

INTENSITY OF DENTAL CARIES AND BODY MASS INDEX IN CHILDREN WITH PERMANENT DENTITION

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Introduction

Excess body weight in children is a global health problem influenced by multiple environmental and genetic risk factors. It results from an imbalance between energy intake through food and energy expenditure, leading to the storage of excess energy as fat. Poor nutrition is considered a primary factor contributing to obesity. Obesity and oral health share common risk factors, particularly unhealthy and unbalanced dietary habits.

Objective

Body Mass Index (BMI), defined as the ratio of weight to height is used as a tool to assess body weight status. The American Academy of Pediatric Dentistry recommends BMI as a diagnostic screening tool for identifying underweight, normal weight, overweight and obesity in children starting from the age of two.

Materials and Methods

The study included 71 children aged 12 years (26 girls and 45 boys). The control group consisted of 31 children without caries, fillings or extractions, while the experimental group included 40 children with caries experience. BMI was determined according to age and sex using charts provided by the Centers for Disease Control and Prevention. Participants were classified into four categories: underweight, normal weight, overweight and obesity. Dental health was assessed using the Klein–Palmer DMFT index.

Results

Most children had normal weight. Although variations in caries prevalence were observed across BMI categories, the associations were not statistically significant ($p>0.05$). The findings suggest a possible relationship between BMI and dental caries in permanent dentition.

Conclusions

These parameters may contribute to developing individualized caries risk assessment strategies and targeted preventive approaches.

Key words: BMI, dental caries, permanent dentition