Results Activity Room: Children took similar risks when supervised (34 ± 27) and unsupervised (30 ± 24), $t(59) = -1.10$. Bivariate correlations revealed greater risk-taking with more protective/supervision-oriented parents. Multiple linear regression predicting supervised play from PSAPQ scales was significant, $F(3,53) = 4.90$, $p < .05$, $R^2 = .22$; only protectiveness significantly predicted, $p < .05$.

Illustrations Children took fewer risks when supervised (2.29 ± 1.55) than unsupervised (1.80 ± 1.71), $t(59) = 2.81$, $p < .05$. Bivariate correlations revealed greater risk-taking for more supervision-oriented parents. Multiple linear regression predicting supervised risk-taking from PSAPQ scales was non-significant, $F(3,54) = 2.56$, $p = .07$, $R^2 = .13$, although supervision significantly predicted, $p < .05$.

Conclusion These findings support crucialness of active parental supervision for child injury prevention, and safe risk-involved exploration for child development. Inattentive supervision may increase risk.

Learning Outcomes Parental supervision quality and type impacts children's risk-taking.

P4.004 CHILD RESTRAINT USE IN SHANGHAI: A MULTI-ROUND CROSS-SECTIONAL OBSERVATIONAL STUDY

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10.1136/injuryprev-2021-safety.207

Background Few studies have assessed the child restraint use in Shanghai. We aim to investigate the prevalence of child restraint use and the potential risk factors affecting child restraint practice in Shanghai.

Methods A cross-sectional observational study was conducted near the pediatric hospitals, kindergartens, entertainment places, and shopping malls between 2015 and 2019 in Shanghai. Trained field workers observed and recoded the child restraint use in all passing motorized vehicles with children passengers at each site. A logistic regression model was used to examine risk factors on non-restraint use among children, adjusting for potential confounders.

Results Eight rounds of data were collected with a total sample size of 12,061 children. The total child restraint use rate was 6.42%. Child restraint use rate rose with fluctuation during the last 5 years, from 5.12% in round 1 to 8.55% in round 8 (p value < 0.001). Results from the logistic regression model showed that children occupants with these factors had a higher risk for inappropriate child restraint use: children aged 5–12 years compared with those aged younger than 4 years (OR: 2.14; 95% CI: 1.79–2.55; $p < 0.001$), children traveling with other children occupants compared to those who were the only child in a car (OR: 2.20; 95% CI: 1.51–3.20; $p < 0.001$), and children traveling in a taxi compared with those in a sedan/saloon (OR: 32.98; 95% CI: 16.37–66.43; $p < 0.001$).

Conclusion Child restraint use rate was low in Shanghai. Our finding may inform intervention programs among children with those risk factors to promote child restraint use.

P4.005 SUPPORT SYSTEM FOR CHILDREN MOBILITY MANAGEMENT TO IMPROVE SCHOOL TRANSPORT SAFETY

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10.1136/injuryprev-2021-safety.208

Context Road accidents are main cause of unnatural road deaths among children and youth. Children are vulnerable when they travel unaccompanied to school: walking/cycling, using public transport or dedicated school transport. School transport system requires modernization and more focus on children safety at all stages of the trip.

Process Based on own research regarding effectiveness of Intelligent Transport Systems for school travel, a model of support system for children mobility management was developed to ensure children's safety in a door-to-door perspective. Aim of the system is to i.e. inform parents and school on child location, assist stakeholders supervising school transport to plan optimal routes of buses. The model of the system is composed of five modules: location of children's tags, location of intelligent bus stops, location of children on the bus, location of children at school, optimisation of bus route, safe travelling.

Analysis Different variables were analysed and practical verification of the model was done based on data from one of the regions in Poland. Model of the system refers to all stages of school travel and includes technologies supporting children on way to school.

Outcomes Preliminary validation of the system's model was positive; journey supported by the system was safer than without system. Further analyses should be carried out on a wider scale and model should be expanded with other elements.

Learning Outcomes It is crucial to investigate possibilities of children safety improvements with relation to the use of modern technology measures, which should encompass other road users too.

P4.006 A NOVEL ADOLESCENT INJURY PREVENTION PROGRAM

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10.1136/injuryprev-2021-safety.209

Background Injury is the leading cause of adolescent mortality in rural Guatemala. Effective injury prevention approaches are conceptualized by local communities to fit the population and environment. Despite the injury burden affecting adolescents worldwide, there is limited engagement of this high-risk population as injury prevention capacity-builders. This project aimed to adapt the World Health Organization (WHO) Child Injury Prevention Course for adolescents, and to assess the acceptability and efficacy of the modified curriculum in increasing injury prevention knowledge and improving self-confidence in safety behaviors.

Methods The conceptual framework of Adult Learning Theory was used to modify the WHO course into an engaging curriculum for adolescents. The curriculum was then translated into Spanish and implemented with a class of 11 adolescents

enrolled in a youth leadership program in rural Guatemala. Pre-/post-testing was conducted.

Results Pre-/post-testing revealed increased injury prevention knowledge (76% to 96%) and self-confidence to implement community injury prevention strategies (50% to 90%) among participants. Participant feedback from the course was positive: 60% endorsed that all topics were comprehensively covered; however 20% desired more education on drowning prevention and road traffic injury. Ninety percent of adolescents anticipated positive safety behavior change post-course.

Discussion and Learning Outcomes Our modified Adolescent Injury Prevention Program was well-accepted by a class of Guatemalan adolescent learners and was efficacious at increasing their injury prevention knowledge and self-confidence. This novel approach of actively engaging adolescents in injury prevention programs could lead to increased adolescent safety behaviors, while building capacity among this high-risk population and their communities.

P4.007 BACK SEAT SAFETY BELT USE AND CHILD RESTRAINT SEAT USE IN JAPAN

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10.1136/injuryprev-2021-safety.210

Background A national survey reported driver and front passenger seat belt use to be high in Japan, 98.9% and 95.9% respectively in 2019. On the other hand, back seat safety belt use is alarmingly low at 39.2%. Child restraint seat (CRS) use has been mandatory since 2000, yet the survey reported the rate of use in 2019 to be only 70.5% for children under the age of 6. Additionally, the rate of use for 5-year-old children is dangerously low at 48%. The purpose of this study was to determine rear passenger seat belt use and CRS use on short-distance trips on local roads in a regional area of Japan.

Methods A cross-sectional survey using self-report questionnaires was performed at 78 nursery schools throughout Aomori prefecture. A descriptive analysis was performed on selected variables.

Results A total of 3021 valid responses (71.1% response rate) were returned. The number of respondents who always wore a seat belt traveling short-distance on local streets as a back-seat passenger was significantly low (25.7%). Consistent CRS use on short trips using local roads was also considerably low with an average of 72.7%.

Conclusion Rear passenger seat belt use is very low, as is CRS use on short-distance trips on local roads in Aomori prefecture. Parents' seat belt use as a backseat passenger may be affecting their behavior toward CRS use.

Learning Outcomes Interventions to increase the protection of children as passengers may need to address parents' perceptions of rear-seat safety.

P4.008 BEYOND SUPERVISION: LINKING SIBLING RELATIONSHIP QUALITY AND SCHOOL-AGED CHILD INJURIES

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10.1136/injuryprev-2021-safety.211

Background While family size and sibling supervision have both been shown to influence child injury risk, the role of sibling relationship quality in child injury has not been investigated. Our goal was to investigate potential linkages between child injuries and the quality of sibling relationships.

Methods Seventy-nine families with two school-aged children aged seven and ten years on average were recruited from the community; 54% were female. Children reported on the quality of their sibling relationships and parents reported on the frequency of minor child injuries within the past three months, as well as their supervision attitudes.

Results Younger siblings in antagonistic relationships characterized by high hostility and low warmth incurred significantly more minor injuries; this was especially the case when age spacing between siblings was larger. Higher parental confidence in younger siblings was significantly related to fewer minor injuries for older, but not younger siblings.

Conclusions Sibling relationship quality played a significant role in injury risk for school-aged children, particularly when sibling age spacing was larger. Therefore, the quality of sibling relationships should be taken into account in future research, as well as in home injury prevention programs. Parental confidence in younger siblings was linked to fewer older sibling injuries, underlining the importance of understanding the interconnected nature of family dynamics on child injury.

Learning Outcomes Antagonistic sibling relationships were significantly associated with more minor injuries for younger siblings, especially when sibling age spacing was larger. Parental confidence in younger siblings was related to fewer older sibling minor injuries.

P4.009 EPIDEMIOLOGY OF SCHOOL INJURIES AMONG MIDDLE SCHOOL STUDENTS IN KANDY, SRI LANKA

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10.1136/injuryprev-2021-safety.212

Background School injuries are recognized as a preventable public health problem. No study has been conducted to find the incidence of school injuries in Sri Lankan schools up to date.

Methods A sample of 820 students were recruited using multi-stage cluster sampling from an education division in Kandy. A well-structured, pre-tested, interviewer-administered questionnaire was used to gather information on unintentional school injuries that took place in the preceding 1 month. Injury severity was assessed using the Abbreviated Injury Score (AIS). The statistical significance of the associations was tested using the chi-square test.

Results The event-based injury incidence rate was 25.37 per 100 students per month (95% CI: 22.04–29.06). A majority (31.8%) of the injury events occurred during a sports event. Some contributory factors identified were overexertion (32.2%), starvation (19.7%), and lack of maintenance of the premises (15.4%). Common injury types were abrasions (33.5%) and lacerations (14.7%). Lower extremities (50.7%) were affected most. The majority of injuries (94.7%) fell to AIS 1, whilst 5.3% fell to AIS 2. Being a male ($\chi^2=22.6$,