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

2D.001 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.

2D.002 DISTRACTION INDEX: A NEW INDICATOR FOR MEASURING DISTRACTED WALKING

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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 indicators, 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.

2D.003 ROAD ENVIRONMENTAL CHARACTERISTICS, DISTRACTED WALKING, AND PEDESTRIAN SAFETY: AN OBSERVATIONAL STUDY

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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, 8729 of 25436 (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.