# Self-reported distraction-related collisions: Mundane distractions are reported more often than technology-related secondary tasks

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## ABSTRACT

The present study investigated self-reported distraction-related collisions and near-misses, both as a driver and a passenger. Data were gathered from 426 semi-structured interviews and the results were weighted according to the distribution of driver licences among city residents, by gender and age group (18–24, 25–44, 45–64, and 65+). Seven percent of drivers reported having had an accident while distracted, with the most commonly reported distraction being the drivers' own thoughts (2.5%), followed by looking at something outside the vehicle (2%) and talking to a passenger (1.1%). Furthermore, 35.7% reported having had a near-miss while distracted, with manipulating the audio entertainment system (8.6%) and talking to passengers (8.2%) being the most common distraction types. The percentage of drivers who reported having had an accident while talking on a hand-held phone, and for reading or sending text messages, were both 0.2%. The proportion of drivers who reported having had a near-miss while talking on a handheld mobile phone, hands-free phone or text messaging (reading or sending), were 2.4%, 0.7% and 4.6%, respectively. However, when drivers were asked whether they knew anybody who had crashed while engaged in each distraction type measured, hand-held phone use was the most commonly identified task. Additionally, we explored potential differences in risk perception, descriptive norms and engagement in distractions between those who experienced an accident or a near-miss and those who did not, for each distraction type. Those who reported engaging in each distraction type were also more likely to report having experienced a crash or near-miss related to that distraction type. Although researchers and public policies place a lot of emphasis on technological distractions, in particular phone-related distractions, these are not the distraction types that are most commonly reported by drivers in relation to accidents, which could suggest that a much broader perspective on driver distraction would be beneficial.

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## 1. Introduction

Inattention and distracted driving have been widely recognised as contributing to a substantial proportion of road crashes for many years (e.g. Stutts, Reinfurt, Staplin, & Rodgman, 2001; Treat et al., 1979). However, the issue of distracted driving

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has received increased attention by both researchers and public policy-makers during the last decade, probably due to the increasingly widespread use of nomadic technological devices in many areas of life, including driving. Nonetheless, crash-based studies have shown that the percentage of crashes related to mobile phone use may not be as large as that of other types of secondary tasks. For example, an analysis of accident data from 1995 to 1999 by Stutts et al. (2001) studied the nature of any distracting events present in crashes. The three most common driving distractions were: outside persons, objects or events (29.4% of the crashes), adjusting radio/cassette or CD (11.4% of the crashes), and other occupants in the vehicle (10.9%). Four other categories were also more common than mobile phone use (which only accounted for 1.5% of the crashes). These were moving objects in the vehicle (representing 4.3% of the crashes), other devices or objects (2.9%), the use of vehicle and climate controls (2.8%), and eating or drinking (1.7%). Other crash-based studies have yielded similar results (e.g., Beanland, Fitzharris, Young, & Lenné, 2013; Glaze & Ellis, 2003). For instance, Beanland et al. (2013) found phone-related distractions in only 3 out of 54 crashes in which a distraction was identified, whereas passenger interactions were identified in 11 out of 54 accidents.

Further support for the above findings comes from a study which interviewed more than 1300 drivers that attended a hospital after having had a car crash. They found that technological devices were not the most frequently reported distracting activities at the moment of the crash (McEvoy, Stevenson, & Woodward, 2007). The most commonly reported activity was interacting with a passenger, which was reported by 11.3% of the drivers and accounted for 12.2% of the crashes. This was followed by a lack of concentration (10.8% of the drivers, accounting for 11.2% of the crashes) and an outside person, object or event (8.9% of the drivers, accounting for 9.5% of the crashes). The use of the radio and mobile phones (considered as a single category) were reported by only 2% of the drivers (which accounted for 2.1% of the crashes). Thus, it seems relatively clear that other distraction types appear to account for a greater proportion of road crashes and these may have been overlooked, to some degree. However, phone-related distractions were found to be the single most common distraction type in a similar study conducted in a city in the Emirates (Eid & Abu-Zidan, 2017), accounting for 5.8% of the accidents. This was followed by deeply thinking about other things (3.6%), talking with passengers (1.8%), picking things up (1.2%), and using the audio system (0.9%), which altogether represented a higher proportion than phone-related accidents.

Nonetheless, it should be said that the findings presented above do not mean that those distraction types representing a larger share of crashes entail higher crash risks, since this is obviously affected by the frequency at which drivers engage in each specific secondary activity. Hence, it is possible for a given secondary activity to be a lot less risky than another and still be associated with a much higher share of the accidents. In fact, research assessing the relative risks of having a crash, or near-crash, have found that some technology-related distractions are high risk events (Dingus et al., 2016; Klauer et al., 2006, 2014).

Apart from crash-based studies, several studies have asked drivers to report whether they had been involved in a distraction-related accident. Using a very large representative sample, Royal (2003) found that 3.5% of drivers in the U.S. had experienced a distraction-related crash in the previous five years. More specifically, 0.8% of drivers attributed their crash to looking at something outside the car, 0.7% to dealing with children or other passengers, and 0.5% to looking for something inside the car. Accidents related to distractions, such as using a mobile phone or other technology (primarily the radio), were each reported by 0.1% of drivers.

In a study using a representative sample of two Australian states, McEvoy, Stevenson, and Woodward (2006b) found that 5% of drivers attributed a crash they had experienced in the last three years to being distracted, and distraction-related crashes accounted for 21% of the total number of self-reported crashes. Those related to a lack of concentration represented 42% of all distraction-related crashes, whereas this figure was 27% for outside distractions, 11% for talking to passengers, and 5% for adjusting in-vehicle equipment. Surprisingly, none of the self-reported distraction-related accidents were related to mobile phone use or other nomadic devices. Despite this, McEvoy, Stevenson, and Woodward (2006a) found that 0.9% of drivers had ever crashed while using a mobile phone and 3% recalled having had to take evasive action because of their phone use in the last year.

In a convenience sample, Lansdown (2012) found that between 1.3% and 2.1% of British drivers reported having had an accident resulting from each of the 14 distraction types considered (aside from the 'other' category, which was 3.2%). The distractions that resulted in the most accidents were: interacting with child passengers (2.1%), using add-on media devices (2%), entering destinations in a sat nav (2%), interacting with pets (1.7%), following advice from a route guidance system (1.7%), and reading text messages (1.7%).

In another study conducted by Salamé (2015) using a convenience sample in Lebanon, almost 30% of the drivers reported distraction-related collisions. This study found that the most common distractions were being absorbed by thoughts unrelated to the driving task and using a mobile phone, which each accounted for 29.5% of the accidents. Other mundane tasks such as manipulating objects, looking at the landscape or at an event outside the vehicle, manipulating entertainment systems, talking to other passengers, etc. accounted for the rest of these accidents.

Interestingly, Lansdown (2012) also investigated self-reports of near-misses related to distractions. This showed that near-misses were more frequent or, at least, more frequently reported. The most commonly reported distraction resulting in a near-miss was interacting with adult passengers (by 11.4% of the drivers), followed by interacting with child passengers (7.5%), writing a text message (6.7%), reading a text (6.5%), and using the in-car entertainment system (5.7%). Regarding near-misses, the figure for the "other" category was 7.1%. Thus, technology-related distractions appeared to be more relevant in this case, although they were still outweighed by other types of distractions. Furthermore, in a sample of U.S. College students Seo and Torabi (2004) found that mobile phones accounted for a substantial proportion of accidents or