

- Some girls had beaten and kicked other girls as a revenge for «stealing» their boyfriends.
- Two girls had assaulted a boy on the homeway from their school.
- Some of the informants with experiences as victims of bullying at school, felt they did not get help but were met by passively and partly belittling attitudes from the schools and authorities.
- One aspect is that most of the girl victims had kept quiet and told nothing to their families and friends about those incidents
- Another aspect is that to stop the violence some of them had moved to another place to get away from the perpetrator, often by presenting other reasons for moving,

**Conclusions** Young girls are more exposed as the victims of the youth violence than parents and the authorities know about. Some of the young girls feel to ashamed to tell their parents. It is important to identify the need for help to the young victims, and make good programs for preventions as well as advocating for increased political will and greater attention and resources for raising awareness about the problem of youth violence.

**578** FREE2B: BRIDGING THE GAP BETWEEN THEORY, PRACTICE & INNOVATION IN BULLYING PREVENTION PROGRAMMING

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10.1136/injuryprev-2016-042156.578

**Background** Urban minority youth are disproportionately exposed to violence, a factor that perpetuates disparities in education, incarceration, and social/behavioural problems. Involvement in bullying in early adolescence has been associated with maladaptive outcomes as youth enter young adulthood. Combining state-of-the-art interactive technology, a strong theoretical foundation and a partnership-based approach with urban youth and educators, initial studies of Free2B will be examined to determine its relevance, acceptability, and initial effectiveness for urban 7th and 8th graders.

**Methods** The program theory explicates how the primary intervention components (3D film, inspirational videos and an interactive quiz show) are thought to impact both proximal (e.g., knowledge of bullying facts; prosocial attitudes about positive bystander behaviour) and distal (e.g., increases in positive bystander behaviour and collective action to prevent bullying) outcomes over time.

**Results** Data from 268 7th and 8th grade ethnic minority youth from two North American urban schools will be presented. Over 90% of students found the program to be acceptable and feasible. In addition, paired sample t-tests also suggest that Free2B enhanced students' social problem-solving knowledge, prosocial attitudes about bullying, and confidence in resolving conflicts. In addition, data has just been collected from ten additional schools across both urban and suburban contexts in order to better understand program applicability for a more diverse set of school contexts.

**Conclusions** Free2B highlights how researchers can collaborate with multi-media experts to develop engaging and scientifically-grounded injury prevention programs that can relevance for diverse urban and potentially suburban settings. Challenges for

researchers in trying to bridge the gap between theory, practice, and innovation will be highlighted.

## Occupational Safety

Post Mon 1.17

**579** APPLICATION OF MINI MORT AND WHY 5 METHODE TO ANALIZED AND INVESTIGATE LOSS TIME ACCIDENT (LTA) CASES (CASE STUDY IN MANUFACTURING INDUSTRIES)

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10.1136/injuryprev-2016-042156.579

**Background** Through in-depth identification of management system and specific control factor, the root cause of the accident can be determined. Had been an accident in the PT.X such as a first aid injury and loss time accident, and has conducted investigations and follow-up but similar accidents still happen. The purpose of this study was to identify the cause of the accident based on management system and specific control factor.

**Methods** This study used qualitative approaches to explore the root cause based on management system factor and specific control factor. Researchers used a qualitative approach, because researchers used a standard mini-MORT as a data collection tool and 5 whys method to explore the root causes.

**Results** Results of the analysis in the first case accident that crushed by c-canal, and the second case of an accident that falling from a ladder have in common causes, which is the cause of the accident was due to organisational influences. Influence of the organisation, such as resource management, organisational climate and organisational process. This relates to the allocation of limited resources, both human and financial, and material.

**Conclusions** Conclusion of this study is that there are elements of the management system and specific control factor was inadequate, and the root cause of the accident was on organisational Influences. The company had to consider the approach to safety behaviour that occupational safety and health programs can be done with an awareness of the whole management to workers who are believed to reduce the number of accidents.

**580** PREVALENCE AND ASSOCIATED FACTORS OF WORK-RELATED INJURIES AMONG RUBBER TAPPERS IN SRI LANKA

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10.1136/injuryprev-2016-042156.580

**Background** Occupational injuries are a major cause of global disability and death. Agriculture has been shown to be the most hazardous of all industries, particularly in jobs that require intense manual labour. Rubber tapping- the process of extracting rubber from rubber trees- involves sharp tools, steep terrain, and heavy loads; putting tappers at risk for injury. This study assesses injury

prevalence and risk factors among Sri Lankan rubber tappers, and identifies possible interventions to improve worker safety.

**Methods** A mixed-methods questionnaire was administered to 300 Sri Lankan rubber tappers between September and November 2014. Information was obtained on demographics, injuries, work environment, behavioural characteristics, and depression. Open ended questions were included to allow participants to provide additional comments.

**Results** 300 rubber tappers reported a total of 594 injuries in the previous 12 months, which resulted in 1080 days of work missed. Knife cuts ( $n = 182$ ) and skin irritation ( $n = 176$ ) were the most common injuries. Snake bites were less common ( $n = 26$ ) but the most severe injury type, resulting in an average of 9.8 (SD = 10.7) days of work missed per injury. Predictors of injuries varied by injury type; they were gender (falls, snake bites), working an additional job (knife cuts), tapping with a two handed approach (skin irritation), and depression (skin irritation, falls). No workers reported wearing personal protective equipment. Qualitative findings suggest that four interventions could address most injuries: 1) use of safety glasses for upper tapping, 2) landscaping of rubber lands, 3) provision of eyeglasses for the vision impaired, and 4) use of equipment to reduce manual transport of latex.

**Conclusions** Sri Lankan rubber tappers experience a heavy burden of work-related injuries and have limited safety equipment. The four interventions identified by this research could help reduce the risk of occupational injury to rubber tappers.

#### 581 SAFE AND EFFECTIVE TRAINING FOR WORKING WITH DIFFICULT TREES USING A CHAIN SAW

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10.1136/injuryprev-2016-042156.581

**Background** With the change in climate, storms are increasing in many parts of the world. One of the most challenging tasks in terms on occupational safety in these situations is removing storm fallen trees that have tensions. This work has more risks than usual and is also rather difficult to train. At the same time, it is often done by rescue workers or power company employees using a chain saw.

**Methods** We surveyed the types of situations in which chain saw work leads to injuries and how often these situations are affected by the trees been damaged or having abnormal tensions. Very often such conditions are met by Fire & Rescue crews clearing roads and other areas from trees that a storm has fallen. A number of workshops were arranged to collect the knowledge from a group of experienced experts.

**Results** Based on the workshops a two part training program was developed. To make the training effective, two simulators were designed. The other one is based on a commercial product, while the other one was designed and drawn by engineers in close cooperation with the research team. In the first simulator, cutting trees under tension is trained in a safe environment. The other simulator is used in further training and can be used to train removing trees fallen on power lines, houses, cars and other similar places.

**Conclusions** Fire and Rescue services, as well as others can improve their level of occupational safety in removing difficult trees. Using a chain saw to remove a tree with abnormal tensions requires both knowledge and adequate practice. This can be

achieved through training and the simulators make training both safe and productive.

#### 582 EVALUATING THE IMPACT OF WORKSAFE NEW ZEALAND ON THE CANTERBURY REBUILD

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10.1136/injuryprev-2016-042156.582

**Background** The Canterbury region in New Zealand is currently in the middle of a major rebuild following two large and thousands of smaller earthquakes in 2010 and 2011. The construction sector has experienced unprecedented demand, which was expected to impact on the health and safety practices of the sector. WorkSafe New Zealand partnered with the sector to establish a safety charter for good practice, as well as establishing a dedicated inspectorate resource for the initial stages of the rebuild.

**Methods** The evaluation utilised a mixed method approach, including injury data analysis, modelling, surveying, interviews and documentation review to understand the impact of WorkSafe's involvement.

**Results** Results are still being analysed, but will be available at the time of the presentation.

**Conclusions** The Canterbury Rebuild provided a unique opportunity for the regulator and construction sector to work in partnership in a time of significant demand, with the goal of preventing severe injury and fatalities. The use of the charter, and sector-led work, is being examined as a potential blueprint for other sectors of priority in New Zealand.

#### 583 HAND INJURIES IN THE UNITED ARAB EMIRATES

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10.1136/injuryprev-2016-042156.583

**Background** We aimed was to study epidemiology, risk factors and outcome of hospitalised patients with hand injuries in order to give recommendations for prevention.

**Methods** We studied all trauma patients having hand injuries admitted to Al Ain Hospital for more than 24 hours, or died after arrival to the hospital during 3 years. Demography, location and time of injury, other injured regions, severity of injury, hospital and ICU stay, and outcome were analysed.

**Results** 296 patients having a mean age of 30.5 years were studied. The annual incidence of hospitalisation was 15.4/100 000 person per year. 91.9% were males and 62.5% from the Indian subcontinent. The most common location for injury was work (53.4%), followed by road (24.7%) and home (13.2%). Injury from road traffic crash was the most common mechanism (26%), followed by machinery (25.7%) and heavy objects (14.9%). Patients injured at home were younger ( $p < 0.0001$ ) and had more females ( $p < 0.0001$ ).

**Conclusions** Males from the Indian subcontinent are at a higher risk of having hand injuries especially at work, while UAE nationals by traffic or at home. Safety education and programs, use of personal protective equipment including gloves, and proper enforcement of the safety guidelines could reduce hospitalizations and disability of hand injuries.