

Reasons of Banning Smoking in Private Vehicles

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The fine particulate matter present in environmental tobacco smoke (ETS), also known as PM2.5 (inhalable or 'breathable' particulate matter with a diameter of $\leq 2.5\mu\text{m}$), can be inhaled and deposited deep into the lungs, damaging them, and are, therefore, considered hazardous to human health.

The amount of this particulate matter present in cars varies depending on the characteristics of the vehicle, such as the position of the windows, the ventilation/air conditioning levels and the speed as well as the number of cigarettes smoked in the cabin.

A study measuring the level of hazardous particulate matter in an car while someone was smoking revealed that it is similar to the level of particulate matter found in a bar where smoking is allowed.

Motor vehicles are microenvironments where passengers may be exposed to high concentrations of ETS if someone smokes in the car.

Exposure to ETS is particularly harmful to groups of more susceptible individuals, such as children, asthmatics, individuals with respiratory failure and pregnant women. Exposure to ETS in cars has been associated with a higher risk of wheezing, higher levels of symptoms of nicotine dependence in children and the highest incidence of respiratory symptoms in the young.

In 2009, 13% of smokers smoked in cars in Portugal, even when children were present, and 15% reported that this behaviour depended on the circumstances, i.e. 28% of the smokers seemed to smoke daily or occasionally in the car while transporting children.¹ In this context, health problems resulting from exposure to ETS and injuries resulting from road accidents associated with tobacco smoking in the car could be avoided through the modification of risk behaviour.

Last year, an observational study was conducted with the aim of describing tobacco smoking while drivers from the city of Braga were driving. The drivers' tobacco-related behaviour was observed at red lights and with the cars stopped, according to a previously validated meth-

odology.² Motorcycles, mopeds and non-motor vehicles were excluded. Amongst the 705 drivers observed, 5.5% (n=39) smoked while driving.

Considering the health risks resulting from exposure to ETS in adults and, especially, children, it is still necessary to take public health measures to protect this vulnerable population, such as banning smoking in private vehicles, especially when children are present, as is already the case in public transport.

Research studies show that more than 90% of the respondents in Portugal agree with banning smoking in private vehicles, especially when children are present.³

There are several reasons to support banning smoking in private vehicles, especially when children are present:

- Second-hand smoke comprises a set of carcinogens and toxic substances that cause serious health problems for children and, therefore, the Government has the obligation and responsibility to ensure that children grow in safe and healthy environments;
- Preschool-age children are unable to communicate their opinion and cannot leave a vehicle, even if it is full of smoke;
- Some are infants or small children who cannot explain that smoking harms them, other than by coughing, presenting breathing difficulty and other symptoms;
- Older children and teenagers, despite being able to communicate verbally, sometimes do not do it for fear of their parents' reprimand or peer pressure;
- Children learn in school and through non-formal health education that smoking and second-hand smoke are harmful. By allowing smoke near children in vehicles, society conveys inconsistent messages to children and adolescents;
- Banning smoking in private vehicles would be similar to other restrictions on drivers' behaviour that are required for public health and safety, such as the prohibition of driving under the influence of alcohol or other drugs and the mandatory use of seat belts.

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Protection of human and animal subjects

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Confidentiality of data

The authors declare that they have followed the protocols of their work centre on the publication of patient data.

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