

in France (2013–2015). Participants were 954 drivers injured in a road crash. The main outcome measure was responsibility for the crash. Covariates were external distraction, working memory, selective attention, alcohol use, psychotropic drug use, and sleep deprivation.

Results A high working memory was associated with responsibility for a traffic crash (odds ratio 1.9, 95% confidence interval 1.3 to 2.6). Regarding selective attention, the group displaying an hyper focus on stimuli was also associated with responsibility for a traffic crash (odds ratio 1.6, 95% confidence interval 1.1 to 2.3).

Conclusions Contrary to our expectations unimpaired executive function variables were associated with responsibility for the crash. It is possible that a better level of executive functioning may be linked to a higher focus on internal stimuli thus limiting attention to external and road stimuli.

765 THE IMPACT OF MIND WANDERING ON ROAD SAFETY

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Background Mind wandering before the crash has been associated with a heightened probability of being responsible for a crash. Yet measurement bias (desirability bias) may explain this association. To progress in the understanding of mind wandering in road safety we sought to assess the relationship between mind wandering trait (a persistent characteristic of the individual) and state (just before the crash) and the risk of being responsible for a road crash.

Methods We conducted a responsibility case-control study in an adult emergency department of the Bordeaux university hospital in France, (2013–2015). Participants were 954 drivers injured in a road crash. Measures were responsibility for the crash, mind wandering (trait/state), external distraction, alcohol use, psychotropic drug use, and sleep deprivation.

Results Intense mind wandering (highly disrupting/distracting content) state was associated with responsibility for a traffic crash (odds ratio 2.3, 95% confidence interval 1.5 to 3.5). Mind wandering trait was also associated with responsibility for a traffic crash (odds ratio 1.8, 95% confidence interval 1.3 to 2.5).

Conclusions Mind wandering, whether just before the crash or as a general propensity characteristic of the individual, is associated with a higher risk of being responsible for crashes. Mind wandering is a deleterious source of inattention on the road.

766 IMPLICATIONS OF MARKING REGIONAL AND GLOBAL ROAD SAFETY EVENTS 2014–2015 ON MULTISECTORAL COLLABORATION IN QATAR

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Background Marking of the global and sub-regional road safety events at the national level is one of the recommendations of the Global Plan for the Decade of Action for Road Safety 2011–2020 to increase the awareness of risk factors and the need for enhanced road traffic injury prevention. Examples of the Global events are the United Nations Global Road Safety Weeks and the

World Remembrance Day for Road Traffic Victims and Sub-regional road safety event are the Gulf Countries Corporation Traffic Weeks held every year during March.

Objective To examine the implication of marking the global and sub-regional road safety events during 2015 on the road safety awareness agenda in Qatar.

Results The World Remembrance Day for Road Victims was marked in Qatar in the 3rd Sunday of November 2014 by multiple national sectors and demonstrated commitment. Following the event, an in-depth evaluation of the stakeholders needs was done by the awareness section of the Traffic Department and Hamad Injury Prevention Program- Trauma Surgery, Hamad General Hospital and concluded that road safety awareness require a systematic and multi-sectoral collaborative approach. This internal evaluation resulted into a substantial improvement of the collaboration between both sectors, starting from the participation in the 31st Gulf Countries Corporation Traffic Week in March 2015 with several participatory activities by Hamad Injury Prevention Program. Another internal evaluation was conducted following the Gulf Traffic Week to identify progress and needed actions. In May 2015, a more collaborative activity for the 3rd United Nations Global Road Safety Week with emphasised planning using the recommendations of the former events and with involving more sectors such as the Supreme Council of Education and Non-Governmental Organisations. The evaluation of the global event acknowledged that the quality and efficiency of the awareness activities in Qatar was improved by multi-sectoral collaboration and recommended joint planned awareness activities on routine basis.

Conclusions Marking the Global and Sub-regional road safety events emphasised the positive impact of the multi-sectoral collaboration in a systematic way to improve the road safety awareness and guided the national stakeholders in Qatar for future and directed collaborative activities.

Occupational Safety

Post Tue 2.17

767 MUSCULOSKELETAL DISORDERS AND ITS CORRELATES AMONG FARMERS WORKING ON VEGETABLE GREENHOUSE

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Background This study aims to examine the incidence of musculoskeletal disorders (MSDs) among farmers working on vegetable greenhouse and to identify the potential correlates of musculoskeletal disorders.

Methods A total of 1823 farmers working on vegetable greenhouse from 15 villages of five main vegetable growing areas in Shouguang city of Shandong province were interviewed using a modified household questionnaire. Chi-square test was performed to assess the incidence of MSDs across farmers with different greenhouses and multivariate logistic regression was performed to explore its risk and protective factors.

Results Among the valid 1780 subjects, 1395 (78.4%) cases reported that they had the experience of MSDs during the past 12 months. The top four positions with MSDs were low back (62.4%), knee(s) (41.9%), neck (22.9%), and shoulder(s)

(20.3%). The incidence of MSDs in upper back, finger, elbow, ankle and hip were 8.4%, 7.94%, 7.94%, 4.34%, 4.14%, respectively. Thirty-six variables were found significantly associated with MSDs. Eight out of 36 were identified as risk factors, including female (OR = 1.63), age older than 50 years (OR = 1.64), working on greenhouse long than 20 years (OR = 2.24), daily work over 10 hours (OR = 1.32), frequent push or pull with power ranged from 5 to 20 kg (OR = 1.56), elevating heavy objects in uncomfortable position (OR = 1.57), bending down in work (OR = 1.84), neck at layback for long time in work (OR = 1.31). While, use of vibrating tools in work was a protective factor (OR = 0.58).

Conclusions The incidence of MSDs is high in the farmers working on greenhouse vegetable. The findings of this study on the correlates of MSDs could inform future development of more specific and efficacious interventions.

768 MOTHERS AND FATHERS PERCEPTIONS OF INJURY RISKS TO YOUTH WORKING ON FAMILY FARMS

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Background Youth live in the agricultural workplace and are at risk of injury and death on the family farm. Fathers usually oversee the most dangerous youth farm work, namely work around large equipment. Less is known about the safety roles and beliefs of mothers. This study examined differences between mothers and fathers in their work and family roles on the family farm, as well as differences in risk-taking, safety perceptions and knowledge, and perceptions of youth injury risk.

Methods Participants were 248 farm parents (124 married couples) with a youth aged 9–19 yrs. Families lived on farms growing row crops in the Southeastern U.S. Mothers and fathers completed study questionnaires.

Results Mothers were less likely than fathers to operate tractors and large equipment, had lower safety self-efficacy, less confidence and perceptions of control related to keeping their youth safe, less safety training, and less knowledge about farm safety. As compared to fathers, mothers believed that youth should be older before being allowed to work with and operate farm equipment. Unexpectedly, mothers perceived less injury risk to youth than did fathers. Fathers were greater risk-takers than were mothers. For both mothers and fathers, higher risk-taking was associated with less perceived youth injury risk. When asked about decision-making related to youth's use of farm equipment, mothers often deferred to fathers.

Conclusions Study findings suggest that on family farms growing row crops in the Southeastern U.S., mothers perceive less injury risk to their youth than do fathers. Gendered labour patterns and limited access to agricultural networks and training constrain women's knowledge about farm safety, especially related to large equipment. These factors may compromise the ability of some women to work jointly with their husbands to keep their youth safe. There is a need for communities to provide farm safety education designed for women, as well as men.

769 IDENTIFYING DEFICIENCIES IN STABILITY, DYNAMIC HANDLING AND ROLLOVER CRASHWORTHINESS OF QUAD BIKES

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Background Currently, in Australia there are around 270,000 quad bikes (ATVs) and Side by Side Vehicles (SSVs) in use, an estimated 80,000 Quad bikes and SSVs in New Zealand, and an estimated 10 million Quad bikes and SSVs in the USA. Analysis of Australian Coronial data from 2001 to 2012 identified around 141 fatalities involving quad-bikes and SSVs. In comparison 2,718 quad-bike fatalities occurred in the US in the years 2000 to 2010. Fatality data indicates that rollover, pinned entrapment and asphyxiation are the major casual factors in farm place deaths related to quad-bikes. As a result, the authors critically evaluated quad bike static stability, dynamic handling and rollover crashworthiness to identify engineering design deficiencies and possible countermeasures to reduce rollover injury risk.

Methods A major three year project comprised of over 1000 tests on a selection of 17 vehicles consisting of 8 quad bikes, 3 recreational quad bikes, 5 SSVs and a modified prototype quad bike. Testing was carried out at the NSW state government's Crashlab testing facility, consisting of static stability, dynamic handling and rollover crashworthiness tests.

Results Results from all the test program are presented, with links provided to the extensive project and Crashlab test reports.

Conclusions Deficiencies in the stability and handling of quad bikes which significantly increased the rollover risk with consequent increased risk of severe injury and death in the farming environment were identified and quantified. For the first time, the comparison of quad bikes with SSVs identified the superior static stability, dynamic handling, minimal disturbance of steering when traversing a bump, and rollover crashworthiness of SSVs. Quad bikes are not the best choice for workplace and farm vehicles but rather well designed SSVs, in general, are the more appropriate 'fit for purpose' vehicle choice.

770 AN EVALUATION OF THE UTILITY OF VARIOUS DATA SOURCES FOR OCCUPATIONAL INJURY SURVEILLANCE

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Background Work-related injuries (WRIs) have been identified as a public health priority in Qatar. At present data on WRIs is collected by diverse governmental and non-governmental agencies. This study evaluates the utility of various data sources for occupational injury surveillance based on international reporting standards of the International Labour Organisation [ILO], Occupational Safety and Health Administration [OSHA] and International Classification of Diseases 10 [ICD-10].

Methods Stakeholder meetings with agencies working for the welfare and health of workers in Qatar were held to assess the existence and availability of data sources and develop consensus on the definition of essential elements related to WRIs