Impact of Severe Dental Caries on Oral Health-related Quality of Life of Preschool Children

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Introduction. Dental disease and treatment experience can negatively affect oral health-related quality of life (OHRQL) of preschool aged children and their caregivers [Pahel et al., 2007].

The aim. This pilot study assessed the internal reliability of parental perceptions of children's oral health: The Early Childhood Oral Health Impact Scale-Reduced (ECOHIS SF-24) to measure the OHRQoL of preschool children and their families.

Materials and methods. Parents of 84 children (divided in two groups according to dmft index) answered the Early Childhood Oral Health Impact Scale (ECOHIS) on their perception of children's OHRQoL and socio-economic conditions. One dentist examined the severity of ECC, and children were categorised into: dmft O = caries free and dmft ≤ 2 = low severity in the first group and dmft ≥ 6 = high caries severity group. Children in high severity dmft group were collected among children having dental treatment under general anesthetic. New index PUFA/pufa was assessed, to evaluate the prevalence and severity of conditions resulting from untreated dental caries. The PUFA/pufa index records the presence of severely decayed teeth with visible pulpal involvement (P/p), ulceration caused by dislocated tooth fragments (U/u), fistula (F/f) and abscess (A/a). OHRQoL was measured through ECOHIS domain mean scores and the prevalence of impacts.

Results. There were 84 children 2–6 years of age who were eligible to participate in this pilot study. Mean age of participants was 3.9 (SD = 0.9) in both groups. Mean dmft in caries free and low severity group were dmft = 0.3 (SD = 0.6) and mean pufa = 0. In high severity mean dmft were 10.21 (SD = 2.9) and mean pufa = 6.3. The reduced questioner of (ECOHIS SF-17) consists of 17 items (internal reliability is α = 0.93). Oral Health (six items) α = 0.78. Functional Well – Being (four items) α = 0.84, Socio-emotional Well-being (three items) α = 0.9, Family impact (five items) α = 0.86.

In each domain and overall ECOHIS scores, the severity of ECC showed a negative impact on OHRQoL (p range from p < 0.01 – p < 0.0001).

The increase in the child's age, higher household crowding, lower family income and mothers' education were not significantly associated with OHRQoL.

Conclusions.
- The severity of ECC had a negative impact on the OHRQoL of preschool children and their patients.
- Reliability testing demonstrates that the ECOHIS–SF 24 profile is a sound instrument to measure oral health-related quality of life across preschool aged children.
- Family income and mothers' education were not significantly associated with lower OHRQoL scores.