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**Fatigue and distraction through mobile phone use**  
Results of the BIVV/IBSR three-yearly road safety attitude survey

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## Summary

# Fatigue and distraction through mobile phone use Results of the BIVV/IBSR three-yearly road safety attitude survey

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Meesmann, U. & Boets, S. (2014) *Fatigue et distraction due à l'usage du GSM. Résultats de la mesure d'attitudes en matière de sécurité routière menée tous les trois ans par l'IBSR*. Bruxelles, Belgique : Institut Belge pour la Sécurité Routière – Centre de connaissance Sécurité routière.

## Summary

The Belgian Institute for Road Safety (BIVV/IBSR) attitude survey 2012 is based on 1,540 interviews with drivers whose principal residence is in Belgium and who had driven a car or delivery van at least 1,500 km in the six months preceding the interview. The interviews were conducted verbally in September and October 2012.

In the attitude survey, respondents were asked to provide their opinion on a number of statements. For each attitude statement it was examined whether or not there was a relation between the answers on the statement and certain driver characteristics (gender, age and region). The analysis tested the existence of significant differences depending on the respondent's gender, age or region. Where possible the figures were compared with those from previous attitude surveys conducted by the BIVV/IBSR and with results from other sources.

The attitude survey 2012 comprises several sections. This report gives the results for fatigue and distraction only, more specifically the use of the mobile phone while driving. Distraction is seen as one of the main risk factors on the road, as are fatigue and drowsiness behind the wheel. For this reason, the BIVV/IBSR has been specifically measuring experiences and opinions related to these themes since 2009.

### **DISTRACTION (MOBILE PHONE USE) WHILE DRIVING**

#### ***Self-reported mobile phone usage while driving***

The main findings in relation to mobile phone usage when driving (based on self-reported behaviour) are:

- In 2012, 45% of Belgian car drivers reported that in the last year, while driving<sup>1</sup>, they had made a non-hands-free call, 34% that they had sent a text message and 50% that they had read a text message. Use of the mobile phone while driving is therefore a widespread phenomenon. The analysis also showed that holding a mobile phone to make a call or text while driving had risen significantly in comparison with 2009.
- The younger the drivers are the more they report the use of a mobile phone while driving ( $p < 0,01$ ). This is true for making a call while holding a mobile phone and for sending and reading texts. There appeared to be no significant difference in reported mobile phone usage while driving based on respondents' gender or region.
- Information complementing this is found in the 2013 NVOV<sup>2</sup> survey. As regards self-reported mobile phone usage while driving, 26% of the Belgian population (16+) reports calling at least "sometimes" with a non-hands-free phone while driving. Note, however, that, as opposed to the BIVV attitude survey, this question did not stress that it also meant mobile phone use while stationary at a red light or in traffic. This difference might partly explain the lower result compared with the BIVV attitude survey (here: 45%). In addition, 1 in 3 (32%) report calling hands-free behind the wheel at times. This result points in the same direction as the WHO literature study (2011), which concludes that in high income countries, usage of hands-free mobile phone kits while driving is presumably greater than usage of non-handsfree mobile phone kits while driving.
- A European comparison shows that the Belgian car driver makes a call while holding a mobile phone less frequently than the average European car driver (BE: 55%; EU average: 42%; SARTRE4).

#### ***Perception of risk***

- The vast majority of drivers (82%) know that awareness of the road traffic situation diminishes (cognitive distraction) when you make a call, hands-free or non-hands-free, while driving. 92% of drivers know that people who make calls with the mobile phone in their hand while driving are at greater risk of involvement in an accident. We can generally say that younger drivers estimate the risk of mobile phone use significantly lower than do older drivers.

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<sup>1</sup> including when at rest at a red light or in traffic

<sup>2</sup> national traffic safety survey

- Flemings (85%) significantly (tend to) agree with the statement that awareness of the road traffic situation diminishes when you make a call, hands-free or non-hands-free, while driving, compared with Walloons (75%) and people living in Brussels (75%). As regards the statement on the perceived risk of accident, we found no significant difference based on respondents' place of residence.

### ***Perceived social norm<sup>3</sup>***

- 75% of respondents are under the impression that almost all car drivers make a non-handsfree call now and then while driving. Compared with 2009 (79%), this percentage has fallen slightly but not significantly. People living in Brussels (82%) are more frequently under the impression than are Flemings (72%) and Walloons (71%) that the social norm is to make a call with phone in hand at times while driving.

### ***Acceptability of mobile phone use while driving***

- Sending a text message from your mobile phone while driving is unacceptable to most Belgian drivers (90%). Compared with the 12 other descriptions of dangerous driving, sending text messages while driving takes 5th place, after driving under the influence of drugs, driving without insurance, not securing children for the journey (all >97%) and not wearing a seatbelt in the front of the car (a little over 90%).
- Making a call with your mobile phone in hand while driving is also unacceptable to most drivers (85%), but a little more acceptable than text messaging (6th place in the list of 13 dangerous driving behaviours). These findings on the acceptability of phoning and texting while driving have hardly changed compared to 2009. We note a clear and gradual age effect: younger drivers find the use of the mobile phone while driving more acceptable than do older drivers, and this is true for both text messages and non-hands free calls while driving. We found no significant differences based on respondents' gender and place of residence in respect of the acceptability of mobile phone use while driving.

### ***Inattentiveness and mobile phone use as a cause of accidents - subjective estimation by the respondents***

- Inattentiveness has, over the years, been seen by Belgian car drivers as a major cause of road accidents (in 2012 it was 4th out of 16 accident causes). Non-hands-free calls while driving were seen as a cause in 39% of all accidents (7th out of 16), followed by texting while driving (38%; 8th out of 16).
- The number of accidents to which inattentiveness contributed was estimated significantly lower by the 63+ group (39%) than by the 30 to 38-year-olds (45%). However, the risk of accident through mobile phone use was estimated lower by 18 to 29-year-olds than by the other age groups. Flemings estimate the number of road accidents caused by inattentiveness (44%) significantly higher than Walloons (42%). As regards risk-estimation for mobile phone use, people living in Brussels estimate the number of accidents highest, Walloons lowest and Flemings somewhere in between. We found no significant difference in the perceived risk of inattentiveness and mobile phone use based on respondents' gender.

## **FATIGUE AND DROWSINESS BEHIND THE WHEEL**

### ***Self-reported fatigue and drowsiness while driving***

The main results for fatigue and drowsiness behind the wheel (based on self-reported behaviour) are:

- More than half of Belgian drivers (58%) report that in the last year they have at some time felt tired and drowsy while driving.
- Men (64%) report this significant more frequently than women (51%). Drivers between the ages of 18 and 49 (67%-70% margin) report significant more frequently that they have driven while tired or drowsy than do the 50+ age group (34%-53% margin). Furthermore, the 2 oldest groups differ significantly from each other: 50 to 62-year-old (53%) drivers report this more often than

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<sup>3</sup> By this we mean the descriptive social norm

the 63+ group (34%). In other words, compared to the other age groups, the oldest age category, 63+, least often reports having driven while tired or drowsy.

- The attitude survey results for tired driving correspond with the NVOV survey results for 2013. Here, 59% of respondents report having driven at times when they were tired (attitude survey: 58%). A previous BIVV/IBSR survey in the run up to a campaign on tired driving (PITSTOP, 2008) confirmed the finding in the attitude survey that tired driving is more frequent among men and young drivers. This study also showed that tired driving is more frequent among drivers from a higher social class and among professional drivers than among drivers in other groups.

### ***Perception of risk***

- 93% of drivers are aware that the risk of accident is greater when the driver feels drowsy behind the wheel. This risk awareness is significantly lower among the youngest age category (18-38; 80%) than among drivers of 39 and over (89%-95% margin).

### ***Tendency to drive while drowsy***

- Belgian car drivers appear to be well aware of the risks associated with fatigue and drowsiness behind the wheel. 88% know it is best not to drive when feeling drowsy. Nonetheless, 19% report that they would continue to drive if they felt drowsy behind the wheel<sup>4</sup>. Men appear more inclined than women to drive while drowsy. We also see that the tendency to drive while drowsy decreases with age. Flemings (92%) report less frequently than Walloons (84%) and people living in Brussels (81%) that they ought not to drive when feeling drowsy. People living in Brussels (20%) have the highest percentage of drivers that report they would continue to drive even if they felt drowsy while driving (Walloons 16% and Flemings 19%).

### ***Acceptability of tired driving***

- Continuing to drive when tired is unacceptable for most Belgian drivers (85%). Compared with the 13 other descriptions of dangerous driving, tired driving takes 9th place. Compared to 2009, the acceptability of tired driving has hardly changed.

### ***Remedies against driving when tired/drowsy***

- A BIVV/IBSR survey in the run up to the PITSTOP campaign (2008) showed that 1 in 3 drivers do not know what to do to prevent fatigue/drowsiness while driving, such as taking a 15-minute "powernap". In this survey, "Information/awareness raising campaigns" are seen as the most appropriate measure to persuade drivers not to drive when tired.
- According to the results of the European SARTE4 survey (2010), the Belgian driver, compared with the average European driver, is 50% less inclined to stop and take a break or drink an energy drink when he/she feels tired. In other areas too, it seems that Belgian drivers are less inclined than the average European driver to act responsibly in respect of fatigue and drowsiness while driving.

### ***Fatigue as a cause of accidents - subjective estimation by respondents***

- Belgian drivers estimate that 36% of road accidents are caused by fatigue (10th out of 16 accident causes). The estimation of the risk of accident due to fatigue would appear to have fallen over the years.
- Young drivers (18 to 29-year-olds) estimate the percentage of accidents (32%) caused by fatigue significantly lower than 39 to 49-year-olds and 50 to 62-year-olds (each 37%). We found no significant difference in the perceived risk of fatigue based on respondents' gender and place of residence.

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<sup>4</sup> In 2009, the same questions were asked, but only to drivers who had previously reported that they had felt drowsy while driving at least once in the last month (293 respondents). As a result of this selection, the results for 2009 are not comparable with those of 2012.

**AWARENESS RAISING AND ENFORCEMENT IN RELATION TO FATIGUE AND DISTRACTION THROUGH MOBILE PHONE USAGE WHEN DRIVING**

In Belgium, distraction and fatigue are still frequently underestimated as road safety problems. Awareness-raising campaigns should be designed to generate awareness of the risks, the social norm and the general unacceptability of this type of driving behaviour (the risk of hands free calling should also be emphasised).

It would also appear that there is a need to provide information on effective remedies for fatigue(short “powernap”). Awareness raising will continue to be very important in the years to come, as will systematic enforcement in cases of non-hands-free calls and text messages.

**NEED FOR FURTHER RESEARCH**

On the basis of the results of this study and the current status of academic research, the BIVV/IBSR calls for further research in the following areas:

- Continuation of attitude surveys in the area of fatigue and distraction;
- Road side surveys in these areas;
- Study of the feasibility, support of potential legislation on hands-free calls;
- Widening of the research to other forms of distraction through in-car infotainment;
- Analysis of the influence of the social norm on the acceptability of tired and distracted driving.



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