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Substance use and social, health and safety-related factors among fatally injured drivers

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ABSTRACT

Objective: The aim of this study was to examine different socio-demographic, health and safety-related factors, and psychoactive substance use among fatally injured drivers in road traffic accidents in Finland during 2006–2008.
Methods: An accident information register maintained by the Traffic Safety Committee of Insurance Companies (VALT) of the Finnish Motor Insurers' Centre was used as basic data, and the basic data were complemented with further toxicological analytical information retrieved from autopsy reports from the Department of Forensic Medicine, Helsinki University. The data included all the drivers (n = 556) who were driving a motor vehicle and who died in a road traffic accident in Finland during 2006–2008.
Results: Of all the 556 fatally injured drivers 43% (n = 238) had psychoactive substance findings. 51% (n = 121) of substance positive drivers had a finding for alcohol only, the rest had a finding for one or more illicit/medicinal drugs impairing driving ability, and possibly also alcohol. Fatally injured drivers with alcohol findings were significantly younger (mean age 34 years) than sober drivers (mean age 44 years) or drivers with findings for drugs (mean age 45 years). Socio-demographic background did not differ substantially among drunken/drugged and sober drivers, although drivers with alcohol findings had a slightly lower education and socioeconomic position. Previous substance abuse problems were highly prevalent among drivers with substance findings and mental or both mental and physical health problems were more common among drivers with drug findings. The non-use of safety equipment and driving at a high speed were more common among fatally injured drivers with substance findings.
Conclusions: Substance abuse and mental health problems, as well as reckless driving behavior were more pronounced among fatally injured drivers with substance findings when compared to sober drivers. Thus, prevention and early intervention concerning substance abuse, mental health problems and DUI are essential. Improved traffic safety cannot be achieved by means of traffic policy only, but integration with other policies, such as health and social policy should be strengthened.

1. Introduction

Road traffic safety is an important issue concerning the entire society. In the EU region, 30,700 people died in road traffic accidents in 2010 (European Commission, 2010a). The European Union's former road safety action programme (2001–2010) aimed to halve the number of road deaths by 2010, and this ambitious target has been renewed in the new EU road safety plan for 2011–2020 (European Commission, 2010b).

Driving under the influence (DUI) of alcohol or drugs, speeding and non-use of seatbelts, are all major factors in fatal traffic accidents (Clarke et al., 2010). It is apparent that the use of alcohol and illicit or medicinal drugs that impair driving skills are very common among fatally injured drivers. According to several different studies approximately half (40–50%) of the drivers in fatal traffic accidents have been found to have some psychoactive substance present in their blood samples (Carmen Del Rio et al., 2002; Drummer et al., 2003; Jones et al., 2009). In case–control studies – whether the controls were fatally injured drug- and alcohol-free drivers (Drummer et al., 2004) or drivers recruited at random while driving on public roads (Movig et al., 2004) – it has been found that the use of alcohol and/or drugs increases the risk of a traffic accident. The risk was especially high among drivers who had used both alcohol and drugs, alcohol only or multiple medicinal/illegal drugs (Gjerde et al., 2011).

In addition to the principal factors of speeding, non-use of seatbelt and DUI, socio-economic position (SEP) and health status have also been shown to have an impact in traffic accidents. Lower SEP increased the risk of severe or fatal traffic injuries in a Swedish

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