

ORAL HYGIENE INDICES AND HARD DENTAL TISSUES CONDITION IN 9-16-YEAR OLD SCHOOLCHILDREN WITH DIFFERENT EDUCATION LOAD

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Abstract. *Over the last years scientific literature has provided the data concerning the impact of different educational forms on the health of schoolchildren. However, according to the data, provided by the current literature, there is no evidence confirming the impact of different educational load on the oral health of schoolchildren.*

That is why the aim of our research was to study oral hygiene state and hard dental tissues condition in 9-16-year old schoolchildren, who are enrolled in different education programs (children enrolled in general education program and schoolchildren enrolled in advanced study of foreign languages).

Keywords: *oral hygiene, tooth decay, various training programs, schoolchildren, children.*

Due to insufficient exploration degree of new methods of study and their impact on schoolchildren, it is necessary to investigate health condition of children in new learning environment. Comprehensive integrated study and hygienic reasoning of new education systems are required to eliminate their negative impact on child's body [1, 4, 5].

The study of education load impact, created by different education systems shows that the increase in intellectual activity volume has an influence on schoolchildren. The influence of increased load is often adverse [1, 5]. The most common data deal with negative impact of an increased educational load (lyceums, gymnasium schools, collegiums, classes with enhanced studying of particular subjects) on the impact of schoolchildren [1, 2, 3]. In the first instance this refers to

impairment of vision, musculoskeletal diseases, gastrointestinal disorders, psychosomatic disturbances etc. [4, 5].

However, according to the data, provided by the current literature, there is no evidence confirming the impact of different educational load on the oral health of schoolchildren.

The aim of our research was to investigate oral hygiene state and hard dental tissues condition in 9-16-year old schoolchildren, who are enrolled in different education programs (children enrolled in general education program and schoolchildren enrolled in advanced study of foreign languages).

Materials and methods: The research was carried out in classes with different educational load. The authors examined 90 9 – 16-year-old children without somatic diseases. This group included 60 schoolchildren who were enrolled in collegium program with enhanced study of foreign languages (first group, the main one) and 30 schoolchildren enrolled in traditional secondary education program (second group, the control one). The children were examined by standard procedure (WHO).

Index assessment for oral hygiene determination was carried out by two methods: hygiene index according to Fedorov-Volodkina and simplified oral hygiene index (OHI-S) J.C. Green, J.R. Vermillion.

Hard dental tissues were examined according to DEF-df index which analyzes the presence of decayed teeth both in deciduous bite (d) and in the permanent bite (D), the number of filled teeth in deciduous (f) and permanent (F) bite and also previously extracted teeth (excluding normal teeth shedding) (E).

Results and their discussion.

Hygiene index determination according to Fedorov-Volodkina shows that schoolchildren have different oral hygiene rates, as for instance, the rate from 1 to 1,5, which is typical for good oral hygiene, was observed in 70,0% schoolchildren, enrolled in board education program and in 80,0% children, enrolled in general education program. The index in 6,3% children in the first group and in 17,4% in the second one was found to be satisfactory. The index of unsatisfactory hygiene, which amounts from 2,1 to 2,5 points, was observed in 15,7 % board education program

schoolchildren and in 2,6 % general education program schoolchild. The index comprising from 2,6 to 3,4 points, which implicates poor oral hygiene, was found in 8,0% children of the first group. This index was completely absent in the second group children. Extremely poor oral hygiene (more than 3,5 points) was not observed neither in the first nor in the second group.

Simplified oral hygiene index data (OHI S) J. C. Green, J. R. Vermillion (Oral Hygiene Indices Simplified) revealed a similar pattern. The majority of children, 80,0% children of the first group and 90,0% children of the second group have low score (0-0,6 points), which confirmed good oral hygiene. Middle level, i.e., satisfactory oral hygiene (indices from 0,7 to 1,6 points) was observed in 10,8% board education program schoolchildren and 10,0% general education program schoolchildren. Unsatisfactory oral hygiene index was observed in 6,2% board education program schoolchildren. Extremely poor oral hygiene was found in 3,0% schoolchild of the same group, his index amounted for 2,6 points. As for general education program schoolchildren, they did not show neither unsatisfactory nor poor oral hygiene.

DEF-df index rate from 0 to 2 was determined in 67,5% schoolchildren with enhanced study of foreign languages and in 54,0% of schoolchildren enrolled in basic program. DEF-df index score from 3 to 5 was observed in 28,2% of first group schoolchildren, and in 30,6% of second group schoolchildren. And, correspondingly, DEF-df index rate more than 6 points was seen in 4,3% of schoolchildren with a higher educational load in comparison to 15,4% of schoolchildren with ordinary load.

Conclusion:

1. The results of this examination of schoolchildren with different educational load provide data that the children with enhanced study of particular subjects have healthier teeth than the children enrolled in standard school program.

2. The obtained results give a possibility to draw a conclusion that board education program schoolchildren are prone to a higher risk of oral diseases development, first of all such as gingivitis and caries.

Reference.

1. Baranov A.A. Medical and social aspects of adaptation to the conditions of modern teenagers education, training and work / / A.A. Baranov , Kuchma V.R., Sukharev L.M. / Guide for physicians . - M., 2007.
2. Kildiyarova R.R. Foundations for Children's Health / R.R. Kildiyarova , V.I. Makarova , Y.F. Lobanov // tutorial . - GEOTAR Media . - 2013. - P. 328.
3. Baranov A.A. Basic laws morphofunctional development of children and adolescents in modern conditions [Text]: scientific publication / A.A. Baranov [etc.] / / Proceedings of the Russian Academy of Medical Sciences . - 2012 . - 12. - P. 35-40 .
4. Kuchma V.R. Hygienic evaluation of the influence of environmental factors on the functional performance of schoolchildren [Text]: scientific publication / V.R. Kuchma, Milushkina O.Y., Bokareva N.A., Detkov V.Y. // Hygiene and sanitation. - 2013 . - 5 . - P. 91-94 .
5. Chermit K.D. University environment and the health of the educational process [Text] / K.D. Chermit // Higher Education in Russia. - 2011 . - N 2 . - P. 60-65.

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