Conclusion This research identifies key risk factors pertaining to female drowning and contributes to SDGs 3 good health and wellbeing and 5 gender equality. It has the potential to inform future drowning prevention interventions for females and the development of future research into the drivers of female drowning, both within New Zealand and globally.

Bystanders who drown attempting a rescue are becoming an increasingly important issue within drowning prevention. In Australia, most of these incidents occur in coastal waterways. This study characterises coastal bystander rescuer fatalities collated in the national coastal fatality database (2004–2019) to guide future safety interventions involving bystander rescuers. Sixty-seven bystander rescuer fatalities in coastal waterways were reported during the 15-year period, an average of 4.5 per year, which is a significant proportion of the five fatalities previously reported across all Australian waterways.

Most coastal bystander rescuer fatality incidents occurred in New South Wales (49%), at beaches (64%), in regional or remote areas (71%), more than 1 km from the nearest lifesaving service (78%), during summer (45%), in the afternoon (72%), in the presence of rip currents (73%), and did not involve the use of flotation devices to assist rescue (97%). The majority of coastal bystander rescuer victims were Australian residents (88%) born in Australia/Oceania (68%), males (81%), aged between 30–44 years old (36%), were visitors to the location (55%), either family (69%) or friends (15%) of the rescuee(s), and were attempting to rescue someone younger than 18 years old (64%).

Our results suggest safety intervention approaches should target males, parents and carers visiting beach locations in regional locations and should focus on the importance of flotation devices when enacting a rescue and further educating visitors about the rip current hazard. Future research should examine the psychology of bystander rescue situations and evaluate the effectiveness of different safety intervention approaches.

Abstracts

28.005 DYING TO HELP: FATAL BYSTANDER RESCUES IN AUSTRALIAN COASTAL ENVIRONMENTS

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10.1136/injuryprev-2021-safety.42

2C – Falls, March 23, 2021

2C.001 TRENDS IN FALLS-RELATED INJURY HOSPITALISATIONS AND DEATHS AMONG ADULTS IN VICTORIA, AUSTRALIA

1Alesandra Natora*, 2Jennie Oxley, 3Terry Haines, 4Linda Barclay, 5Bruce Bolam. 1Monash University, Melbourne, Australia; 2Department of Health and Human Services Victoria, Melbourne, Australia

10.1136/injuryprev-2021-safety.43

2C.002 GRAVITY CAN BE A REAL KILLOJOY. FALL ACCIDENTS INVOLVING 0–4-YEAR OLD’S IN RESIDENCES

1Peter Spitzer*, 2Holger Till. 1Research Center for Childhood Injuries at Safe Kids Austria, Graz, Austria; 2Medical University, Graz, Austria

10.1136/injuryprev-2021-safety.44

27 – Falls, March 23, 2021

27.005 FALLS – AVOIDABLE TERRAIN AND INJURY PATTERNS AMONG AUSTRALIAN CHILDREN AND ADULTS IN THE HOME

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10.1136/injuryprev-2021-safety.45
Learning Outcomes: Parents are of paramount importance in protecting the youngest children. They are aware of the living environment of their child and the child’s current developmental steps. A sensitisation to both of these aspects is of great importance to the child’s safety during the first years of life.

2D – Road – Pedestrians, March 23, 2021

DISTRacted Walking Prevention with Multi-SECTORal Collaboration from Research to AWARENESS & EDUCATION

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10.1136/injuryprev-2021-safety.44

Background: Road traffic accident is the first killer to teens aged 15–17 in China. Teens are the group walking independently and with the highest increasing rate on web-surfing through mobile phone. This program involves research and transfers the research findings into actions on awareness and education to prevent the distracted walk among teens and public.

Objective: Understand distracted walk among teens and raise awareness on no distracted walk among teens and the public.

Method: 1) A questionnaire survey on distracted walking among 2,984 teens in 12 schools were conducted. 2) Results were used to build an awareness campaign with multi-sectoral collaboration; 3) Working with local educators to have the curriculum into schools as a must-do education to teens.

Results: 1) A research report on teens distracted walk was issued which showed 35.80% of the respondents using cell-phones while walking, among which 18.04% were hit by vehicles; 2) The findings were used to lobby: a) the decision-makers of multi-sectors working together on the campaign ‘The Moment of Silence’ and the promotion in the public transportation (public bus and subway) and shopping malls; b) the decision-makers of educational sector to have ‘No Distracted Walking’ curriculum into 2000 schools of 5 cities as the must-do education on road safety and also schools over 40 cities used the curriculum.

Conclusion: Research findings are the key to kick the ball running on engaging local government’s action on raising the awareness on ‘No Distracted Walking’ among teens and the public.

DISTraction INDEX: A NEW INDICATOR FOR MEASURING DISTRACTED WALKING

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10.1136/injuryprev-2021-safety.45

Background: Simple and valid measures are important for studying distracted walking, an important and emerging risk factor for pedestrian injury. Based on common epidemiological indicators for distracted walking, we developed and validated an indicator to measuring distracted walking, called the ‘distraction index’.

Methods: A large, video-based, observational study was conducted at 20 intersections in Changsha, China. To develop a ‘distraction index’ that would quantify safety risks based on distracted walking, we calculated relationships between 7 observed distraction indicators and 3 safety outcomes. This allowed us to assess the discriminant validity of the 7 indicators and create a ‘distraction index’ that best predicts street-crossing safety based on distracted behavior.

Results: In total, 8,729 distracted pedestrian crossings were identified. Discriminant validity varied greatly across the distraction indicators. Compared to each individual indicator, the distraction index demonstrated the strongest capacity to discriminate all three safety measures of street-crossing. Using the three levels in the ‘distraction index’, distracted pedestrians had much higher risks of experiencing near-crash events compared to undistracted pedestrians, with odds ratios of 1.3 (95% CI: 1.1, 1.4) for low index scores, 1.6 (95% CI: 1.4, 1.9) for medium, and 1.9 (95% CI: 1.6, 2.3) for high.

Conclusion: The distraction index predicted pedestrian crossing safety more accurately than any of the seven individual measures of distracted walking. We recommend use of this index in future research.

Learning Outcomes: No widely recognized epidemiological measure exists to observe distracted walking. The newly-created ‘distraction index’ shows excellent discriminant validity compared to individual indicators of distraction.

ROAD ENVIRONMENTAL CHARACTERISTICS, DISTRACTED WALKING, AND PEDESTRIAN SAFETY: AN OBSERVATIONAL STUDY

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10.1136/injuryprev-2021-safety.46

Background: Distracted walking is a major risk factor for pedestrian injury, but it is unknown whether pedestrians have different risks of distracted walking in some road environments compared to others.

Methods: An observational study was conducted at 20 intersections in Changsha, China. We developed a composite measure distracted behavior (called the ‘distraction index’) based on types and duration of pedestrian distraction. Another composite indicator, ‘road environmental risk score’, was constructed on the basis of eight variables on road environment and traffic volumes. The mediating effect of distraction index was examined while studying the impact of road environmental risk score on the risk of near-crash events.

Results: In total, 8,729 of 25,436 (38.9%) pedestrians were distracted by mobile phone use, interaction with others, or eating/drinking/smoking while walking. A higher distraction index was related to higher risk of near-crash event (p<=0.05). The distracted index was positively associated with the road environmental risk score (p<=0.05). Pedestrians with high and medium road environmental risk scores had higher risks of a near-crash event than those with low scores (RR=1.41, 95% CI: 1.15, 1.73; RR=1.56, 95% CI: 1.28, 1.92). Road environment yielded an indirect effect on near-crash event; the effect was mediated by the distracted walking index, accounting for 5.3% of total variance.