

Body mass index risk for the development of dental caries of 12 year-old pupils

Nashkova S*, Iljovska S**, Dimova C*, Alimani-Jakupi J**, Zarkova-Atanasova J*

* Faculty of Medical Sciences – Dental Medicine; University “Goce Delcev” Stip, FYROM

**Faculty of Dentistry; University “Ss. Cyril and Methodij”, Skopje, FYROM.



Obesity and the oral health have common risk factors, with a special attention given to the unbalanced diet.

Introduction: The prevalence of obesity in children was our challenge. We focused our objective on determining the relationship between high weight and the presence of dental caries.

**Materials and methods: Our research included a total of 100 pupils from both genders (30 -control group without DMF and 70 -an experimental one with DMF) at the age of 12 from the local elementary schools in Shtip. The determination of BMI in % was conducted following the patterns of BMI and using the tables provided by the Centre of Disease Control and Prevention and the specialized software of the WHO (AnthroPlus v1.0.4) which enables to estimate the data for the body weight of children and adolescents by generating values given in % which determines the category of BMI in charts. The examinees were divided in 4 categories in the following manner: low weight BMI <.5%, normal weight = 5< BMI <25%, risk for high weight 25< BMI <30%, obese = BMI:>30%
The presence or absence of caries process was noted using the Klein – Palmer index.**

Results: There is no significant relation between the body mass index in children and the presence of dental caries for Pearson Chi-square=0,92 and $p>0,05$ ($p=0,82$).

In determining the significance of the contribution for the presence of dental caries in every component, where the increased body weight was taken as a reference category, it has been noted that in the experimental group the greatest influence is in the increased weight group (Wald=0,76 / $p>0,05$ ($p=0,38$), then in the normal weight (Wald=0,23 / $p>0,05$ ($p=0,63$) and with the least influence found in the low weight group (Wald=0,01 / $p>0,05$ ($p=0,92$).

In the presented distribution of data concerning the weight in children with permanent dentition for the correlation of the presence of dental caries, for the Fisher's Exact Test=1,08 and $p>0,05$ ($p=0,840 / 0,826-0,845$) showed no significant difference between the two groups.

Conclusion: The relevance of the high or low levels of BMI for the development of dental caries still remains. It should be pointed out that there are various factors for the increased index of caries in children and a significant one is still the high BMI and the low socio-economic background.