

Child restraint a **MUST**

Editor: As a follow-up of last Friday's article on child seats ("Is your child using the right car seat?"), here is a more serious look at the importance of child restraints.

BY **JOZELYN NG**

IN 2014, there were a total of 2,073 reported road casualties involving children aged 15 and below, which represented 10.5% of total road casualties in Malaysia (see Table 1). Out of this figure, 67% of casualties involved children aged 11-15, 17.7% involved children aged six to 10 and the rest were young children aged up to five. "Travelling unrestrained" is one of the main contributory factors of all casualty collisions involving children below 15 years old. It is very common to see children, especially the smaller-sized ones, travelling unrestrained in passenger cars in Malaysia, as the country has yet to make child restraints compulsory.

Research showed that an unrestrained child occupant who sits in the front passenger seat has 25% higher risk than an unrestrained one who sits in the rear. For restrained child occupant in both seating positions, the risk of the child occupant suffering injuries in the front passenger seat is 15% higher than in the rear seat. Thus, it is recommended that a child who travels in a car to sit in the rear seat instead of front.

The use of seatbelt and child restraint is one of the most vital actions that can prevent fatality and injury of child occupant during a car crash. Infants and children need child restraints that accommodate their sizes and weights, and can adapt to cope with the different stages of their development. The proper use of child restraints could minimise the severity of injury by preventing the child occupant from being ejected from the car during a collision and reduce the risk of injury of

other occupants in the same vehicle as a result of human collision during the crash.

Seatbelts and child restraints could only increase the chances of survival when properly restrained. Thus, always choose an appropriate seatbelt and child restraints, according to the child's age, height, weight, physical limitations and needs. Child restraint varies considerably depending on the type of restraint used (see Figure 1). Generally, child restraint could be divided into four common types, (a) rear-facing, (b) forward-facing, (c) booster seat and (d) seatbelt.



Typically, the risk of injury for a child up to four years old could be reduced by 50% and 80% respectively in a forward-facing and rear-facing child restraint seat. For children five to nine years old, the proper use of car seat or booster seat could reduce the injury risk by 52%. The use of three-point lap and shoulder seatbelt is suitable for children aged 10-14 with minimum height of 145cm and above. In the case of only an adult seatbelt was used to restrain the child, the reduction of injury is 32%, 19% and 46% respectively for children up to four years old, five to nine years old and 10 to 14 years old (see Table 2).

A study conducted by Universiti Putra Malaysia's Road Safety Research Centre on 423 parents with household having young children below six years old indicated that 75% of the parents were willing to purchase child restraints ranging from RM150 to RM2,000 for their children if the risk of fatalities and injuries could be reduced by 40% to 70%, respectively, by using the child restraint. Only less than 1% of parents were unwilling to purchase child restraints for their kids. The reason is that they lack the awareness about the benefits of child restraints. Child restraints are not only effective in preventing injuries during a collision, but also effective in reducing injuries

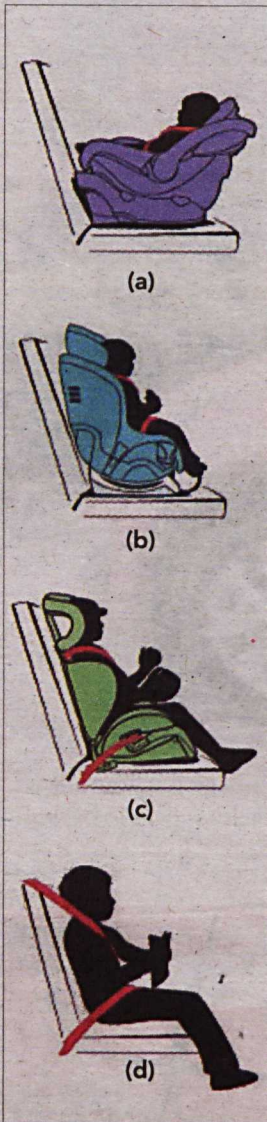


Figure 1: Types of child restraints

Total reported road casualties in Malaysia (2014)

Age of Victims	Fatal	Serious	Minor	Total
0-5	75	96	148	319
6-10	66	111	189	366
11-15	326	371	691	1,388
Total				2,073

Table 1 (Source: Royal Malaysian Police, 2014)

Effects of child restraints in cars on child's risk of injury as passenger

Type of restraint used	Risk reduction %
Children aged 0-4 years old	
(a) Restraint with seatbelt only	32
(b) Restraint in a forward-facing child restraint	50
(c) Restraint in a rear-facing child restraint	80
Children aged 5-9 years old	
(a) Restraint with seatbelt only	19
(b) Restraint with appropriate child restraint and seatbelt	52
Children aged 10-14 years old	
(a) Restraint with seatbelt only	46

Table 2 (Source: World Health Organisation, 2009)

that can occur during non-crash events, such as a sudden stop, a swerving evasive manoeuvre or a door opening during vehicle movement.

Perhaps it is time we see a series of advocacy and promotional campaigns to promote the use of child restraint prior to the enactment of child restraint system in 2017. The provision of extensive road safety education is also warranted and necessary to help the public to understand and be aware of the risks related to road safety, and more importantly, to raise the awareness of the benefits of using seatbelt and child restraint.

Ng is a lecturer with the Department of Civil Engineering, Faculty of Engineering, National Defence University of Malaysia.