

generates mass mobilisation, street plays and rallies help in effectively reaching the masses.

**Conclusions** Adopting a multipronged approach works better in building safety culture and creating positive and sustainable change.

### 852 EMERGING SAFETY CHALLENGES OF MOTORCYCLES ON BANGLADESH ROADS

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**Background** Motorcycles are becoming an increasingly popular mode of travel in Bangladesh. There are around 1.3 million registered motorcycles in Bangladesh, representing nearly 55% of total registered motor vehicles. Motorcycles are increasing at an astonishing rate, around 95% during 2009–2015 with fleet growing at a faster rate than other vehicles. Motorcycle crashes are a growing problem resulting from massive increase of motorcycles.

**Methods** To assess the risk factors of motorised two wheelers in Bangladesh, police reported crash data were analysed and International Road Assessment Program (iRAP) methodologies were applied in assessing road environment hazards associated with motorcyclists together with field observation of motorcycle travel behaviour.

**Results** Motorcycle crashes are claiming over 200 deaths annually and nearly 70% occurred in rural areas, mostly attributable to effects of speeding. Predominant crash types are head-on, hit-pedestrian and rear-end, which together account for nearly 86%. Recent iRAP assessment revealed that national highways are mostly 2-star or less for motorcyclists indicating a relatively high level of risks of deaths and injuries. Major risk factors are mostly related to road infrastructure and environmental deficiencies and unsatisfactory driver behaviour and law enforcement.

**Conclusions** Sustained and accelerated reduction in road fatalities involving pedestrians, bicyclists and motorcyclists is clearly a priority, particularly for achieving the target of 50% reduction of deaths by 2020 in Bangladesh. Road fatalities involving motorcycles are unacceptably high. Addressing the safety of motorcycles and the riders is therefore an enormous challenge to transport engineering professionals. It is urgent to conduct in depth research and to develop pragmatic strategies and actions with particular emphasis for wider application of road engineering and environment measures for preventing motorcycle crashes and injuries.

### 853 UNDERSTANDING ROAD TRAFFIC INJURIES AND PREVENTION MEASURES FOR CHILDREN IN RURAL BANGLADESH: A QUALITATIVE STUDY OF COMMUNITY MEMBERS' VIEWS

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**Introduction** Road traffic injury (RTI) was the second leading cause of injury mortality and fourth leading of injury morbidity

in Bangladesh. For both mortality and morbidity most the vulnerable age group was 5-9 years.

**Objectives** To gain an in-depth understanding of people's perception of causes and their concepts of prevention of childhood RTIs in rural Bangladesh.

**Method** Focus Group Discussions (FGDs) were conducted with 7 groups: mothers and fathers of children aged 5–12 years; adolescents; students and non school going children aged 6–12 years, teachers and local leaders. Out of 79 participants 40 were female. The study was conducted in Raiganj rural community in Bangladesh.

**Results** Most respondents considered that children, aged 5–10 years are at risk of road traffic injuries in rural community, with school going boys being particularly vulnerable. Most of the RTIs were reported to occur on school journey particularly returning home. Key sources of risk identified by participants included: risk taking behaviour, poor supervision, lack of road skills, untrained drivers, unauthorised vehicles, and poorly implemented traffic law. Preventive interventions suggested included supervision, training in road skills, law enforcement by government, increase awareness in the community, and improvement of the road infrastructure.

**Conclusions** Community people could identify the causes of childhood RTIs and suggest ways of preventing them; but knowledge is not translated into preventative actions. Appropriate community based intervention programmes need to be multi-facet and include practical road safety education for children.

### 854 CREATING A MODEL – SAFER SCHOOL ZONE PROJECT

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**Background** In the mega city like Mumbai, there is need to do a scalable, sustainable and cost effective projects in communities to address road safety is a must. Model school zone project is a part of Walk This Way, pedestrian safety program that was implemented at St. Joseph High School Mumbai, to create safer environment for 2,200 children. Evaluating the school zone and implementing interventions was primary goal of this project.

**Method** The project was carried out in 3 phases.

**Phase I-** Gathering statistics and information on accidents from various sources like hospitals, police, traffic & transport department. 46 stakeholders like road safety experts, engineers, policy makers, parents, teachers, community members, research agencies and 178 students were involved in the project. The tools used were school zone assessment, parents' survey, walkability checklist for students, photovoice- children's perspective on road safety, where 10 children were involved, students knowledge and awareness assessment study was also conducted.

**Phase II-** Interventions – zebra crossing was painted near the school, signages like school ahead were installed, usage of different school gates, widening of footpaths, fencing the footpath near the school.

**Phase III-** The reaserch was repeated to study the impact after the interventions. Conducted the post intervention assessment. Interpreted assessment findings.

**Results** Permanent road infrastructure modifications were carried out. School authorities made modifications in the premises and survey showed behavioural changes amongst children and parents. All worked together as a cohesive team and showed results.