

**Let's prevent the slip that leads to a hospital trip- awareness and knowledge of parents regarding the prevention of traumatic dental injuries**

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**Abstract**

**Introduction:** Traumatic dental injuries are common everyday occurrences and their prevalence has been rising continuously. A thorough knowledge of traumatic injuries is mandatory to treat and prevent the consequences of them successfully.

**Aim:** To know the awareness and knowledge amongst the parents regarding the prevention of traumatic dental injury.

**Materials & method:** 100 parents of children aged below 15 years staying in urban area were included in the study. Questionnaires were distributed to those parents after giving a brief idea about the study and consent was obtained. Study included Yes or No type of questions which focused on the basic safety measures to be taken by the parents to prevent any traumatic injury to their children. The data obtained was analysed by statistician.

**Results:** A total of 100 questionnaires were distributed to parents of children aged below 15 years. This was done in an apartment where the families were all upper middle class. The overall awareness and knowledge regarding the prevention of traumatic injury was average.

**Conclusion:** The overall knowledge regarding the preventive measures and the use of safety equipments were average in parents of children aged below 15 but practice of the use of these equipments was less. Poor preference to the dentist was given by parents in case of any facial trauma sustained by their children.

**Keywords:** Traumatic dental injury, Safety Equipment

**Introduction**

Dental traumatic injury frequently occurs in children and adolescents and it has an impact on their teeth as well as their supporting structures and adjoining soft tissues. It could lead to many major psychosocial and economic

problems.<sup>[1]</sup> These accidental traumatic injuries generally occur due to physical activities.<sup>[2]</sup> Injuries on the facial region are usually neglected by non-dental professionals as they are not life threatening.<sup>[3]</sup> The causes of traumatic injuries are any physical activities ,sports, due to any fall ,skid, slip, negligence of parents etc.<sup>[4]</sup> Lack of awareness and knowledge about the prevention and post traumatic follow up are also causes attributed to some permanent damage to facial structures of these children who have encountered an accident.

**‘All work and no play makes jack a dull boy’**

In the holistic development of children’s health, sports and physical activities play a vital role.<sup>[5]</sup> Studies show that children indulging in outdoor activities are more prone to injuries. Amongst injuries most of them are associated with face and mostly involves teeth. These risk can be reduced by the use of safety equipments. These equipments are mouthguards, helmets, face mask, protective eye wears, rubber cleated shoes, seat belts etc.<sup>[6]</sup> Use of mouth guards reduces the risk of dental trauma as it distributes the impact of blow evenly throughout the mouth and thus reduces the chance of

**Questionnaire**

Parent’s name: \_\_\_\_\_

Age/gender: \_\_\_\_\_

Child’s name: \_\_\_\_\_

Age /gender: \_\_\_\_\_

Place: urban/semi urban/rural

**Occupation**

1) Annual Income of parent:

- a) below 1lakh
- b) 1 lakh to 3Lakh
- c) Above 3 lakhs

2)What type of vehicle do you use?

- a) 2-wheeler
- b) 4-wheeler

hard and soft tissue injury , jaw fractures and neck injuries.<sup>[7]</sup> Sports like trekking ,downhill cycling, snowboarding, skateboarding, micro scooter riding which has introduced adventure in life and fascinated the young to increase skills , speed, experimenting new tricks is fraught with danger. Use of well-fitting mouth guards, helmets with protection of face, shoes with rubber cleats would reduce trauma.

**Materials and method**

The study was performed on 100 parents of children aged below 15 years staying in urban residential area. Questionnaires were distributed to the parents after giving a brief idea about the study. After obtaining institutional ethical committee clearance, verbal and written consent was obtained from the parents. Study included Yes or no type of questions which focused on the basic safety measures to be taken by the parents to prevent any traumatic injury and precautions taken by them if their kid encountered any trauma. The data obtained was analysed by statistician and results were formulated. The questionnaire included the following set of questions., viz.,

c) Both

**If 2-wheeler,**

3) Does your child wear helmet while sitting in the 2-wheeler?

Yes / No

**If 4-wheeler,**

4) Does your child wear seat belt in the car?

Yes / No

5) Are you aware of the air bags installed in your car?

Yes / No

6) Are you aware of the safest seat in the car for your children?

Yes / No

6.A) Are you aware that the right age to switch to a front facing car seat is when your child reaches 2 years or reaches the weight or height limit?

Yes / No

6. B) Are you aware that the right time to switch to a booster seat is when your child outgrows the weight limit of his front facing car seats?

Yes / No

7) Is your child involved in any sports?

Yes / No

8) If yes what type of sports? \_\_\_\_\_

9) Are you aware about the use of protective wears like mouthguards, shin guards, ankle braces, and shoes with rubber cleats?

Yes / No

10) If you are aware then do you encourage or make sure that your child uses it while doing these activities?

Yes / No

11) Does your child wear helmet with light while cycling?

Yes / No

12) Does your child use hand signals while riding cycle?

Yes / No

13) Do you keep a watch while they are playing or riding cycle?

Yes / No

14) Do you supervise your child while he/she enters the kitchen?

Yes/ No

15) Are you aware about the precautions or immediate action to be taken during any type of emergency to your child?

Yes/ No

16) During any injury to the face do you take your child to dentist?

Yes/ No

17) Do you think that education regarding the use of safety equipments in children should be given in schools?

Yes / No

**Results**

A total of 100 questionnaires were distributed to parents of children aged below 15 years. This was done in an apartment where the families were all upper middle

class. 38% of them only used 2 wheelers while 30% had only 4 wheelers and 32% of them used both type of vehicles (Table 1). The participants were divided into 3 age groups (Table 2).

Table 1: vehicles used

Type of vehicle used	No. of people using the vehicle
2-wheeler	38
4-wheeler	30
Both	32

Table 2: age distribution of children

S.no	Age of the children in years	No. of children
1	Less than 6 yrs	18
2	7- 12 yrs	70
3	13- 15 yrs	12

Table 3: results of the survey.

Sn.	Awareness of parents pertaining to question	N	Less than 6 yrs		7-12 yrs		13- 15 yrs		Statistical analysis	
			Yes	No	Yes	No	Yes	No		
1	Usage of helmets in two wheelers	70	6	8	32	18	4	2	Chi square -2.16 P-0.34	
2	Seat belts	62	14	0	32	8	6	2	Chi square -3.60 P -0.165	
3	Installation of airbags	62	12	2	32	8	4	4	Chi square -4.14 P -0.12	
4	Awareness of safety seats	62	8	6	24	16	4	4	Chi square-0.28 P -0.86	
5	Right age to switch to front seat	62	4	10	14	26	2	6	Chi square -0.42 P -0.81	
6	Right time to switch to booster seat	62	2	12	4	36	2	6	Chi square -1.37 P -0.505	
7	Involvement in sports	100	6	12	42	28	4	8	Chi square -5.98 P -0.04	
8	Awareness to use protective wear	100	6	12	54	16	8	4	Chi square -12.64 P -0.002	
9	Encouragement to use safety equipments	100	1	4	5	2	1	8	6	Chi square -12.64 P -0.002

10	Usage of helmets with lights during cycling	100	2	16	28	42	4	8	Chi square -5.33 P -0.070
11	Usage of hand signals while cycling	100	4	14	26	44	4	8	Chi square -1.42 P -0.49
12	Supervision while playing	100	12	6	50	20	10	2	Chi square -1.03 P -0.598
13	Supervision in kitchen	100	12	6	54	16	8	4	Chi square -1.20 P -0.549
14	Awareness regarding emergency management of trauma	100	6	12	36	34	8	4	Chi square -3.39 P -0.184
15	Dental visit in facial injury	100	8	10	42	28	8	4	Chi square -1.84 P -0.398
16	Requirement for school education regarding safety measures	100	18	0	56	14	10	2	Chi square -4.27 P -0.118

**Discussion**

“Awareness allows us to get outside of our mind and observe it in action.”-Dan Brule.

We could prevent so many accidents by being more cautious. Wearing helmets while riding a two-wheeler, especially while riding cycle use of helmets with lights and use of hand signals have saved many lives. Thompson et al, from his study reported that use of bicycle helmets reduces the risk of facial injuries by 65% but risk of dental trauma exist because of lack of protection of the lower face and jaw.<sup>[8]</sup> Deficient knowledge about the use of helmets is one of the major risk factors causing accidents and the best way to bring about the awareness among population regarding the use of helmet is through legal status.<sup>[9]</sup> When surveyed, 60% parents in our current study who use two wheelers make their child wear helmets while driving.

Parents have a misconception that their kids are safe in cars than in two wheelers but cars are also not safe and they are equally vulnerable to road traffic accidents. Out of 62 parents who were using four wheelers, when surveyed, 83.8% practice the usage of seat belts for their

child while driving a car. Not only this, 77.4% of them are aware of the installed air bags. Rocchia et al <sup>[10]</sup> and Mouzakes et al <sup>[11]</sup> demonstrated that air bag explosion in car can cause facial trauma. Cox et al <sup>[12]</sup> reported in his study that air bag installation and use of seat belt in the car has consequently reduced the possibility of trauma in the face.

In our study, more than 50 % of the parents were aware regarding the safest seat in a car for children. According to the participants of current study, rear seat is the safest seat in car for their child. A study in Nigeria published that rear seat occupants of commercial vehicle are more likely to stand maxillofacial injuries.<sup>[13]</sup> Children are in danger of getting facial bone fractures during any road traffic accidents<sup>[14]</sup>.

All the infants and toddlers are made to sit only in rear facing seats up to the age of 2 years and as they reach the highest weight, they are shifted to forward facing or convertible seats. As they reach school going age, they switch to booster seat with a proper fitting seat belts. Children below 13 years of age are advised to take up the rear seat. When surveyed only few parents could

give the right answer regarding the right age of switching the car seats for their kids.

Undoubtedly, a steady physical activity is an indication of a healthy child.<sup>[4]</sup> Many surveys throw light on the fact that most of the children were involved in sports at their schools. When surveyed most of the children below 15 years of age are involved in some or the other physical activities either at schools or at home. Children involved in sports are more prone to injuries especially facial injuries. During any of the physical activity especially sports, close contact between the athletes and speed are the predisposing factors with injuries caused by hand or elbow contact in the facial areas <sup>[9]</sup>. Insufficient knowledge of parents regarding the use of safety equipments when the child engages in any physical activities causes accidents.

On total 68% of parents are aware about the safety measures out of which only few of parents encourage their child to use these safety equipments. Most parents of children of age group 7-12 years are aware of the protective wears but only 74.2 % encourage their kids to use these safety equipments. Even though the awareness regarding the safety wears were less in parents of children aged below 6, amongst the ones who are aware 77.7 % of them encourage their child to use them. Parents need to be made aware of the risks of the traumatic happenings and the benefits of wearing mouthguards, headgear etc. <sup>[9]</sup>

40 % of Parents of children aged 7-12 years are aware of the accidents and make their child wear helmets while cycling whereas usage of hand signals in all the groups are minimal.

When asked to those parents regarding the supervision of their child while they are playing or in and around the kitchen area where chances of accidents are more,

majority of the parents irrespective of the age groups look after their wards.

Regarding the immediate precautions to be taken in case of any facial trauma equal results was obtained. Some of them answered that they know what has to be done, while few responded that they would rush their child to casualty or to a nearby clinic, some used home remedies to stop the bleeding, some mothers replied that they would place ice packs on the wound.

Amongst the ones who were aware of the immediate precautions only 58 % would take their child to a dentist in case of dental or facial injuries. The rest others would prefer a general surgeon for the treatment.

Even schools and sports organizations should promote the use of safety equipments during outdoor recreational activities.<sup>[9]</sup> 84% of the parents agreed to the fact that education regarding the proper way of use of these protective wears and their importance should be given to children in their schools.

### **Conclusion**

“A little knowledge that acts is worth infinitely more than much knowledge that is idle.”- Khalil Gibran.

The overall knowledge regarding the preventive measures and the use of safety equipments were average in parents of children. Poor preference to the dentist was given in case of any facial trauma. Deficient knowledge regarding the application of safety equipments, and the immediate precautions during facial injury was sighted in our study. Even though parents wish to provide education regarding the prevention and safety measures for their child in schools, but that is not enough till it is been put to practice.

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