

“ „CARIES RISK ASSESSMENT IN CHILDREN WITH PRIMARY AND PERMANENT DENTITION”

The most massive disease in the history of mankind with a classic pandemic feature is dental caries, which is a chronic disease of the hard tooth tissues, with a progressive centripetal course, irreversible nature, to which individuals are susceptible throughout their lives due to which causes pronounced social, medical and economic problem. For the realization of the set goals for the doctoral thesis, children were randomly selected from the preschool and primary schools in the city of Stip.

The research included 145 respondents, namely 74 children (35 females and 39 males) aged 4 years and 71 children (26 females and 45 males) aged 12 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. Based on the data obtained from the clinical examination, we determined the intensity (presence / absence) of dental caries (WHO, Geneve, 1997) which we noted and interpreted as follows: for primary dentition the interpretation was ≤ 3 - low caries risk, 4-6 - moderate caries risk, ≥ 7 - high caries risk. For permanent dentition the interpretation was: 0.0-0.9 - very low caries risk, 1.0-2.4 - low caries risk, 2.5-3.8 - moderate caries risk, 3.9-5.5 - high caries risk, ≥ 5.6 - very high caries risk.

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The results related to primary dentition show that in the experimental group of 43 (58.10%) children, 15 (20.30%) had a low caries risk (≤ 3), 20 (27.00%) had a moderate caries risk (4-6), 8 (10.80%) with high caries risk (≥ 7). In the control group all 31 (41.90%) had a low caries risk (≤ 3). In the displayed distribution of data relating to the intensity of dental caries in children with primary dentition, for Fisher's Exact Test = 36.52 and $p < 0.001$ ($p = 0.000 / 0.000-0,000$) there is a significant difference between the two groups. Data on the intensity of dental caries in children with permanent dentition show that in the experimental group of 40 (56.30%) children, 32 (45.10%) children had a low caries risk (1.0-2.4), 1 (1.40%) child had a moderate caries risk (2.5-3.8), 7 (9.90%) children had a high caries risk (3.9-5.5).

In the control group (without dental caries) all 31 (43.70%) children had a very low caries risk (0.0-0.9). In the displayed distribution of data relating to the intensity of dental caries in children with permanent dentition, for Fisher's Exact Test = 85.30 and $p < 0.001$ ($p = 0.000 / 0.000-0,000$) there is a significant difference between the two groups. Decades of research on the evaluation and identification of children at high risk of caries and discovering the cause of them is of great importance and it has been proven that several risk factors often act simultaneously on the occurrence of dental caries.