

Poster Communication 28

## Mutual conditioning between nutrition and oral health in odontogeriatrics: Cross-sectional observational study

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### Abstract

**Background:** Oral health and nutrition exhibit a bidirectional relationship, particularly in older adults [1,2]. Oral cavity alterations may limit food intake, while dietary habits — especially frequency of consumption and sugar intake — directly affect caries prevalence and dental deterioration [2,3]. **Objective:** This study aims to explore the interaction between nutritional habits and oral health in institutionalized older adults, highlighting the mutual conditioning between these dimensions. **Methods:** A cross-sectional observational study was conducted with 67 older adults attending Day Care Centers in the Greater Porto region. Clinical indicators (Decayed, Missing, and Filled Teeth Index (DMF-T), number of decayed teeth), dietary habits (number of daily meals, fruit intake, consumption of sugary foods and beverages), and Oral Health-Related Quality of Life (OHRQoL) measures — including mastication difficulties, dietary satisfaction, and food limitations — were assessed. Body Mass Index (BMI) was also recorded. **Results:** Meal frequency analysis showed that 33% of participants consumed four meals/day, 20% three meals, 10% two meals, and 2% one or two meals. Mean daily intake was 2,12 servings of fruits/vegetables and 0,94 exposures to sugary foods [3,4,5]. Sugary beverages were consumed by 25,37% of participants, with 76,47% consumed outside main meals, and only 23,53% reported brushing afterward. Mean BMI was 26,8. Regarding OHRQoL, 29,85% reported very frequent difficulty chewing due to oral conditions, 19% occasional difficulty, and 34,32% occasionally limited the type or quantity of foods [4,5]. The mean DMF-T was 24,40, with an average of 2,36 decayed teeth per individual, reflecting the relationship between sugar intake and cumulative caries experience [1,2,4,5]. **Conclusions:** Findings demonstrate a bidirectional cycle: frequent sugar exposure combined with inadequate oral hygiene promotes caries and oral deterioration, reflected in high DMF-T and decayed teeth [1,2]. Conversely, oral problems constrain dietary choices, reducing fruit and vegetable consumption and potentially contributing to overweight and suboptimal nutritional status [3]. Self-reported OHRQoL measures indicate that oral health affects mastication, dietary satisfaction, and the diversity of food intake, reinforcing the reciprocal relationship. These results underscore the importance of integrated interventions addressing both diet and oral hygiene in geriatric populations [4,5].

**Keywords:** oral health; nutrition; geriatric dentistry

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