=4.36$), $F(5,1640)=103.95$, $p<.0001$. Cellular phone users ($M=3.55$) more strongly disagreed that laws are needed to prevent cellular phone use while driving than non-cellular phone users ($M=3.90$), $F(2,656)=4.08$, $p<.05$. These results indicate that a substantial number of people are using cellular phones while driving. While evidence is growing that cellular phone use can negatively affect driving performance, as a group cellular phone owners less strongly hold that belief, and furthermore do not want additional laws restricting their use relative to non-cellular phone owners. Thus while knowing that cellular phone use can decrease driving performance, cellular phone owners still want to be able to use them. This research has implications for individual and societal transportation safety.

Dalziel, J.R., & Job, R.F.S. (1997). Motor vehicle accidents, fatigue and optimism bias in taxi drivers. *Accident Analysis and Prevention*, 29, 489-494.

Dejoy, D.M. (1987). The optimism bias and traffic safety. *Proceedings of the Human Factors Society*, 31, 756-759.

Redelmeier, D.A., & Tibshirani, R.J. (1997). Association between cellular-telephone calls and motor vehicle collisions. *New England Journal of Medicine*, 336, 453-458.