

“CORRELATION BETWEEN DENTAL CARIES AND BODY MASS INDEX IN CHILDREN WITH PRIMARY DENTITION”

Weight gain in children is a global health problem with multifactorial environmental disorders and genetic risk factors, where there is an imbalance between energy intake through food and energy consumption, which allows the storage of excess energy as fat, which means that poor diet is the primary factor in obesity. What motivates us to plan and conduct this type of research was to provide data on how much it participates in the occurrence of dental caries, which is a serious and current health problem in our country among the entire population.

For the realization of the set goals for children are randomly selected from preschool schools in the city of Stip. The study included 74 children (35 females and 39 males) aged 4-6 years. We performed the dental examinations using portable lamps with power of 60 W with white-blue spectrum and sterilized periodontal probes No. 5 and a mirror. To avoid visual fatigue, a maximum of 15 children were observed during one day. We conducted the examinations after the verbal consent of the respondents and the parents. The anthropometric measurements we took into account were body weight and height and according to the guidelines of the World Health Organization (WHO) from 2002 we realized them in the following few steps. The respondents were lightly dressed, we made the measurements with the help of a standardized digital scale where the weight under and over 500 grams was rounded to the nearest number. At the time of determining the height, the respondents were without shoes and we determined it with the help of height measuring tapes graduated in centimeters and meters.

$$\text{Body Mass Index} = \frac{\text{Weight (in kg)}}{\text{Height}^2 \text{ (in m)}}$$

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We realized the interpretation according to age and gender with the help of an ITM scheme and using tables provided by the Center for Disease Control and Prevention and specially prepared WHO software (Anthro Plus v1.0.4) for that purpose which allows calculation of body weight data in children and adolescents. The results of the study related to body mass index indicate that in the experimental group of a total of 43(58.10%) children, 5(6.80%) children were malnourished, 23(31.10%) children were of normal weight, 9(12.20%) were overweight, 6(8.10%) children were overweight. In the control group (without dental caries) out of a total of 31(41.90%) children, 1(1.40%) children were malnourished, 18(24.30%) children were of normal weight, 5(6.80%) were overweight and 7(9.50%) children were found to be overweight.

There is no significant correlation between children's body weight and the presence of dental caries for Pearson Chi-square = 2.80 and $p > 0.05$ ($p = 0.42$). In determining the significance of the contribution to the presence of dental caries on each component, it was found that the greatest impact has malnutrition (Wald = 2.06 / $p > 0.05$ ($p = 0.15$), weight gain (Wald = 0.89 / $p > 0.05$ ($p = 0.35$) and the weakest is the influence of normal weight (Wald = 0.39 / $p > 0.05$ ($p = 0.53$).