

comparisons of NOSACQ results made in different time periods and answered by the trained and untrained personnel, comparisons of accidents rates in various time periods and results of the qualitative data analyses (focus group discussions).

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PREVENTING HARM FROM ALCOHOL AND DRUGS AT WORK: NATIONAL STUDY AND DEVELOPMENT OF EDUCATIONAL TOOLS

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Background There has long been concern over the impact of alcohol and other drug (AOD) consumption on workplace safety, particularly within the construction industry. Until now there has been little scientific evidence on the relationship between AOD and safety. This research aimed to evaluate AOD within the Australian construction industry and to develop, through engagement with industry, mental health and e-Therapy experts, AOD specific education.

Methods Using the Alcohol Use Disorders Identification Test a national assessment study evaluated the extent of general AOD use in the industry. A survey was distributed to 500 employees across Australia. Semi-structured interviews were also conducted. The researchers collaborated with AOD and e-Therapy experts to develop a web-based AOD program for managers. Researchers then collaborated with an industry-based mental health and suicide prevention organisation. A peer-based AOD education program was developed. It targeted social attitudes to impairment at work and was evaluated through a pilot study with 42 young apprentices.

Results The national assessment study showed that a total of 286 respondents (58%) scored above the cut-off score for 'risky' alcohol use with 43 respondents (15%) scoring in the significantly 'at risk' category. Other drug use was also identified as a major issue. The peer-based AOD education program was positively received by young workers. The pilot study showed an increase in both knowledge and awareness of alcohol and drug impairment and intention to seek help.

Conclusions A proportion of the industry is at risk of hazardous alcohol use. Other drugs are also a major issue. Several areas for consideration were identified. Results from the peer-based AOD education program were encouraging and support the need for further evaluation. Web-based programs can enable the provision of AOD education and support (and mental health information more broadly) to those living/working in remote locations.

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TACKLING STRESS IN THE WORKPLACE

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Background Work related stress is a wide spread problem in Europe and also in Finland. Almost one third of the workforce report experiencing work stress and stress related symptoms, such as sleeping disorders and problems concentrating, are common problems among employees. Especially, experienced job insecurity and not having enough time to accomplish their duties

properly are the most common problems reported in many surveys.

Description of the problem Even though employers are obligated by the Finnish legislation to take measures to analyse the workload factors and to avoid or reduce the risk, not all employers even recognise the psychosocial workload factors. Furthermore, employers and workplaces in general have too little information about the health risks caused by work stress and about the links between stress and other work related factors, such as sick leaves, workplace accidents and reduced productivity. **Results** This presentation will describe actions taken in Finland to tackle work stress with the target of prolonging work careers and to reduce sick leaves and early retirement. Actions at all levels will be presented, i.e. in the strategic level, planning and implementation.

Conclusions Tackling work stress requires effective measures both in the policy level and in practical implementation. Successful measures are based in co-operation between governmental institutes, research institutes, trade unions and practitioners.

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RISKY DRIVING, UNSAFE VEHICLES AND CAR CRASH INJURY: A POPULATION-BASED CASE-CONTROL STUDY IN FIJI

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Background Risky driving and unsafe vehicles are two areas receiving increased global attention as priorities for road traffic injury prevention. However, the attendant risks have not been quantified in low- and middle-income Pacific nations using controlled epidemiological studies.

Methods A population-based case-control study was designed to include all four-wheeled motor vehicles involved in crashes where at least one occupant died or was hospitalised (case vehicles) and a random sample of vehicles driven on roads in Viti Levu, Fiji (control vehicles). The drivers or their proxies were administered structured questionnaires eliciting self-reported data on risky driving and vehicle factors, including crash involvement and traffic convictions in the previous five years.

Results Drivers of 154 case and 752 control vehicles participated in this study. Multivariable models of the main effects of interest found significant excess in the odds of injury-involved motor vehicle crashes (MVCs) with vehicles older than 10 years (OR 1.99; 95% CI: 1.27–3.12); vehicles with seat belts only in the front seats (OR 2.03; 95% CI: 1.19–3.46) and speeding up when someone tries to pass (OR 3.40; 95% CI: 1.51–7.65). The odds of MVC were significantly less if drivers had experienced a traffic conviction or crash in the previous 5 years (OR 0.43; 95% CI: 0.24–0.78 and OR 0.45; 95% CI: 0.22, 0.95, respectively).

Conclusions Speeding in some contexts and driving vehicles older than 10 years or without a full complement of seatbelts were associated with a 2–3 fold increase in the odds of serious injury-involved MVCs. In contrast to some other studies, previous traffic convictions and crash involvement appeared

protective, which may signify a greater deterrent effect. However, it is unclear if the apparent risk reduction will be long-lasting and we cannot exclude the possibility that this finding may reflect biases relating to social desirability or concerns relating to risk of prosecution.

642 PREVALENCE OF BEHAVIOURAL RISK FACTORS FOR ROAD TRAFFIC INJURIES: REGIONAL DIFFERENCES IN BRAZIL

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Background Road traffic injuries (RTIs) are estimated to be the fourth leading cause of death in Brazil. This burden is not uniform throughout the country with differences between the wealthy developed South and less-developed North. Understanding regional differences in specific behaviours (speeding, helmet use, seatbelt use and drink driving) associated with RTIs is critical in designing effective RTI interventions. This study aimed to assess such differences by comparing observed road safety behaviours in the cities of Sao Paulo (South) and Fortaleza (North).

Methods As part of the Bloomberg Initiative for Global Road Safety (BIGRS), observational studies were conducted in Sao Paulo and Fortaleza, Brazil. Six sites were randomly selected in each city and trained observers recorded road safety behaviour (speeding, helmet use, seatbelt use and drink driving) for three full-day periods between August–October 2015.

Results 190,730 observations were collected: Sao Paulo (113,539), Fortaleza (77,191). Fortaleza had higher rates of speeding (16.7%) with motorcycles being the most common speeders compared to Sao Paulo (8.1%) where sedans were most responsible. Rates of seatbelt and helmet use among all passengers were higher in Sao Paulo (90.2% and 99.1%, respectively) than Fortaleza (63.4% and 82.8%, respectively). Drivers testing positive for any alcohol was higher in Sao Paulo (14%) than Fortaleza (1.2%).

Conclusions Important regional differences in road safety behaviour highlight the need for tailored interventions in Brazil. National-level interventions might not be as effective as regional ones. While both cities had high rates of helmet use, seatbelt use remains low in Fortaleza. Speeding, especially among motorcycles, is a priority for Fortaleza and parts of Northern Brazil. Sao Paulo's alcohol results illustrate the urgency for drink driving-based interventions for areas of Southern Brazil. These results will be used to develop specific interventions for BIGRS.

643 CORRELATION OF ROAD SAFETY PERFORMANCE WITH SOCIAL AND ECONOMIC INDICATORS IN THE EUROPEAN UNION

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Background – methodology The objective of this research is the correlation of road fatalities with basic social and economic indicators in the European Union. On that purpose, a database was developed containing the most recent data regarding population, road fatalities, gross domestic product per capita, human

development index, unemployment rate and few other economic and social indicators for the twenty eight Member States of the European Union. Statistical models were developed using the method of multiple linear regression and applied for all countries tested but also for different groups of countries selected (north-western, eastern, southern countries).

Results The application of the models demonstrated that annual increase of GDP, unemployment rate and suicides rate leads to annual increase of road fatalities. Whereas road fatalities annual decrease is correlated to increase of the human development index and of the motorway network density. These results are broadly confirmed with some variations in the three groups of EU countries.

The sensitivity analysis demonstrated that the human development index has the most important effect on road fatalities annual change

Conclusions The findings of this research might be useful for decisions makers to identify the expected level of road safety in a region or in a country based on their macroscopic economic and social indicators, allowing thus to identify the separate effect of specific road safety policies, programmes and measures implemented.

644 NEW AND INNOVATIVE WAY TO TACKLE CHILD SEXUAL ABUSE – WWW.OTANVASTUUN.FI

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Background Child sexual abuse is a serious safety and health issue. To prevent the sexual abuse of children, it is crucial to target individuals who run the risk of conducting a sexual crime against a child but have not (yet) done so. There are treatment programs in Finland within prison services for sex offenders, but no specialised interventions exist for potential offenders.

Methods The www.otanvastuun.fi online self-help material developed by Save the Children Finland, targets specifically potential child sexual offenders and focuses on their online behaviour. The website is based on the English-speaking coga.org material, and draws on best practices of sex offenders treatment programmes and interviews with convicted sex offenders, who have been actively involved in the development of the material. The aim of the website is to increase the self-awareness of the potential offenders and to help them to control their problematic behaviour.

Results Since the publication of the material, there have been nearly 15000 visitors on the website. The material has been introduced at several occasions, and has been well received by the professionals working with convicted and potential sex offenders and by other relevant parties and audiences. A systematic evaluation of the website among sex offenders and professionals working with them is scheduled early next year. The Otanvastuun.fi website has been awarded the Finnish national crime prevention prize 2015 and represents Finland at the annual European crime prevention competition.

Conclusions To prevent child sexual abuse, it is crucial to target potential offenders. The Otanvastuun.fi online self-help material targets individuals, who have not (yet) acted in illegal or harmful ways towards children but are at risk of doing so. The material has been well received by the main target groups and other relevant parties and audiences, and has been awarded the Finnish national crime prevention prize.