



# Driving distractions: An insight gained from roadside interviews on their prevalence and factors associated with driver distraction

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## ABSTRACT

The present research investigated the proportion of drivers that engage in a wide range of observable and unobservable driving distractions, along with a number of variables associated with driver distraction. A total of 426 semi-structured interviews were performed, with the results weighed according to the proportion of driver licences among city residents of each gender and age group (18–24, 25–44, 45–64, and 65+). Drivers were most inclined to think about phone-related activities when asked about driving distractions, although the vast majority also recognised that a wide variety of other activities can be regarded as distractions. Drivers were aware of the ban on handheld mobile phone activities, but their knowledge of the law was less accurate in relation to other illegal activities, such as manipulating a SatNav while driving. Almost 90% of participants reported engaging in distractions while driving, such as: looking at something outside the vehicle, thinking about things unrelated to the driving task and manipulating the audio entertainment system. The figures for text messaging, having a handheld or hands-free conversation were also relatively high (43.7%, 32.2%, and 25.4%, respectively). Texting while driving was perceived to be the most dangerous secondary activity, followed by having a handheld conversation, with significant differences between distractions. Further, hands-free conversations were perceived to be significantly less risky than handheld conversations. Perceived descriptive norms consistently predicted engagement in all distraction types. The results show that drivers are well aware that secondary activities can be distracting and are risky, and yet a substantial proportion of drivers reported engaging in a wide variety of distractions while driving.

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## 1. Introduction

Driver distractions have been identified as a common causal factor in vehicle collisions by an extensive body of research (e.g., Beanland, Fitzharris, Young, & Lenné, 2013; Klauer, Dingus, Neale, Sudweeks, & Ramsey, 2006; Klauer et al., 2014; McEvoy, Stevenson, & Woodward, 2007; Redelmeier & Tibshirani, 1997; Violanti & Marshall, 1996). Therefore, measuring their prevalence and their psychosocial correlates are needed to provide information useful for addressing this issue.

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Although a large body of research has studied engagement in distracted driving using self-report (e.g., [Gras et al., 2007](#); [Sullman & Baas, 2004](#)), direct roadside observations (e.g., [Taylor, MacBean, Das, & Rosli, 2007](#); [Townsend, 2006](#); [Young, Rudin-Brown, & Lenné, 2010](#)) and instrumented vehicles (e.g., [Stutts et al., 2005](#)), a substantial proportion of the research has mainly focused on mobile-phone-related activities. However, the variety of distractions in which drivers engage while driving is much wider. Suffice to say that in the *100-car naturalistic driving study* ([Klauer et al., 2006](#)), which investigated real-world driving from more than one hundred drivers, more than 40 categories of driving distractions were found by the coders. On the other hand, while observational studies provide a precise estimate of engagement in observable distractions, they do not allow research into their psychosocial correlates. Furthermore, observational surveys do not allow the investigation of internal distractions (e.g., thinking about something or daydreaming), which have also been found to interfere with safe driving (e.g., [Martens & Brouwer, 2013](#)).

Several studies have investigated the prevalence of a wide range of driving distractions using different forms of self-report: online questionnaires ([Lansdown, 2012](#); [Young & Lenné, 2010](#)), telephone interviews ([McEvoy, Stevenson, & Woodward, 2006a, 2006b](#); [Royal, 2003](#); [Schroeder, Meyers, & Kostyniuk, 2013](#); [Tison, Chaudhary, & Cosgrove, 2011](#)), and face-to-face interviews ([Fofanova & Vollrath, 2012](#); [Huemer & Vollrath, 2011](#)). For instance, [Royal \(2003\)](#) investigated the prevalence of several types of driving distractions in two representative samples of more than 4000 U.S. drivers. The most frequently reported distraction was conversing with passengers, with 81% of the drivers acknowledging doing so on at least some driving trips. This was followed by changing radio stations or CDs (66%), eating or drinking (49%), making outgoing calls on a mobile phone (25%), taking incoming calls on a mobile phone (26%) and dealing with children riding in the rear seats (24%). More recently, two studies conducted using larger U.S. samples have assessed the self-reported frequency of engagement in distracting activities ([Schroeder et al., 2013](#); [Tison et al., 2011](#)). Specifically, [Schroeder et al. \(2013\)](#) reported that the most common activities were: talking to passengers (79.5%), adjusting the car radio (68.4%), eating and drinking (47.0%), making and accepting phone calls (39.6%), and interacting with children in the back seat (35.5%).

[McEvoy et al. \(2006b\)](#) studied distracting activities, during the drivers' most recent trip, in a large representative sample from two Australian states. The most commonly reported distractions were: lack of concentration (71.8%), adjusting in-vehicle equipment (68.7%), looking at people, objects or events happening outside the vehicle (57.8%), and talking to passengers (39.8%). Furthermore, their results showed that, on average, drivers reported engaging in some type of distracting activity every 6 min.

An interview survey conducted by [Huemer and Vollrath \(2011\)](#) provided very detailed information regarding engagement in secondary tasks at the wheel during the last 30 min of driving, as well as the duration of these tasks. Strikingly, only 3.8% of drivers reported not having engaged in any activity other than driving. While the most commonly reported task was the use of integrated devices (58% of drivers), this only accounted for 5% of the driving time. In contrast, passenger-related activities were reported by 39% of the drivers, but this distraction type accounted for 38% of the time.

In an online study, [Lansdown \(2012\)](#) also found that the vast majority (91%) of UK drivers reported using the in-car entertainment system on a daily or weekly basis, while this figure was 81% for interacting with adult passengers, 51% for drinking, 46% for eating, and 34% for interacting with child passengers. In terms of phone-related distractions, the figure was 32% for using a hands-free phone, 25% for reading a text message, 14% for writing a text, and 14% for handheld phone use.

While the results from previous studies are difficult to compare, due to differences in their specific goals and methodology, these demonstrate that drivers engage in a broad variety of secondary activities. Furthermore, those that are more commonly tackled by government policies are often not the most prevalent. Knowledge regarding the prevalence of driver distractions has also been created via direct observations in both Spain ([Prat, Planes, Gras, & Sullman, 2015](#)) and abroad ([Stutts et al., 2005](#); [Sullman, Prat, & Kuzu, 2015](#)). These studies clearly show that drivers engage in a wide variety of distracting tasks and also that mobile phone use is not the most prevalent distraction. However, as mentioned earlier mobile phone use has been the subject of far more research than any other distraction type and has also been the main focus of efforts aimed at curbing distracted driving (e.g., legislation banning handheld mobile phone use while driving is in 27 of the 28 European Union members). Furthermore, it is also important to identify which activities drivers consider to be distracting, as referring to distractions using general terms may result in drivers taking into account only a small subset of the distractions.

A number of studies have also investigated risk perceptions regarding driving distractions (e.g., [Fofanova & Vollrath, 2012](#); [Huemer & Vollrath, 2011](#); [Lansdown, 2012](#); [Royal, 2003](#); [White, Eiser, & Harris, 2004](#); [Young & Lenné, 2010](#)). The most obvious feature of these studies is that perceptions of risk differ substantially for the different distraction types. Furthermore, several studies have found significant relationships between the frequency of engagement and risk perceptions for some specific distractions (e.g., [Gras et al., 2007](#); [Hallett, Lambert, & Regan, 2011, 2012](#); [Prat, Gras, Planes, González-Iglesias, & Sullman, 2015](#); [Sullman & Baas, 2004](#)).

Another important focus of research associated with driver distractions are the psychosocial factors underlying engagement in these tasks. A variety of psychological constructs from different models has been investigated in relation to drivers' secondary task engagement, particularly those considered in [Ajzen's \(1991\)](#) Theory of Planned Behaviour (e.g., attitude, perceived behavioural control and subjective norm; see, for instance, [Nemme & White, 2010](#), or [Walsh, White, Hyde, & Watson, 2008](#)). However, perceived descriptive norm (that is, what the respondent thinks others do) has largely been overlooked as a source of social influence ([Cialdini, 2007](#)), which has also been the case with distracted driving. Despite this, the behaviour of others can provide influential information about which behaviours are adaptive and effective in a given context and has been

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