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## Results of the Prevention Program Dental Diseases in School-Age Children

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ABSTRACT

This article describes the experience of conducting an educational program on oral care in Uzbekistan and the results of its implementation.

**Keywords:**

Prevention, oral hygiene, sanitary and hygienic education

**Introduction:** The global program to prevent the increase in dental morbidity is based on the principles proclaimed by WHO and FDI, the main stages of which are public health education in the field of dentistry, the expansion of preventive dental services, and the motivation of the population to maintain oral health [1; 2; 3; 4]. Increasing dental morbidity in Uzbekistan poses a real threat, primarily to the health of the younger generation [5; 6]. In order to improve the health status of the population in the field of dentistry in accordance with the principles proclaimed by WHO and FDI, in our republic, the Uzbekistan Dental Association is conducting a School Educational Program (SHEP) to teach oral hygiene [7; 8]. Purpose of the study. To study the effectiveness of the School Educational Program on oral care for children in Uzbekistan using fluoride-containing toothpastes.

**Materials and research methods.** To determine the level of knowledge of oral hygiene, a survey of children was conducted before the start of the program, a year and a half and 3 years after the start of the program (a total of 510)

questionnaires. Sanitary culture on the prevention of oral diseases was studied in 55 parents of primary school children in Baku and 75 teachers Section 1. Clinical medicine 14 primary classes. In order to study the preventive and clinical effectiveness of the action of fluoride-containing toothpastes on the condition of the teeth and tissues of the oral cavity in children, the task was set to study the initial data on the dental status of 909 younger schoolchildren (7–10 years old). Children who participated in clinical studies on the preventive efficacy of fluoride toothpaste (total 909 people) were divided into groups in the following order: trained parents at home (supervised hygiene group CG). The second group of schoolchildren also brushed their teeth 2 times a day with fluoride-containing toothpaste, but without control (the group of uncontrolled oral hygiene of the GCG). The third group - 120 schoolchildren (comparison group GS) were once trained in oral hygiene, but their further hygiene and used toothpastes were arbitrary and uncontrolled. The children participating in the clinical study underwent a

thorough examination of the state of the oral cavity with filling out the cards recommended by WHO (Geneva, 1997). The condition of the teeth was studied with the determination of the prevalence and intensity of caries (KPU, KPU + kp indices and their components), the GreenVermillion Hygiene Index (OHI-S), the CPI index and its components. Examinations of the same children were carried out every 6 months by a dentist. Diagnosis of dental caries, periodontal diseases, determination of clinical indices were carried out by methods generally accepted in clinical examinations. It should be noted that the content of fluoride in the drinking water of Baku in all three studied groups was approximately the same and amounted to 0.3–0.5 mg/l. The obtained digital data were subjected to statistical processing by methods of medical statistics. To quantify the difference between the variation series, the parametric Student's t-test was used, for frequency analysis, Pearson's test of agreement -  $\chi^2$ . Calculations were carried out on a computer using an EXCEL spreadsheet.

**Results of own researches.** The comprehensive program proposed by us consists of 2 areas - pedagogical and medical. The task of the pedagogical stage of the program was to familiarize primary school children with the anatomy and physiology of the oral cavity, with the main dental diseases, methods for detecting such diseases, as well as methods for their prevention. The main emphasis in teaching was on the need for regular hygienic care of the oral cavity, teaching proper brushing of teeth, methods of preventing diseases of the oral cavity and rational nutrition. For the implementation of the pedagogical stage of the comprehensive program for the prevention of dental diseases, we proposed teaching aids approved by the Ministry of Education of the Republic of Uzbekistan. The initial levels of knowledge of oral hygiene in children aged 7-8 years were low. At the same time, 30% of boys and 50% of girls believed that teeth should be brushed only once a day. 50% of boys and 40% of girls did not know which toothpaste to choose and what kind of toothbrush should be. The initial levels of knowledge of oral hygiene in

children aged 8-9 and 9-10 years also turned out to be low. The pedagogical stage of the comprehensive preventive program had a positive impact on the level of knowledge of oral hygiene. After 3 years, the level of hygienic knowledge in boys increased to 12.5 points, in girls to 11.5 points; in children aged 8-9 years, knowledge was evaluated equally by 12 points, respectively, for boys and girls. The same dynamics was noted in children aged 9-10 years. The study of the initial dental status in 302 schoolchildren of 7-9 years old first graders made it possible to establish a high prevalence of the main dental diseases. The prevalence of dental caries was  $91.64 \pm 0.83\%$ , the intensity of caries was  $5.83 \pm 0.31$ . Inflammatory diseases of periodontal tissues were detected in  $55.45 \pm 1.50$  schoolchildren. The majority of children ( $73.18 \pm 1.33\%$ , according to OHI-S) had poor oral hygiene. The positive effect of the educational program was obtained in relation to the reduction in children of the 1st group (studied according to the program), compared with schoolchildren of the 2nd group (not trained), the prevalence of caries in permanent teeth by  $19.95\%$  ( $49.60 \pm 1.83\%$  and  $69.55 \pm 2.43\%$ ,  $p < 0.001$ ). The intensity of caries in permanent teeth is also decreased in children of the 1st group, compared with schoolchildren of the 2nd group, by 1.8 times ( $0.79 \pm 0.11$  and  $1.42 \pm 0.21$  according to KPU,  $p < 0.001$ ). The number of children with inflammatory periodontal diseases also decreased in the 1<sup>st</sup> group, compared with the 2nd group, 1.7 times. Thus, the introduction of a program conducted by dentists and teachers among young children showed its high efficiency in improving sanitary and hygienic knowledge and reducing dental morbidity in schoolchildren. The study of preventive and clinical The effectiveness of the action of fluoride-containing toothpastes on the condition of the teeth and tissues of the oral cavity in children was studied in 909 junior schoolchildren (7-10 years old). We studied the effect of fluoride-containing toothpaste on the main indicators of caries and periodontal diseases, the state of oral hygiene, as well as on the processes of enamel remineralization. Interesting results were obtained when studying the dynamics of the incidence of dental

caries in children in terms of its prevalence, differences between HS and the CG of the oral cavity in terms of the increase in the prevalence of caries was 58%. The most important indicator of the effectiveness of preventive work - the reduction in the increase in the prevalence of caries - in relation to the HS was 41.57% at different times, and in relation to the NCG - 3% - 52%. The most important indicator - the reduction in the increase in the intensity of caries - differed most pronouncedly between the control groups (GS, NKG) and controlled oral hygiene. Already after 6 months, the reduction in caries growth was 17%. Subsequently, the figure exceeded 50% and did not go lower. Interesting results of studying the state Oral Hygiene Index, in GS for all time research index of hygiene during the entire period was unsatisfactory (2.13-2.02), which indicates an unsatisfactory state of oral hygiene in schoolchildren. The exact opposite of hygiene oral cavity developed in the group with CG. Already through 6 months after the start of the study, the level of hygiene in the group increased, which resulted in a decrease in the index from 2.20 to 1.29, and after 36 months to 0.44. In connection with the high results obtained by us with controlled oral hygiene mouth, one would also expect a high efficiency of fluoride-containing toothpastes on the condition of the periodontium in schoolchildren. The prevalence of periodontal diseases decreased by 42%, while in the group of uncontrolled oral hygiene it decreased by only 6.0%, and in the comparison group only by 2.5%. Thus, clinical studies conducted over 3 years strongly suggest that the use of fluoride-containing toothpaste in the School Dental Prevention Education Program has a very rapid effect on the growth and development of dental caries and periodontal disease. Uncontrolled oral hygiene proved to be ineffective. Even the emerging positive changes were achieved only after 18 months. Therefore, for the prevention and treatment of diseases periodontal disease in schoolchildren with the help of fluoride-containing toothpastes, only controlled oral hygiene can be recommended.

### Conclusions:

1. A high prevalence of caries among primary school students in Baku was established -  $91.64 \pm 0.83\%$ , inflammatory periodontal diseases were detected in  $55.45 \pm 1.50\%$  of children, and an unsatisfactory level of sanitary culture was revealed in children of primary school age and their parents;
2. As part of a comprehensive program for the prevention of dental diseases, teaching aids for children have been developed, parents and teachers;
3. School Education Program Prevention of dental diseases is a modern effective method for the prevention of dental caries and periodontal diseases, which makes it possible to reduce the increase in the intensity of caries by 2 times within 2-3 years, and periodontal diseases - by 2-4 times;
4. Controlled oral hygiene with the use of fluoride-containing toothpastes showed pronounced results in the prevention of dental caries: by reducing the growth the prevalence of the incidence of caries up to 57%, by reducing the increase in the intensity of caries 48-57%;
5. The high preventive efficacy of controlled oral hygiene using fluoride-containing toothpaste is expressed in improving the state of oral and periodontal hygiene: for 3 years, the Hygiene Index decreased from 2.2 to 0.44, the number of sextants with bleeding decreased from  $5.47 \pm 0.49$  to  $1.85 \pm 0.12$ , and the number of sextants with tartar decreased from  $0.16 \pm 0.01$  to  $0,06 \pm 0.01$ .

### Literature

1. Иргашев Ш., Норбутаев А., Исламова Н. Эффективность энтеросгеля при лечении генерализованного пародонтита у ликвидаторов последствий аварии на черновыльской АЭС //Общество и инновации. – 2020. – Т. 1. – №. 1/S. – С. 656-663.
2. Maxzuna U., Zараfruz B. IMPROVING THE PROVISION OF THERAPEUTIC DENTAL CARE TO PREGNANT WOMEN //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 618-623.

3. Norbutaev A. et al. Results of the effect of complex treatments on perodonot microcirculation in child periodontitis with iron deficiency //European Journal of Molecular & Clinical Medicine. – 2020. – Т. 7. – №. 2. – С. 2020.
4. Назарова Н., Исламова Н. Postmenopauza davridagi ayollarda stomatologik kasalliklarining klinik va mikrobiologik ko'rsatmalari va mexanizmlari //in Library. – 2022. – Т. 22. – №. 1. – С. 204-211.
5. Zarafuz B., Hekmat K. H. A. S. MANIFESTATION OF HERPATIC INFECTION IN THE ORAL CAVITY AND THEIR TIMELY ELIMINATION //Spectrum Journal of Innovation, Reforms and Development. – 2022. – Т. 10. – С. 47-52.
6. Ruziyeva K. A., Burhonova Z. K. K. Complex Application Of Magnetic Laser Therapy And Propolis Tincture For The Prevention And Treatment Of Chronic Recurrent Aphthous Stomatitis //The American Journal of Medical Sciences and Pharmaceutical Research. – 2021. – Т. 3. – №. 06. – С. 127-130.
7. Shamsiev M., Norbutaev A., Nazarova N. Dynamics of changes in the functional state of hard tissues in patients with hemophilia //Science of the 21st century: society and digitalization. – 2021. – Т. 1. – №. 02. – С. 84-86.
8. Qobilovna B. Z., Azamatovich B. M. MANIFESTATION OF SYMPTOMS IN THE ORAL CAVITY IN PATIENTS WITH TUBERCULOSIS INFECTION //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 402-407.
9. Qobilovna B. Z., Hekmat K. H. A. S. CLINIC AND TREATMENT OF ACUTE AND RECURRENT HERPATIC STOMATITIS IN YOUNG PATIENTS //Spectrum Journal of Innovation, Reforms and Development. – 2022. – Т. 10. – С. 40-46.
10. Berdikulovich N. A. TREATMENT AND EFFECTIVENESS OF DISEASED PERIODONTITIS WITH IRON DEFICIENCY //Asian journal of pharmaceutical and biological research. – 2022. – Т. 11. – №. 2.
11. Bakhtiyorovna M. U. MODERN METHODS PREVENTION AND TREATMENT POSTOPERATIVE HYPERESTHESIA IN ORTHOPEDIC DENTISTRY //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 12. – С. 1104-1108.
12. Berdikulovich N. A. SIGNS OF IRON DEFICIENCY IN THE ORAL CAVITY //Thematics Journal of Education. – 2022. – Т. 7. – №. 3.
13. ИСЛАМОВА Н. Б., НОРБУТАЕВ А. Б. ПРОФИЛАКТИКА И ЛЕЧЕНИЯ КАРИЕСА У ПОСТОЯННЫХ ЗУБОВ //ЖУРНАЛ БИОМЕДИЦИНЫ И ПРАКТИКИ. – 2022. – Т. 7. – №. 1.
14. Nizomitdin A. I. THERAPEUTIC EFFECT OF IMPROVED ENAMEL SURFACE PREPARATION TECHNIQUE IN THE TREATMENT OF ACUTE INITIAL CARIES OF TEMPORARY TEETH IN CHILDREN //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 440-445.
15. Zubaydullaeva M. A., Rakhimberdiev R. A., Norbutaev A. B. CHANGES IN THE SPECTRUM OF SALIVARY CYTOKINES IN RECURRENT STOMATITIS IN CHILDREN //Asian journal of pharmaceutical and biological research. – 2021. – Т. 10. – №. 3.
16. Qobilovna B. Z. INTEGRATIVE APPROACH TO THE TREATMENT OF DISEASES OF THE ORAL MUCOSA USING LASER THERAPY //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 408-412.
17. Bakhtiyorovna M. U. CAUSES OF REMOVABLE DENTURE BREAKS AND ALLERGIC REACTIONS //Spectrum Journal of Innovation, Reforms and Development. – 2022. – Т. 10. – С. 374-377.
18. Qobilovna B. Z. GENERAL CHARACTERISTICS OF RECURRENT HERPATIC STOMATITIS IN THE MOUTH //Web of Scientist: International

- Scientific Research Journal. – 2022. – Т. 3.  
– №. 12. – С. 162-168.
19. Ortikova N., Rizaev J. THE PREVALENCE AND REASONS OF STOMATOPHOBIA IN CHILDREN //Euro-Asia Conferences. – 2021. – Т. 5. – №. 1. – С. 182-183.
20. Makhmudova U. B. THE EFFECTIVENESS OF THE USE OF PARAPULPAR PINS (PPP) WHEN RESTORING DEFECTS IN THE CROWN PART OF THE FRONTAL TEETH //Asian journal of pharmaceutical and biological research. – 2022. – Т. 11. – №. 2.
21. Ортикова Н. POLITICAL ELITE AS A SCIENTIFIC PROBLEM //МЕЖДУНАРОДНЫЙ ЖУРНАЛ КОНСЕНСУС. – 2021. – Т. 2. – №. 1.
22. Alimdjanovich R. J., Khairullaevna O. N., Normuratovich N. A. CORRECTION OF PSYCHOLOGICAL STRESS IN CHILDREN WITH NON-PHARMACOLOGICAL METHODS OF DENTAL ADMISSION //Archive of Conferences. – 2021. – С. 108-114.
23. Bustanovna I. N. ASSESSMENT OF CLINICAL AND MORPHOLOGICAL CHANGES IN THE ORAL ORGANS AND TISSUES IN POST-MENOPAUSE WOMEN //Thematics Journal of Education. – 2022. – Т. 7. – №. 3.
24. Shavkatovich O. R., Nizomitdin A. I. EFFECTIVENESS OF THE USE OF OSTEOPLASTIC MATERIAL" STIMUL-OSS" IN SAMARKAND //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 612-617.
25. МЕЛИБАЕВ Б. А., МАХМУДОВА У. Б. ЭФФЕКТИВНОСТЬ ПРИМЕНЕНИЯ ПАРАПУЛЬПАРНЫХ ШТИФТОВ (ППШ) ПРИ ВОССТАНОВЛЕНИИ ДЕФЕКТОВ КОРОНКОВОЙ ЧАСТИ ФРОНТАЛЬНЫХ ЗУБОВ //ЖУРНАЛ БИОМЕДИЦИНЫ И ПРАКТИКИ. – 2022. – Т. 7. – №. 1.