Improving Oral Health Is a Way to Maintain Brain Health: A Scoping Review

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ABSTRACT

Introduction: This study reviews the literature on the relationship between oral and brain health. Poor dental care results in deteriorating oral health and increases the risk of developing other illnesses, such as candidiasis or pneumonia. Dental caries, periodontitis, and tooth loss are common oral health issues. Studies have suggested that oral cavity-related disorders may stem from endotoxins, chronic inflammation, and metastatic infection.

Search Strategy: In this scoping review, articles published between 2020 and 2023 on the relationship between oral health and brain health were examined using keywords such as “oral health”, “cognitive impairment”, “Alzheimer’s disease”, and “brain”. A total of 457 English articles were found through searches on PubMed, Scopus, Web of Science, Science Direct databases, and Google Scholar search engines. A general review of the quality of the articles was conducted, and duplicate articles were removed. Finally, 16 relevant articles were included in the study.

Results: The results can be divided into two categories: prevention of brain disorders and improving brain activities in oral hygiene. Learning deficits were caused by pathological alterations in the hippocampus and cerebral cortex brought on by molar extraction and a soft diet. An increased number of functional teeth decreases the chance of Alzheimer's disease. Concerns about dementia and activities to prevent dementia seemed to improve with higher oral health awareness. Cognitive function and systemic health status positively correlated with oral health status.

Conclusion and Discussion: Promoting dental health can reduce the impact of brain impairment. In addition to offering more specialized and focused health education on the link between dental and overall health, close collaboration between physicians, nurses, and dentists is necessary. It is also essential to acknowledge the valuable role that community health nurses play in schools and society regarding education and prevention.

Keywords: Alzheimer disease, Brain, Cognitive dysfunction, Oral health

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