A RETROSPECTIVE STUDY TO EVALUATE THE IMPACT OF TRAUMATIC DENTAL INJURY ON QUALITY OF LIFE OF CHILDREN AND THEIR PARENTS

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ABSTRACT
An injury to the anterior teeth can affect a perfect smile and thus have an adverse effect on the psychology of the individual. Traumatic injuries to the anterior teeth among the young children are tragic but often an ignored problem. The aim of the study is to determine the impact of traumatic dental injuries to permanent anterior teeth on the quality of life of children of 7-14-years of age and their parents. A cross sectional survey was conducted in 25 schools in and around Mangalore South. The study participants included parents of children with age group of 7-14 years. Participants will be informed about the purpose of the study and a questionnaire will be distributed to the children who have undergone traumatic dental injury. The results of this study showed that 94.6% children did not miss school due to traumatic injury but 5.4% children missed the school. Similarly, on evaluating the impact on the parents, 99.1% parents did not leave from work for this same reason. This study shows that there is no impact on the quality of life of the children and their parents. The parents and children should be given awareness on the importance of trauma to the teeth and its management.

INTRODUCTION
Face is an index of the mind and smile is a saving grace on the face. A brilliant charming smile boosts self confidence and add spark to ones personality. An injury to the anterior teeth can affect a perfect smile and thus have an adverse effect on the psychology of the individual. Traumatic injuries to the anterior teeth among the young children are tragic but often an ignored problem. There is perhaps no single dental disturbance that has a greater psychological impact on both the parents and the child than the fracture or loss of a child's anterior tooth, especially if the injury involves an extensive loss of the tooth structure.1

Traumatic dental injuries occur with great frequency in preschool, school-age children, and in young adults. Accidents during playing, falls, violence, striking against objects, bicycle accidents and many other factors contribute to the cause of injury. Traumatic dental injury can have physical, psychological and social impacts on quality of life. Many of these injuries result in varying degrees of disability, and, depending on the cause, severity and circumstances may result in serious physical, psychological, educational, social and economic consequences for the affected individuals and their families. The majority of dental injuries involve the anterior teeth which may lead to restriction in biting, trouble sleeping, avoidance of smiling, difficulty in pronouncing some words, diminished school performance, irritation, and low self-esteem as well as problems with socialization and nutrition. The presence of a broken tooth makes the child more apprehensive about his appearance in public and the way he will be looked upon by the rest.

Oral health-related quality of life (OHRQoL) have been employed in oral health surveys as a tool to gain a better understanding of the impact of oral health problems on the individual's daily functioning, well-being or overall quality of life. The aim of the study is to determine the impact of traumatic dental injuries to permanent anterior teeth on the quality of life of children of 7-14 years of age and their parents.

METHODS
A cross sectional survey will be conducted in various schools in and around Mangalore South. The study participants will include parents of whose children are in an age group of 7-14 years. Participants will be informed about the purpose of the study and a questionnaire will be distributed to the participants.

All children who have undergone traumatic dental injury regardless of the tooth is treated or not treated enamel fracture, enamel-dentin fracture, tooth discoloration, displacement due to trauma, luxation, avulsion, treated/restored traumatic dental injuries were screened.

Statistical analysis: Descriptive Statistical analysis was done.

SOCIODEMOGRAPHIC QUESTIONNAIRE (PART-I)
- Gender : Male/ Female
- Age
- Type of school: Private/ Public
- Number of residents in household
- House hold income per month : >25,000
  - 25,000 to 35,000
  - 35,000 to 45,000
  - >50,000
- Family provider: Both parent
  - Father alone
  - Mother alone
- Grand parent or uncle/aunt
- Parent's or care giver's schooling: Below graduate
  - Above graduate
- Parent's or care giver's assessment of child's general health: Good/Poor
- Parent's or care giver's assessment of child's oral health:
  - Good/Poor
- Parent's or care giver's oral health : Good/ Poor
- History of dental visit : Yes/ No

QUESTIONNAIRE PART-II
CHILD IMPACT
- Related pain :
  - Yes/ No
- Had difficulty in drinking hot or cold beverages:
  - Yes/ No
- Had difficulty in eating food:
  - Yes/ No
- Had difficulty in pronouncing words:
  - Yes/ No
- Missed school:
  - Yes/ No
- Had trouble sleeping:
  - Yes/ No
- Avoided smiling or laughing:
  - Yes/ No
- Avoided talking:
  - Yes/ No

FAMILY IMPACT
- Been upset:
  - Yes/ No
- Felt guilty:
  - Yes/ No
- Taken off from work:
  - Yes/ No

KEYWORDS : Dental trauma, anterior teeth fracture, impact of traumatic injury
RESULTS
SOCIODEMOGRAPHIC RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENDER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>71</td>
<td>63.4</td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
<td>36.6</td>
</tr>
<tr>
<td><strong>TYPE OF SCHOOL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>17</td>
<td>15.2</td>
</tr>
<tr>
<td>Public</td>
<td>95</td>
<td>84.8</td>
</tr>
<tr>
<td><strong>PARENT’S/CAREGIVER’S SCHOLING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above graduate</td>
<td>27</td>
<td>24.1</td>
</tr>
<tr>
<td>Below graduate</td>
<td>85</td>
<td>75.9</td>
</tr>
<tr>
<td><strong>HISTORY OF DENTAL VISIT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>35</td>
<td>31.3</td>
</tr>
<tr>
<td>No</td>
<td>74</td>
<td>66.1</td>
</tr>
<tr>
<td>Not responded</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>TIME TRAUMA OCCURRED</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-6 months</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td>&lt;6 months</td>
<td>102</td>
<td>91.1</td>
</tr>
<tr>
<td>Not responded</td>
<td>6</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>CAUSE OF TRAUMA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collision with object</td>
<td>13</td>
<td>11.6</td>
</tr>
<tr>
<td>Fall</td>
<td>93</td>
<td>83.0</td>
</tr>
<tr>
<td>Violence</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>Not responded</td>
<td>6</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>TRAUMATIZED TOOTH/TEETH IS TREATED/UNTREATED</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treated</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>Untreated</td>
<td>108</td>
<td>96.4</td>
</tr>
<tr>
<td>Not responded</td>
<td>1</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Table 1 shows the sociodemographic details of the participants selected for the study. There were 36.6% females and 63.4% males among the children with 84.8% attending the public school and 15.2% attending the private school. 75.9% of the parents/caregiver’s were below graduates and 24.1% were above graduates. Among the participants 66.1% had no history of dental visit whereas 31.3% had history of dental visit; 91.1% had dental trauma in <6 months whereas 3.6% had dental trauma in 3-6 months. This study shows that there is no impact on the quality of life of the child as well as the parents. This study also showed that there is no influence of socioeconomic status on the management of dental trauma.

**PARENT IMPACT**

<table>
<thead>
<tr>
<th></th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEEN UPSET</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>No</td>
<td>109</td>
<td>97.3</td>
</tr>
</tbody>
</table>

Table 2 shows the impact of dental trauma on children on parents. 97.3% among the parents reported that they were not upset regarding the trauma and 99.1% of them reported that they did not feel guilty whereas 2.7% reported that they were upset regarding the trauma and 0.9% of them reported that they feel guilty. 99.1% parents were not taken from work for this reason and 100% of them did not report any financial impact.

**DISCUSSION**

Physical activity is a basic need for the growth of a child. During these physical activities, injuries to the face are one of the risks associated with it. Trauma to both primary and permanent dentition continues as a frequent dental problem. Trauma to the child dentition is an important issue, since fracture of one or more teeth, especially the anterior, may result in pain, loss of function, poor esthetics and psychological trauma. Traumatic dental injuries constitute a true dental emergency and require immediate assessment and management. Dental disease and treatment experience can negatively affect the OHRQoL of preschool children and their parents/caregivers. The prevalence of negative impact on quality of life of the child was 31.1% which is lower than the figure reported in previous Brazilian studies (49% to 69.3%).

In this study, out of 112 children who have been screened with fractured anterior teeth, 71 were boys and 31 were girls. In 102 children, trauma had occurred more than 6 months back and which is untreated. 93 of children fractured their anterior tooth/teeth due to fall while the others were due to collision with an object or violence. Only 3 children underwent the treatment for trauma to teeth.

Among the participants 66.1% had no history of dental visit whereas 31.3% had history of dental visit; 91.1% had dental trauma in <6 months whereas 3.6% had dental trauma in 3-6 months. This study suggests that there is no impact of traumatic dental injury on the quality of life of the children and their parents. This can be due to lack of awareness of the parents about the importance of trauma to the teeth. However, in rare cases of tooth avulsion or tooth discoloration and where there is pulpal involvement, there is a negative impact on the quality of life of the child as well as the parents. This study also showed that there is no influence of socioeconomic status on the management of dental trauma.

Traumatic dental injury is a cumulative condition and it is possible that the adaptation of children to this condition leads to the attenuation of the impact of traumatic dental injury on OHRQoL over time, thereby diminishing or even impeding the possibility of tooth injuries being detected by parents/caregivers.

The limitation of the study is its retrospective nature and the study was conducted only in 112 children. Further studies on large scale need to be conducted.

**CONCLUSION**

This study shows that there is no impact on the quality of life of the children and their parents. The parents and children should be given awareness on the importance of trauma to the teeth and its management.

**ACKNOWLEDGMENT**

This study was based on a short term project submitted by Dr. Naseeha Paduppugal, to the faculty of Department of Pedodontics and Preventive Dentistry, Yenepoya Dental College, Mangalore, Karnataka in partial fulfillment of requirements for receiving a degree in master of dental surgery.

**REFERENCES**


