Impact of early childhood caries on oral health-related quality of life: A systematic review and meta-analysis

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Abstract
Objectives: The aim of this study was to conduct a systematic review in order to assess the impact of early childhood caries (ECC) and its severity on Oral health-related quality of life (OHRQoL). Materials and Methods: An electronic search was conducted in MEDLINE, EMBASE, Cochrane, SciELO and Lilacs databases. The study eligibility criteria were primary studies published in English, Spanish or Portuguese that assessed OHRQoL in preschool children with dental caries using validated instruments. Two researchers independently performed the selection process and data extraction. The Effective Public Health Practice Project's Quality Assessment Tool was used for the quality assessment. Random effects models were used to estimate the pooled effect for continuous and categorical data. Results: Of 2,037 identified articles, thirty-five studies (37 articles) met the inclusion criteria. The methodological quality was judged mainly as moderate. Children with ECC were more likely to report any impact on OHRQoL than children without caries (OR: 1.99; 95% CI: 1.51–2.62; 6 studies). Severe ECC (dmft > 5) presented a higher effect (OR: 5.00; 95% CI: 3.70–6.74; 8 studies). Sensitivity analysis including only population studies showed uncertain results on the impact of ECC on OHRQoL (OR: 1.67; 95% CI: 0.99–2.82; I^2 = 95%). The symptom and psychological domains were the most affected (SMD: 0.60, 95% CI: 0.38–0.81 and SMD: 0.61, 95% CI: 0.37–0.85 respectively). Conclusions: ECC has a negative impact on the OHRQoL of both preschoolers and their families. However, its impact on OHRQoL is diluted when it is evaluated at population level.

Author keywords
dental caries; OHRQoL; preschoolers; quality of life