Dental Public Health

The role of community dental programs in enhancing dental health

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Роля на обществено базираните програми за подобряване на денталното здраве

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Summary:

The spread of oral diseases is a serious problem in modern society. They affect a huge part of the world's population, have negative effect on the quality of life of those affected (cause low self-esteem, pain, discomfort) and bring along serious economic consequences. Establishing community dental programs is one major step toward addressing the problem. Focusing on specific population groups with an emphasis on prevention, prophylaxis and health education serve as the primary means of improving dental health at the population level. Proper organization and implementation of public dental health programs, as well as their adaptation to the constantly changing health needs of the population, is key to achieving long-lasting results.

Aim: *To examine trends in the development and implementation of community-based dental programs*

Materials and Methods: *A review of the literature on the implementation of community-based dental programs and their impact on dental health.*

Keywords: *community dental programs, dental health, public health*

Резюме:

Оралните заболявания са сериозен проблем в съвременното общество . Те засягат огромна част от световното население, влияят негативно върху качеството на живот на засегнатите (предизвикват лошо самочувствие, болка, дискомфорт) и носят със себе си сериозни икономически последствия. Създаването на обществени дентални програми е една от главните стъпки към справяне с проблема. Фокусът върху отделни групи от населението с акцент върху превенция, профилактика и здравна просвета служат като основно средство за подобряване на денталното здраве на популационно ниво. Правилното организиране и прилагане на програмите за обществено дентално здраве, както и адаптирането им към константно променящите се здравни нужди на населението е ключово за постигане на дълготрайни резултати.

Цел: *Да се проучат тенденциите в развитието и прилагането на обществено базирани дентални програми*

Материали и методи: *Анализ на литературата за приложението на обществено базирани дентални програми и влиянието им върху денталното здраве.*

Ключови думи: *обществено базирани дентални програми, дентално здраве, обществено здраве*

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Oral health is an integral part of public health, as oral diseases (dental caries, periodontitis, oral cancer) are widespread and have significant impact on the individual and the society as a whole. By implementing prevention and prophylaxis, risk factors like poor oral hygiene, dietary habits, smoking, and alcohol consumption can be positively impacted [1, 2]

The definition of public health is "the science and practice of preventing oral disease, promoting oral health, and improving the quality of life through the organized efforts of society" [1, 3, 4]. Oral health is not only limited to the health of the teeth, but is also related to the overall health and well-being of the body. [5, 6] Oral diseases, unfortunately, remain one of the most widespread on Earth. [7, 8]

The World Health Organization (WHO) published The Global Oral Health Status Report (GOHSR) in November 2022. Its main goal is the achieving of "universal health coverage (UHC) for oral health by the year 2030". [7, 9] The study evaluates the latest information on global oral health status, including "oral disease impact, risk factors, distribution of dental professionals and financial resources, and national health interventions for oral health emergencies" [7] According to the World Health Organization oral diseases affect nearly 3.5 billion people worldwide. [7, 10, 11, 12] Treatment and prevention measures are not effective enough. [10] Because of their widespread prevalence, oral diseases also carry serious economic consequences to the public and the healthcare systems. [8, 11] The underprivileged segments of the global population – individuals with disabilities (whether physical or mental), elderly individuals, residents of rural areas, those with lower incomes, etc. – face a higher risk of oral diseases. [9] Dental diseases share the same risk factors with other noncommunicable diseases (cardiovascular diseases, cancer, diabetes) – high sugar intake, smoking, alcohol use and overall negative health behavior. [8, 9, 10] Periodontitis, for example, has a proven connection with a lot of systemic diseases, some of which are different types of cancer, cardiovascular disease, diabetes mellitus. [13, 14]

The current model of prevention and treatment cannot deal with the burden of oral diseases worldwide, because dental care is still not accessible to a large part of low and middle income countries (LMIC). . The reason for this is the expensive treatment of dental diseases, which determines the limited access to the necessary help. The trend towards commercialization of dental services and the use of increasingly expensive treatment methods also brings negative consequences. [10]

Currently, dental treatment focuses more on providing therapy rather than preventive care. [7, 10] Changes are required to prioritize prevention, offering prophylaxis, early detection of oral diseases, and promoting good health. This can be achieved by implementing political changes at the national, international, and global scales. [7, 8] For success to occur, it is necessary to conduct a proper evaluation of the population's oral health, establish targeted measures, and strive for successful outcomes. [15] The importance of prevention is being recognized not only for children, but also for adults. It is important to address obstacles to accessing dental services in various communities and enhance funding for dental healthcare. [16]

A survey conducted in 2016 by the World Federation of Public Health Associations (WFPHA) across 74 countries sought to determine the level of DPH effectiveness in each country. Assessment is done on human resources, education, financial support, and cooperation between countries. It is evident that the majority of countries do not fully integrate DPH (Dental Public Health) into their healthcare system. [10] More DPH professionals are required to work together in healthcare and its delivery. [17, 18]

The purpose of a worldwide study carried out from December 2020 to December 2021 was to pinpoint various crucial aspects within the nations that are part of the World Dental Federation (FDI) – presence and focus of oral health policies; policies aimed at young children; and inclusion

of dental care in universal health coverage. Sixty out of the 158 FDI member nations replied to the survey. Out of the 60 countries studied, 48 possessed a national oral health policy document or a position statement regarding oral health; 54 had strategies for universal health care, while 42 incorporated dental care into their universal health care plans. The main emphasis was on strategies for children's oral health, collaboration with primary healthcare professionals, and dental education for mothers prior to the birth of their children. [19]

Effective planning, setting clear objectives, and having a clear strategy are vital for the success of public dental programs [20] It is highly important to monitor the execution of programs and adjust them in order to better serve the requirements of dental professionals and their clients. [21]

There is a lot of information in the literature regarding the execution of dental programs globally, targeting various societal groups as recipients. [22, 23, 24, 25, 26]

"Keep Smiling" is an example of such community dental program. It took place in 5 schools in economically disadvantaged areas of London in 2015. It was aimed at children from 3 to 7 years of age, and the actions that were performed were fluoridation and training for proper maintenance of oral hygiene. The program was carried out in collaboration with various dental specialists, staff working in schools and the so-called "Tooth Champions" (local volunteers, participants in the promotion of health.). The results were positive – the local community's knowledge was improved, children and adults were educated to recognize the importance of a regular dental check-up and maintaining good oral health. [24]

Another example can be given with the 2021 study evaluating the TOW (Teeth on Wheels) dental program conducted in Australia. It is aimed at children from low-income families in Victoria who are eligible for the CDBS – Child Dental Benefits Schedule. The program focused on minimally invasive dentistry and health promotion. The actions were carried out by 2 teams – one works in collaboration with the school administration to provide mobile dental services, and the other is responsible for carrying out activities related to the promotion of oral health. Within 3 years, the positive results were clear – a reduction in the need for restorative interventions and a good effect of health promotion. [25]

A 2019 study on 4th, 5th and 6th grade children in the city of Saveh, Iran showed good results after implementing the Theory of Planned Behavior (TPB) The sessions with the children included knowledge enhancement through group discussions, roleplay, practical work, as well as a demonstration of the use of tools for cleaning teeth (brushes, floss). These interventions influenced positively dental health behavior and habits, therefore TBP can be considered as an effective measure for oral health promotion [26]

A dental care program for children and students was held in Hwang Jin, South Korea in the period 2013-2019. Once again, the outcomes were positive and promising – children who received preventive dental care experienced less cavities, gum problems, and malocclusion. [27] Data in the literature show that after conducting oral health programs in children and adolescents, oral health knowledge (OHK), behavior (OHB), attitude (OHA), status (OHS) and quality of life (OHRQoL) are improved in most cases. Parents also hold a crucial position in establishing and upholding proper habits in the children. [22, 23]

Conclusions: In response to the challenges of constantly changing and evolving health systems, considerable efforts should be aimed at the creation of public programs for dental health and prevention, the training of epidemiologists, nutrition and prevention specialists. [18, 28] Reorientation in dental healthcare towards prevention, prophylaxis and addressing problems in different population groups is key to addressing the burden of dental pathology and reducing the significant consequences it brings.

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