

# Dental Trauma in Children and Young Adults

Jennifer Suhasini.S, Dr.Gheena.S  
Saveetha Dental College and Hospitals

---

<b>AIM-</b>	The aim of the study is to present the distribution of traumatic dental injuries and trauma in teeth of patients in the age interval of 6 to 20 years.
<b>OBJECTIVE-</b>	The purpose of this investigation was to determine the type and prevalence of dental injuries seen in a hospital emergency room.
<b>BACKGROUND-</b>	The highest frequency of tooth injuries occurred among 10- to 13-years-old children. Traumatic injuries affecting teeth in the upper jaw were more frequent. The most commonly affected teeth were the maxillary central incisors (42.4% of right central incisors and 38% of left central incisors). As for now the most frequent injury was enamel and dentin fracture without pulpal involvement (38.7%). The most common fracture site was the mesioincisal angle (40.6 percent) followed by distoincisal angle (27.3%). We aim to study this in a hospital base out patient population.
<b>REASON-</b>	To diagnose, manage and treat dental trauma and also to create an awareness about dental trauma in children and young adults

---

## INTRODUCTION

Changes in lifestyle associated with urbanization, has resulted in a nutrition transition towards a greater prevalence of noncommunicable diseases. Traumatic dental injuries (TDI) constitute one of the leading reasons for childhood odontological emergencies [1]. Recent estimates of the prevalence of these injuries to anterior teeth in children shows wide variation [2–4]. Various risk factors to TDI suggested in the literature include excessive overjet, [4–6] inadequate lip coverage, [5,6] high socioeconomic status, [7] and childhood obesity [8,9]. Furthermore, there is very limited literature reporting on the relation between Overweight and dental trauma in India. The aim of the present study was to determine the prevalence of traumatic dental injuries to permanent and primary dentition.[10] It is also well known that increased incisal overjet of the teeth and inadequate lip coverage significantly increase the chances of having a dental injury when people have an accident.[11]

## MATERIALS AND METHODS

The study was carried out through proper channel after getting ethical approval from Department of Research, Saveetha Dental College and Hospitals, Saveetha University. The subjects consisted of convenience samples of adolescents (age 11-18) attending one school in Chennai, A total of 207 children were sampled; 124 were males and 83 were females. All the children were examined clinically within their schools under standard illumination from a Darry light using disposable plane mouth mirrors. The surfaces of all teeth present in the mouth were scored for dental erosion. All the children were examined by the same person who had previously undergone extensive training. The data were recorded by a trained assistant.

## RESULTS

In this examination, 45 children have dental trauma, out of which 14 are female and 31 are male. So the prevalence of dental trauma is more in school going children. In the present study males were more affected by tooth wear than females with no significant difference. Similar observation was reported by Goncalves et al. (2008)[12]

## DISCUSSION

The results of this study suggest that dental trauma is prevalent in Chennai among adolescents. Possible reasons include enamel breakage without any pulpal involvement. Comparison with other studies is difficult because of different indices used, but the prevalence reported appears of a similar magnitude.

Children with evidence of traumatic injury had experienced more caries than those without, with caries experience being particularly high in children who had experienced the more severe forms of injury. Again the connection between the two conditions is not altogether clear. It may be due to the confounding effects of variables such as socioeconomic status, or may reflect the fact that a subgroup of children live within environments or are prone to behaviours that place them at greater risk of multiple oral disorders. Certainly, the nature of the link warrants further investigation since it may reveal common risk factors and indicate the need for a common risk factor approach. One demonstrated risk factor for dental injury that needs to be examined in this context is that of childhood obesity.[13]

We are all aware that dental trauma accidents peak during the summer months due to the increased activities of children playing sports, swimming, riding bicycles, skateboarding, climbing and other adventurous pursuits in addition to those injuries incurred during normal household activities and road traffic accidents. Some children and parents will therefore attend emergency clinics as a result of the consequences of dental trauma to either the primary or permanent dentitions. This is an anxious time for both the child and parent and the immediate dental management will have a tremendous impact on the long term prognosis of the traumatised tooth or teeth. Avulsions need to be replanted urgently and the extra-alveolar period should not exceed 30 minutes in order to maximise the long term prognosis of the tooth. Damage to the periodontal ligament is inevitable with lengthy extra-alveolar time periods, which leads to ankylosis and eventual replacement resorption with loss of the tooth. Children and parents usually attend multiple visits at their dentist, as a consequence of their summertime dental trauma, and this also affects their schooling and parental work schedules.

The usual treatment for an incisor tooth that is lost due to dental trauma is replacement with a partial denture or a Maryland bridge with perhaps future consideration for an implant.[14]

### CONCLUSION

There is an increase in the prevalence of dental trauma in school going children and young adults. They children should be advised about dental trauma and immediate management of dental trauma.

NAME.	GENDER	AGE	PREVALENCE OF DENTAL TRAUMA
Prabhu	Male	15	No
Sasikanth	Male	15	Yes
Paramesh	Male	15	No
Gowtham	Male	15	Yes
Manoj	Male	15	No
Mahesh	Male	15	Yes
Abdul	Male	15	No
Sudhar	Male	15	No
Mohamed	Male	15	No
Kevin	Male	15	Yes
Fayaz	Male	15	Yes
Karthi	Male	15	No
Hari	Male	15	Yes
Karthi.K	Male	15	No
Rafyk	Male	15	No
Kalyan	Male	15	No
Abrar	Male	15	No
Durai	Male	15	No
Josphine	Male	15	No
Nithya	Female	14	Yes
Sona	Female	14	Yes
Melina	Female	15	No
Malavika	Female	14	Yes
Magithga	Female	14	Yes
Sowfar	Female	14	No
Jameena	Female	14	No
Anees	Female	14	No
Charles	Male	15	No
Ebenzer	Male	13	No
Robert	Male	15	No
Richard	Male	12	No
Vimal	Male	15	Yes
Shankar	Male	13	No
Denny	Male	15	No
Mathews	Male	17	No
Immanuel	Male	12	Yes
Semon	Male	13	No
Stephen	Male	13	Yes
Alleshius	Male	15	No
Stephen.K	Male	17	No
Richard.M	Male	18	Yes
Lewis	Male	16	No
Adam	Male	16	No
Jennifer	Female	16	No
Sai kumar	Male	14	No
Jeswanth	Male	15	No
Helen	Female	14	No
Tharun	Male	13	No
Varun	Male	15	Yes
Jhon	Male	14	No
Surya	Male	18	Yes
Roger	Male	18	Yes
Thomai	Male	12	No
Nithish	Male	17	Yes
Alisha	Female	15	No
Christopher	Male	18	No

NAME.	GENDER	AGE	PREVALENCE OF DENTAL TRAUMA
Albiness	Male	9	Yes
Samuel	Male	12	No
Laura	Female	15	No
Rahul	Male	11	Yes
Genevi	Female	19	Yes
Mohan	Male	12	No
Kiko	Male	13	No
Gerald	Male	16	Yes
Davidson	Male	18	Yes
Savio	Male	12	No
Mohamed.b	Male	16	No
Vincent	Male	18	No
Chandru	Male	12	No
Sathish	Male	15	No
Mary	Female	15	Yes
Annie	Female	13	No
Joselin	Female	9	No
Anthony	Male	12	Yes
Alwin	Male	12	Yes
Dominic	Male	12	No
Davius	Male	11	No
Shakina	Female	17	Yes
Thilothama	Female	19	No
Arun	Male	13	No
Aravind	Male	16	No
Chella	Female	16	No
Catherin	Female	16	No
Kate	Female	16	No
Nirmala	Female	16	No
Navin	Male	16	No
Shabana	Female	16	No
Mufeedha	Female	16	No
Gopal	Male	16	Yes
Gowtham.b	Male	16	No
Daksh	Male	16	No
Deepika	Female	16	No
Sowmiya	Female	16	No
Monika	Female	16	No
Santhosh	Male	16	Yes
Princy	Female	16	No
Jennifer.b	Female	16	No
Praveen	Male	16	No
Selva	Male	16	No
Swetha	Female	16	No
Bina	Female	16	No
Charitha	Female	16	No
Adithya	Male	16	No
Saritha	Female	16	No
Anmol	Male	16	No
Sarvana	Male	16	Yes
Bala	Male	16	No
Apsara	Female	16	No
Binish	Male	16	No
Adithi	Male	16	No
Selvi	Female	16	No
Bharathi	Female	16	No
Madhan	Male	16	No
Megana	Female	16	No
Bhuvana	Female	16	No
Nilesh	Male	16	Yes
Kayal	Male	16	No
Ujjwal	Male	16	No
Sandeep	Male	16	No
Riya	Female	16	No
Riyadha	Female	16	No
Sherya	Female	16	No
Kalyan	Male	16	No
Kishore	Male	16	No
Pavithra	Female	16	No

NAME.	GENDER	AGE	PREVALENCE OF DENTAL TRAUMA
Sajan	Female	16	Yes
Rifa	Female	16	No
Sangavi	Female	16	No
Prithika	Female	16	No
Pooja	Female	16	No
Thejaswari	Female	16	No
kanniamma	Female	16	No
Paul	Male	16	No
Rohit	Male	16	Yes
Wilson	Male	16	No
Rochelle	Female	16	No
Daniel	Male	16	No
Radin	Male	16	No
Gifson	Male	16	No
Thara	Female	16	No
Ranjitha	Female	16	No
Aiswarya	Female	16	No
Badamisiri	Female	16	No
Chandini	Female	16	No
Abilash	Male	16	No
Ahamed	Male	16	Yes
Ragini	Female	16	No
Judith	Female	16	No
Benitha	Female	16	No
Kelshiya	Female	16	No
Angelina	Female	16	No
Robert	Male	16	No
Mohana	Female	16	No
Kumar	Male	16	Yes
Sandra	Female	16	No
Juliet	Female	16	No
Thanvir	Male	16	No
Afridi	Male	16	No
Jaqfar	Male	16	Yes
Annah	Female	16	No
Anitha	Female	14	No
Liya	Female	14	No
Gayathri	Female	14	No
Mounika	Female	14	No
Elizabeth	Female	14	Yes
Micheal	Male	14	No
Sasi	Male	14	No
Peter	Male	14	No
Keerthi	Female	14	No
Prathana	Female	14	No
Vinothini	Female	14	No
Nalini	Female	14	No
Kirpa	Female	14	No
Vimal	Male	14	Yes
Babu	Male	14	No
Sai	Male	14	No
Varsha	Female	14	No
Yuvaraj	Male	14	No
Vignesh	Male	14	Yes
Lokesh	Male	14	No
Lalith	Male	14	No
Akash	Male	14	Yes
Annamalai	Male	14	No
Darshan	Male	14	No
Harish	Male	14	Yes
Priya	Female	14	No
Priya.K	Female	14	No
Shruthi	Female	14	No
Sathish.b	Male	14	No
Jamuna	Female	14	No
Nisha	Female	14	No
Anisha	Female	14	No
Reshma	Female	14	No
Prithivi	Male	14	No

NAME.	GENDER	AGE	PREVALENCE OF DENTAL TRAUMA
Sanjay	Male	14	No
Ajmal	Male	14	No
James	Male	14	No
Nabeel	Male	14	No
Aahil	Male	14	Yes
Anwar	Male	14	No
Jarrenda	Male	14	No
Afraz	Male	14	No
Ankitha	Female	14	No
Darren	Male	14	No
Ashik	Male	14	Yes
Joe	Male	14	No
Oliver	Male	14	No

## REFERENCES

- [1] Tapias MA, Jimenez-Garcia R, Lamas F, Gil AA. Prevalence of traumatic crown fractures to permanent incisors in a childhood population; Mostoles, Spain. *Dent Traumatol.* 2003;19:119-22.
- [2] Gupta S, Kumar-Jindal S, Bansal M, Singla A. Prevalence of traumatic dental injuries and role of incisal overjet and inadequate lip coverage as risk factors among 4-15 years old government school children in Baddi-Barotiwala Area, Himachal Pradesh, India. *Med Oral Patol Oral Cir Bucal.* 2011;16:e960-5.
- [3] Marcenes W, Murray S. Social deprivation and traumatic dental injuries among 14-year-old schoolchildren in Newham, London. *Dent Traumatol.* 2001; 17:17-21.
- [4] Malikaew P, Watt RG, Sheiham A. Prevalence and factors associated with traumatic dental injuries (TDI) to anterior teeth of 11-13 year old Thai children. *Community Dent Health.* 2006;23:222-7.
- [5] Ravishankar TL, Kumar MA, Ramesh N, Chaitra TR. Prevalence of traumatic dental injuries to permanent incisors among 12-year-old school children in Davangere, Southern India. *Chin J Dent Res.* 2010;13:57-60.
- [6] Khan NA, Qazi HS, Maxood A, Khan AM, Abbas I. Traumatic injuries of the permanent maxillary incisors at Dental department, Pakistan Institute of Medical Sciences, Islamabad: a retrospective study. *J Ayub Med Coll Abbottabad.* 2008; 20:84-7.
- [7] Naidoo S, Sheiham A, Tsakos G. Traumatic dental injuries of permanent incisors in 11- to 13-year-old Southern African schoolchildren. *Dent Traumatol.* 2009;25:224-8.
- [8] Nicolau B, Marcenes W, Sheiham A. Prevalence, causes and correlates of traumatic dental injuries among 13-years-old in Brazil. *Dent Traumatol.* 2001;17:213-17.
- [9] Soriano EP, Caldas Jr AF, Carvalho MVD, Amorim Filho HA. Prevalence and risk factors related to traumatic dental injuries in Brazilian school children. *Dent Traumatol.* 2007;23:232-40.
- [10] Traumatic Dental Injuries and Its Relation to Overweight among Indian School Children Living in an Urban Area Singamaneni Vijaykumar1, maDiraju guna Shekhar2, rajenDran Vijayakumar
- [11] Andreasen JO, Andreasen FM. Textbook and colour atlas of traumatic injuries to the teeth. 3rd ed. Co-penhagen: Munksgaard; 1994.
- [12] Toothwear, enamel hypoplasia and traumatic dental injuries among cerebral palsy children of Riyadh city Nouf S. Alhammad Department of Pediatric Dentistry and Orthodontics, King Saud University College of Dentistry, Saudi Arabia Received 22 December 2010; accepted 25 January 2011 Available online 8 April 2011
- [13] Petti S, Cairella G, Tarsitani G. Childhood obesity: A risk factor for traumatic injuries for anterior teeth. *Endodont Dental Traumatol* 1996;13:285-88.
- [14] European Archives of Paediatric Dentistry Dental trauma during summer vacation