**Study characteristics and the association between uncomplicated TDI and OHRQoL in children and adolescents.**

Table 1: Case controls studies

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| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **Firmino, Gomes et al. 2016 (69)**, Impact of oral health problems on the quality of life of preschool children: a case–control study, Brazil,population-based, n/N= 830/845 | Andreasen classification,Age – 3-5,Clinical examination | OHRQoLAge – 3-5,ECOHIS | Matched for sex, age and monthly household income |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life Impacted (Unadjusted OR)  | 95 % CI (P-value) |
| Absent | REF | REF |
| Present | 1.57  | 0.92-2.64 (0.0741) |

 | Pre-schoolers with uncomplicated TDI have greater odds to have their oral health related quality of life impacted than children without TDIs. |
| **Vieira-Andrade, Siqueira et al. 2015 (67)**, Impact of traumatic dental injury on the quality of life of young children: a case–control study, Brazil, population-based, n/N= 335/335 | Andreasen classification, Age – 3-5 Clinical examination | OHRQoL ,Age – 3-5, ECOHIS | Adjusted for: dental caries and malocclusion.Matched for age, gender, type of preschool and monthly household income.  |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life Impacted  (Adjusted OR)  | 95 % CI (P-value) |
| Absent | REF | REF |
| Present | 1.05  | 0.54-1.99 (0.8657) |

 | Uncomplicated TDI had no impact on the quality of life of preschool children. |
| **Bendo, Paiva et al. 2014 (68),** Oral health-related quality of life and traumatic dental injuries in Brazilian adolescents, Brazil, population-based, n/N= 1215/1215 | Andreasen classification, Age – 11-14Clinical examination | OHRQol,Age – 11-14CPQ11–14 | Adjusted for: dental caries and malocclusion.Matched for gender and type of school |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life Impacted  (Adjusted OR)  | 95 % CI (P-value) |
| Absent | REF | REF |
| Present | 0.64  | 0.38- 1.06 (0.0733)  |

 | Mild TDI and were not associated with negative impact on OHRQoL of adolescents. |

**Table 2:** Cross-sectional studies

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| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **(Soares, Barasuol et al. 2018) (87)**, The impact of crown fracture in the permanent dentition on children’s quality of life, Brazil population-based, n/N= 1589/1671 | Andreasen classificationAge – 8-10Clinical examination | OHRQoL Age – 8-10CPQ8-10 | Adjusted for: socio-demographic characteristics (monthly family income and caregivers’ schooling), characteristics of the child (gender, age) and clinical oral conditions (DMFT, DAI, overjet and TDI) |

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| TDI’s impact in QOL |
| TDI | Quality of Life Impacted PR | 95 % CI (p-value) |
| Without fracture | REF | REF |
| Enamel Fracture | 0.9 | 0.72-1.08 (0.254) |
| Enamel and dentin Fracture | 1.35 | 1.07-1.70 (0.009) |

 | Enamel fracture had no significant impact on children’ quality of life, while enamel-dentin fracture had a 35% higher prevalence of impact on the OHRQoL compared to those without TDI. |
| **Silva-Oliveira, Goursand et al. 2018 (2)** Traumatic dental injuries in Brazilian children and oral health related quality of life, Brazil, Population-based, n/N= 588/633 | Andreasen classification,Age – 12,Clinical examination | OHRQoL,Age – 12,CPQ11-14 | Adjusted for: overjet, gender, mother’s schooling, monthly household income, and type of school. |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life Impacted OR | 95 % CI (p-value) |
| Absence | REF | REF |
| present | Adjusted OR 1.47  | 1.004 -2.17 (0.0382) |

 | Uncomplicated TDI associated with impact in adolescent quality of life. |
| **Martins, Sardenberg et al. 2018 (70),** Dental caries are more likely to impact on children’s quality of life than malocclusion or traumatic dental injuries, Brazil, population-based, n/N= 1,204/1,439 | Andreasen classification,Age – 8 -10,Clinical examination | OHRQoL,Age – 8 -10,CPQ8-10 | Adjusted for oral conditions. |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life Impacted OR | 95 % CI (p-value) |
| Absence | REF | REF |
| present | 1.04  | 0.83-1.30 (0.756) |

 | The children with TDI did not show statistically significant difference on the CPQ8-10 when compared with those without oral conditions, probably because enamel fracture was the major finding. |

**Table 2:** (continued)

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| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **Ramos-Jorge, Sa-Pinto et al. 2017 (30),** Effect of dark discolouration and enamel/dentine fracture on the oral health-related quality of life of pre-schoolers, Brazil, preschool-based, n/N= 391/459 | Andreasen classification,Age – 3-5, Clinical examination | OHRQoL,Age – 3-5 ECOHIS | Adjusted for: characteristics of the child (gender and age), home, monthly household income, type of pre-school (public or private) and family provider) and clinical oral conditions (TDI and untreated dental caries) |

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| TDI’s impact in QOL |
| TDI | Quality of Life Impacted PR | 95 % CI (p-value) |
| Without fracture | REF | REF |
| Enamel Fracture | 1.30 | 0.79–2.16 (0.296) |
| Enamel and dentin Fracture | 1.89  | 1.22–2.92 (<0.001) |

 | Enamel–dentine fracture without pulp exposure were associated with a negative impact on the QoL of pre-schoolers. |
| **Neves, Perazzo et al. 2017 (71)** Perception of parents and self-reports of children regarding the impact of traumatic dental injury on quality of life, Brazil, school-based n/N= 769/769 | Andreasen classification, Age – 5,Clinical examinationby two dentists | OHRQoL, Age – 5,SOHO-5 | Adjusted for: child’s gender, schooling of parent/caregiver,monthly household income, number of residents in home, toothache, TDI, type of TDI, and number ofteeth with TDI |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life Impacted Adjusted PR | 95% CI (p-value) |
| Absence | REF | REF |
| Presence  | 0.66  | 0.44-0.98 (0.044) |

 | The occurrence of non-complicated TDI was seen as a protective factor for OHRQoL according to the reports of the children. |
| **Gonçalves, Dias et al. 2017 (72)**,Impact of dental trauma and esthetic impairment on the quality of life of preschool children, Brazil, school-based, n/N= 192/192 | Andreasen classification, Age – 2-5,Clinical examination | OHRQoL, Age – 2-5, ECOHIS | Potential confounding trauma and gender, age, quality of life and esthetic impairment. |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life Impacted RR | 95% CI (p-value) |
| Absence  | REF | REF |
| Presence  | 1.48 | 1.20-1.83 (0.0107) |

 | The presence of uncomplicated TDIs did not inﬂuence negatively on children’s quality of life,  |

**Table 2:** (continued)

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| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **Gomes, Perazzo et al. 2017 (73),** Oral Problems and Self-Confidence in Preschool Children, Brazil, school-based, n/N= 769/769 | Andreasen classification,Age – 5Clinical examination | OHRQoLAge – 5SOHO-5 | Not adjusted for confounders. |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Unadjusted Prevalence ratio | 95 % CI (p-value) |
| Absent  | REF | REF |
| Presence | 0.51 | 0.23-1.11 (0.091) |

 | Uncomplicated TDIs did not affected quality of life of preschool children |
| **Bomfim, Herrera et al. 2017 (88)**, Oral health-related quality of life and risk factors associated with traumatic dental injuries in Brazilian children: A multilevel approach, Brazil, population-based, n/N= 7328/7328 | Five oral health outcomes based on the original data set were usedas dependent variables: trauma 12, trauma 11, trauma 21, trauma 22,trauma 31, trauma 32, trauma 41 and trauma 42,Age – 12,Clinical examination | OHRQoL,Age – 12,Oral Impact on Daily Performance (OIDP) questionnaire | Adjusted for: gender, skin colour, education and family income.Education, a continuous variable ranging from 0 to 15, was assessed by estimating the number of years of complete education without retention. Self-reported skin colour was classified as white and non-white (black, mulatto and others). Monthly family income |

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| TDI’s impact in QOL |
| Enamel Fracture | Shame Adjusted OR | 95% CI (p-value) |
| Absent | REF | REF |
| Present | 1.27  | 1:05-1:53 (<0.05) |

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| --- | --- | --- | --- |
| Dentin/enamel fractures | Shame Adjusted OR | 95% CI (p-value) |  |
| Absent | REF | REF |  |
| Present | 1.89  | 1.30-2.74 (<0.05) |  |

 | Enamel fractures were risk factors for feelings of shame among children, whereas dentin/enamel fractures had higher probability of children having dissatisfaction with their teeth or for feeling embarrassed at smiling and messing up with the study.  |
| **Pulache, Abanto et al. 2016 (74)**, Exploring the association between oral health problems and oral health-related quality of life in Peruvian 11- to 14-year-old children, Peru, school-based, n/N= 473/513  | Andreasen classification,Age – 11-14,Clinical examination | OHRQol,Age – 11-14CPQ11–14  | Adjusted for: Child age, Child gender, Dental caries experience, TDI, Malocclusion, Tooth discolorationPossible observer bias |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Adjusted RR | 95 5 CI (P-value) |
| Absent | REF | REF |
| Present | 1.04  | 1- 1.09 (0.05) |

 | Presence of uncomplicated TDI doesn’t have an impact on children’s OHRQoL |

**Table 2:** (continued)

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| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **Feldens, Day et al. 2016 (89),** Enamel fracture in the primary dentition has no impact on children’s quality of life: implications for clinicians and researchers, Brazil, population-based n/N= 1683 /1683 | Andreasen classification, Age – 1-5,Clinical examination | OHRQoLAge – 1-5, ECOHIS | Adjusted for: age, dental caries, and malocclusion, Attendance at a dental professional and number of teeth. |

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| TDI’s impact in QOL |
| TDI | Quality of Life Impacted Adjusted PR | 95 5 CI (P-value) |
| Absent | REF | REF |
| Enamel fracture | 1.10 | 0.62–1.93 (0.753) |
| Other TDI | 1.87 | 1.39–2.52 (<0.001) |

 | Enamel fractures have no significant impact on young children’s quality of life. |
| **Freire-Maia, Auad et al. 2015 (84)**, Oral Health-Related Quality of Life and Traumatic Dental Injuries in Young Permanent Incisors in Brazilian Schoolchildren: A Multilevel Approach, Brazil, school-based, n/N= 1201/1,201 | Andreasen classification, Age – 8-10,Clinical examination | OHRQoL ,Age – 8-10,CPQ8–10 | Adjusted for: were gender, age,TDI, dental caries, anterior open bite, anterior maxillary overjet, median diastema, upper anterior crowding and lower anterior crowding, family income, residents in home, parents/caregivers’ level of education, type of school and SVI. |

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| TDI’s impact in QOL |
| TDI | Quality of Life Impacted (Adjusted OR)  | 95 5 CI (P-value) |
| Without TDI/mild trauma | REF | REF |
| Severe trauma | 2.54 | 1.21–5.31 (0.014) |

 | Severe trauma was significantly associated with negative impact on overall quality of Life. |

**Table 2:** (continued)

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| --- | --- | --- | --- | --- | --- |
| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **Abanto, Tello et al. 2015 (75)**, Impact of traumatic dental injuries and malocclusions onquality of life of preschool children, Brazil, population-based, n/N= 1215/1215 | Glendor classification,Age 1-4,Clinical examination  | OHRQoL,Age 1-4, ECOHIS | Adjusted for: dental caries, malocclusions, and socio-demographic conditions. |

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| TDI’s impact in QOL |
| TDI | Quality of life impacted (adjusted PR) | 95 % CI (P-value) |
| Absent | REF | REF |
| Uncomplicatedinjuries | 0.75 | 0.55–1.03 (0.068) |

 | The presence of uncomplicated TDI is not associated with worse OHRQoL of Brazilian preschool children. |
| **Viegas, Paiva et al. 2014 (31)**, Influence of traumatic dental injury on quality of life of Brazilian preschool children and their families, Brazil, school-based,n/N= 1632/1632 | Andreasen classification,Age – 5-6,Clinical examination | OHRQoL,Age – 5-6,ECOHIS | Adjusted for: dental caries experience |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of life impacted OR | 95 % CI (p-value) |
| Absence | REF | REF |
| Presence | 0.91  | 0.73-1.13 (0.3799)  |

 | The presence of uncomplicated TDI in Brazilian preschool children has no impact on quality of life of the children or their families.  |
| **Gomes, Pinto-Sarmento et al. 2014 (76)**, Impact of oral health conditions on the quality of life of preschool children and their families: A cross-sectional study, Brazil, preschool-based, n/N= 834/864 | Andreasen classification,Age – 3-5,Clinical examination | OHRQoL,Age – 3-5,ECOHIS | Adjusted for: sex, age, type of preschool, mother’s schooling, monthly household income, parent’s/guardian’s age, |

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| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of life impacted OR | 95 % CI (p-value) |
| Absence | REF | REF |
| present | adjusted OR 0.98 | 0.69- 1.38 (0.9002) |

 | Negative quality of life impact in children occurs in more serious TDI cases. |

**Table 2:** (continued)

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| --- | --- | --- | --- | --- | --- |
| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **Abanto, Tsakos et al. 2014 (77)**, Impact of dental caries and trauma on quality of life among 5- to 6-year-old children perceptions of parents and children, Brazil, Dental school-based, n/N= 335/394 | Glendor classification,Age – 5-6Clinical examination | OHRQoLAge – 5-6SOHO-5 | Adjusted for: caries and sociodemographic conditions (child’s gender, child’s age, family income) |

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| --- |
| TDI’s impact in QOL |
| TDI | Quality of life impacted RR | 95 % CI (P-value) |
| Absent | REF | REF |
| Uncomplicatedinjuries | 0.69  |  0.51–0.94 (0.019) |

 | TDIs are not associated with worse OHRQoL of 5- to 6-year-old children in terms of perceptions of both children and their parents. |
| **Siqueira, Firmino et al. 2013 (78)**, Impact of Traumatic Dental Injury on the Quality of Life of Brazilian Preschool Children, Brazil, population-based, n/N= 814/864 | Andreasen classification,Age – 3-5,Clinical examination | OHRQolAge – 3-5,ECOHIS | Adjusted for: dental caries and malocclusion |

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| --- |
| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of life impacted OR | 95 % CI (p-value) |
| Absence | REF | REF |
| Presence | 1.02  | 0.74 1.41 (0.8974) |

 | No association between TDI and OHRQoL. |
| **Dame-Teixeira, Alves et al. 2013 (85)**, Traumatic dental injury with treatment needs negatively affects the quality of life of Brazilian schoolchildren, Brazil, school-based, n/N=1528/1837 | O’Brien classification,Age – 14,Clinical examination | OHRQoL,Age – 14,CPQ11–14 | Adjusted for: gender, socioeconomic status, malocclusion, and dental caries |

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| --- |
| TDI’s impact in QOL |
| TDI | Quality of Life impacted RR | 95 % CI (p-value) |
| No TDI/No treatmentneed | REF | REF |
| Treatment need | 1.09 | 0.92–1.29(P < 0.05) |

 | 97% of the total TDIs in the study were uncomplicated TDI. TDI. Those with treatment needs had a negative effect in the OHRQoL in this population of 12-year-old schoolchildren |

**Table 2:** (continued)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **Viegas, Scarpelli et al. 2012 (79)**, Impact of Traumatic Dental Injury on Quality of Life Among Brazilian Preschool Children and Their Families, Brazil, preschool-based, n/N= 388 /413 | Andreasen classification,Age – 5Clinical examination | OHRQoLAge –5,ECOHIS | Adjusted for: clinical factors (malocclusion, dental caries, and developmental defects of enamel) and socioeconomic factors (household income and social vulnerability index) |

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| --- |
| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life impacted adjusted RR | 95 % CI (p-value) |
| No | REF | REF |
| Yes | 1.15 | 1.15-1.71 (0.001) |

 | Quality of life of the children and their families was not inﬂuenced by the presence of dental trauma |
| **Traebert, de Lacerda et al. 2012 (86)**, Impact of traumatic dental injuries on the quality of life of schoolchildren, Brazil, population-based, n/N= 403/409 | WHO criteria,Age – 11-14,Clinical examination | OHRQoLAge – 11-14,CPQ11–14 | Adjusted for: Gender, age, mother’s education level, father’s education level, whether fathers were currently working, the presence of TDI, caries experience in the anterior dentition, and presence of malocclusion |

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| --- |
| TDI’s impact in QOL |
| TDI | Quality of Life impacted adjusted PR | 95 % CI (p-value) |
| Absence | REF | REF |
| Presence | 1.79  | 1.16–2.76 (0.008) |

 | Traumatic dental injuries appear to affect schoolchildren’s OHRQoL. |
| **Piovesan, Abella et al. 2011 (80)**, Child Oral Health-related Quality of Life and Socioeconomic Factors Associated with Traumatic Dental Injuries in Schoolchildren, Brazil, school-based, n/N= 713/ 792 | O’Brien classification,Age – 12,Clinical examination | OHRQoLAge – 12,CPQ11–14 | Adjusted for: gender, parents’ educational level, household income, overjet and lip coverage. |

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| --- |
| TDI’s impact in QOL |
| TDI | Quality of Life impacted adjusted RR | 95 % CI (p-value) |
| Absence | REF | REF |
| Presence | 1.01  | 0.86 – 1.19 (0.84) |

 | TDIs are not related to children quality of life. Taken together, the low prevalence and severity of TDI (98.9% uncomplicated TDI) reported in this study could have inﬂuenced the lack of association between dental trauma and OHRQoL |

**Table 2:** (continued)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Author and year, Title, country, type of population and sample size n/N (analysed sample/total sample)** | **TDI diagnosis criteria, Age exposure measured in years. How TDI was measured?** |  **QOL measure, Age outcome was measured. Questionnaire used** | **Stratification, confounders/selection bias, reverse causation** | **Results** | **Findings by the authors** |
| **Aldrigui, Abanto et al. 2011 (81)**, Impact of traumatic dental injuries and malocclusions on quality of life of young children, Brazil, preschool-based, n/N= 260/305 | Andreasen classification,Age – 2-5,Clinical examination | OHRQoLAge – 2-5ECOHIS | Adjusted for: anterior malocclusions traits, caries, Age. |

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| --- |
| TDI’s impact in QOL |
| Uncomplicated TDI | Quality of Life impacted adjusted RR | 95 % CI (p-value) |
| Absence | REF | REF |
| Presence | 0.89  | 0.66 - 1.20 (0.441) |

 | Uncomplicated traumatic dental injuries have no negative impact on the OHRQoL of preschool children and their parents. |
| **Bendo, Paiva et al. 2010 (83)**, Association between treated/untreated traumatic dental injuries and impact on quality of life of Brazilian schoolchildren, Brazil, school-based, n/N= 1612 /1870 | Andreasen classification,Age – 11-14,Clinical examination | OHRQoLAge – 11-14, CPQ11-14 | Not adjusted. |

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| --- |
| TDI’s impact in QOL |
| TDI | Quality of Life Impacted (Unadjusted PR) | 95 % CI (p-value) |
| Absence | REF | REF |
| Untreated TDI | 0.6  | 0.2-1.6 (0.368) |

 | Untreated TDI (96% of the sample had uncomplicated TDI) was not associated with oral symptoms, functional limitations or emotional wellbeing |
| **Piovesan, Antunes et al. 2010 (82)**, Impact of socioeconomic and clinical factors on child oral health-related quality of life (COHRQoL), Brazil, n/N= 713/ 792 | O’Brien classification,Age – 12,Clinical examination | OHRQoLAge – 12,CPQ11–14 | none |

|  |
| --- |
| TDI’s impact in QOL |
| TDI | Quality of life impacted (Unadjusted RR) | 95 % CI (p-value) |
| Absence | REF | REF |
| Presence | 1.00  | 0.86–1.18 (0.91) |

 | Dental trauma was not associated with quality of life in adolescents |