

## Traffic risk behaviour: an observational study of drivers' behaviour in Braga (Portugal)



### Comportamiento de riesgo vial: un estudio observacional del comportamiento de los conductores en Braga (Portugal)

To the Editor:

Traffic accidents are a serious public health problem which causes a high number of deaths and injuries. In Portugal, 32,299 traffic accidents involving victims (accidents involving at least one injured person), 554 accidents involving deaths and 2148 accidents involving severe injuries occurred in 2016.<sup>1</sup> The use of cell phones and tobacco consumption cause traffic accidents, whose consequences are aggravated if passengers fail to use seat belts.<sup>2</sup> Using a cell phone while driving (whether it is used with or without a hands-free system) causes visual, auditive, physical and cognitive distraction. Tobacco consumption negatively affects the health of the driver and the other passengers in the vehicle (particularly children) by the high concentrations of tobacco smoke inside the car, and it is also a distracting factor that compromises driving.<sup>3</sup> Several studies have shown that using a seat belt is associated to a drastic reduction on the number of accidents and injuries. Many traffic accidents could be avoided by modifying these behaviors. The present study aimed to describe drivers' risk behaviors in the city of Braga (Portugal), namely the use of cell phone, tobacco consumption and failure to use seat belts while driving.

This is an observational study conducted between December 2016 and January 2017 which followed the validated methodology of Martínez-Sánchez et al.<sup>4</sup> The observers registered the behavior of the first five drivers who stopped at a red light traffic in Avenida João XXI, Avenida 31 de Janeiro, Rua da Estrada Nova, and EN 103 (Braga, Portugal). Motorcycles, mopeds and non-motor vehicles were excluded from the study. The observation focused on the use of cell phones, tobacco consumption (lit cigarettes), and failure to use seat belts by the driver of the vehicle. Descriptive analysis was performed. Among the 705 conductors observed, 70 (9.8%) used a cell phone, 50 (7.1%) did not use a seat belt, and 39 (5.5%) smoked while driving.

There is still a significant percentage of drivers who adopt risk behaviors while driving. Greater police attention is needed to prevent non-compliance with the law regarding the use of cell phones and driving without seat belts. However, it still does not exist a ban on smoking inside the cars in Portugal. Car smoking bans should be similar to other restrictions on drivers' behavior that are critical for public health and safety, such as the driving ban under the influence of alcohol or other drugs. Studies show that over 90% of respondents agree with a car smoking ban, especially with children on board.<sup>5</sup> Creating campaigns to highlight the importance of banning tobacco consumption inside the car would be useful, not only to increase awareness about the negative effects of smoking

on the driver's health and on the road traffic safety, but also as a way to collect signatures to present this ban at the Portuguese Parliament.

### Authorship contributions

The study was designed by J. Precioso. Data was collected by A. Faria, A.R. Matos, L. Rodrigues, A. Araújo, P. Magalhães, and D. Barroso. V. Rocha wrote the first draft of the letter. J. Precioso designed and carried out statistical analysis. All authors gave a substantial contribution to the interpretation of data, critical discussion and revision of the manuscript, and approved its final version.

### Funding

None.

### Conflicts of interests

None.

### Bibliografía

1. Autoridade Nacional de Segurança Rodoviária. Sinistralidade Rodoviária. Ano de 2016. Lisboa: Observatório de Segurança Rodoviária; 2017.
2. Stutts J, Feaganes J, Reinfurt D, et al. Driver's exposure to distractions in their natural driving environment. *Accid Anal Prev*. 2005;37:1093–101.
3. Brison RJ. Risk of automobile accidents in cigarette smokers. *Can J Public Health*. 1990;81:102–6.
4. Martínez-Sánchez J, Curto A, Fernández E. Concordancia entre dos observadores en la medición del consumo de tabaco y del uso del cinturón de seguridad y del teléfono móvil en vehículos. *Gac Sanit*. 2012;26:91–3.
5. Precioso J, Reis F, Sousa I, et al. Opinions on a car smoking ban: a needed guide for public health decision-makers. *Gac Sanit*. 2016;30:85–7.

Adriana Faria<sup>a</sup>, Ana Rita Matos<sup>a</sup>, Vânia Rocha<sup>b</sup>,  
Lucinda Rodrigues<sup>a</sup>, Ana Araújo<sup>a</sup>, Patrícia Magalhães<sup>a</sup>,  
Davide Barroso<sup>a</sup>, Catarina Samorinha<sup>c</sup>, José Precioso<sup>a,\*</sup>

<sup>a</sup> Instituto de Educação, Universidade do Minho, Braga, Portugal

<sup>b</sup> Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto, Porto, Portugal

<sup>c</sup> EPIUnit - Instituto de Saúde Pública, Universidade do Porto, Porto, Portugal

\* Corresponding author.

E-mail address: [precioso@ie.uminho.pt](mailto:precioso@ie.uminho.pt) (J. Precioso).

<https://doi.org/10.1016/j.gaceta.2017.10.012>

0213-9111/

© 2017 SESPAS. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).