The level of good oral hygiene and mean value of OHI-index among children with cerebral palsy in Asia and Africa: A Systematic review and meta-analysis

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Abstract (300 word limit)

Background: Good oral hygiene is essential for the overall well-being and quality of life of children with cerebral palsy. However, there is a lack of comprehensive evidence regarding the level good oral hygiene and the mean value of the Oral Health Index among children with cerebral palsy, which hinders the development of targeted interventions and strategies to improve oral health outcomes.

Objective: The aim of this systematic review and meta-analysis was to collect and synthesis evidence on level of good oral hygiene and mean value of OHI-index among children with cerebral palsy in Asia and Africa.

Methods: PubMed, Scopus, Embase, Hinary, citation searching, and gray literature were retrieved to identity eligible articles through Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines. Data were extracted by standardized JBI data extraction format for personal hygiene and mean value of OHI-index. Then exported to STATA 14 for further analysis. I2 and Egger's tests were employed to estimate the heterogeneity and publication bias respectively. Subgroup analysis based on country, study design, year of publication, and the sample size was also examined.

Result: The random-effects model analysis revealed that the pooled estimate of good oral hygiene among children with cerebral palsy in Asia and Africa was 21.79% (95%CI: 14.17-29.42). Additionally, the analysis showed that the pooled mean value of the OHI-index among children with cerebral palsy in Asia and Africa was 1.85 (95%CI: 0.83-2.87). The study conducted separate analyses on the proportion of good oral hygiene in Africa and Asia, showing that the estimated proportion was 33.3% (95%CI: 15.1-51.4) for Africa and 11.7% (95%CI: 7.6-15.9) for Asia. Additionally, the study categorized the proportion good oral hygiene based on the study design, revealing that 22.9% (95%CI: 10.4-35.4) for case-control studies and 21.5% (95%CI: 12.6-30.4) for cross-sectional studies. Furthermore, the analysis considered the difference in publication year, the proportions good oral hygiene was found to be 23.2% (95%CI: 10.1-36.3) for publications before ≤2015 and 20.3% (95%CI: 11.4-29.3) for publications after >2015.

Conclusion: The level good oral hygiene was found to be low among children with cerebral palsy in Asia and Africa continent. Moreover, the mean value of OHI-index was found to be high among children with cerebral palsy in Asia and Africa continent. Ongoing monitoring, research, and evidence-based interventions are crucial for promoting improved oral hygiene practices and enhancing the oral health outcomes of children with cerebral palsy

Photograph



Image

Recent Publications (minimum 5)

1. Estimate the burden of malnutrition among children with cerebral palsy in Sub- Saharan Africa: a systematic review with meta-analysis.
2. Escalating the limit of median survival time and predictors of mortality among preterm neonates in Northwest Ethiopia, 2021: a 1-year prospective follow-up study
3. Impact of Respiratory Distress Syndrome and Birth Asphyxia Exposure on the Survival of Preterm Neonates in East Africa continent: Systematic Review and Meta-analysis:
4. The shadow challenges to improve the state essential newborn care practices in healthcare providers: evidence from a multicenter cross-sectional study in Ethiopia:
5. The effect of timely initiation of complementary feeding and vitamin A supplementation on acute malnutrition among children aged 6–59 months attending Hamusit Health Centre, Northwest Ethiopia, 2021: A cross-sectional study
6. Estimation of lifetime survival and predictors of mortality among TB with HIV co-infected children after test and treat strategies launched in Northwest, Ethiopia, 2021; a multicenter historical follow-up study:

I am an enthusiastic Ethiopian senior lecturer and researcher specializing in children, neonate, and maternal health. My dedication to continuous learning enables me to provide high-quality, evidence-based education to my students. As part of my position, I have a range of tasks includes writing grant proposals, mentoring MSc and BSc students in their research projects, conducting research, publishing articles, participating in research committees, establishing collaborations, presenting findings at conferences, providing clinical services, offering training on statistical models and study designs, and reviewing and providing feedback for esteemed academic journals. I have 80 published articles, with 15 as the principal investigator author. All articles were published in reputable journals indexed in pub-MED, SCOPUS, or MEDLINE. Among them, 55 were in Q1 journals, 14 in Q2 journals, and 11 in Q3 journals

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