



**Journal** **Website:**  
<http://usajournalshub.com/index.php/TAJMSPR>

**Copyright:** Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

## Criteria For Evaluating Student Dental Health Index In Accordance With The «8020» Program Methodology

**Farrukh Aslidinovich Ismatov**

Assistant Of The Department Of Facial Surgery And Pediatric Surgery Of Samarkand State Medical Institute, Uzbekistan

**Khasanova Lola Emilievna**

Doctor Of Medical Sciences, Tashkent State Institute Of Stomatology Professional Development, Uzbekistan

### ABSTRACT

The Dental Index was created to preserve and promote public health in accordance with the 8020 program methodology. One of the important population groups is student youth. The health of students is of great social and medical importance. Student youth is one of the main reserves of highly qualified specialists for various branches of national economy. Modern students will have to implement the most important social functions of society in the future: professional and labor, reproductive, intellectual and moral. An important factor in the preservation of health is lifestyle, the share of which is estimated at more than 50%. The way of life of students from hygienic positions has a number of defects that lead to deteriorating health.

### KEYWORDS

Program "8020", dental index, students, lifestyle,

### INTRODUCTION

While expensive mass health surveys are conducted in different countries to determine health status, an important criterion is the self-assessment of health, the definition of which is relatively easy to comprehend among different

categories of population. The Health Survey questionnaire, developed in accordance with the 8020 program to assess oral health, lifestyle, general health and quality of life of the population, has been applied in Japan and

some other countries, but in Russia similar surveys have been conducted earlier.

In connection with the above, the use of sociological methods of research to study the problem of the relationship between dental and general health of students is an important and relevant area of scientific research.

Research objective. Defining the criteria for evaluating dental health in students according to the «8020» program methodology.

### RESEARCH MATERIALS AND METHODS

The subject of the research was sociological methods of studying the relationship between dental health and the general health of students.

Our study involved 1024 students (513 men (50.1%) and 511 women (49.9%) aged 18-25 years. The age and sex composition of the subjects is presented in. The average age of the students was  $19.3 \pm 1.5$  years (men  $19.2 \pm 1.4$ , women  $19.4 \pm 1.6$ ).

In order to fulfill the purpose of the research, a survey of students was organized with the help of the "Health Survey" questionnaire, for which the Russian version was created and its cultural and linguistic adaptation was carried out.

Health Survey" (HS) questionnaire, developed by scientists from the Department of Dental Prevention and Public Health at Aichi-Gakuin University, Japan, and the Health Authorities Dental Service in Leeds, UK. The original questionnaire was translated directly into Russian, then back translated into English with the help of another translator (Professor Lutz Stösser, Germany), and the questionnaire was evaluated by an expert committee (Head - Professor Haruo Nakagaki, Japan).

The questionnaire was designed to examine the relationship between lifestyle, general health, oral health and quality of life, and to assess the implementation of the 8020 program. The "8020" program, which was actively implemented in 1989 at Aichi-ken (Japan), aims to improve oral health and preserve at least 20 teeth in a person aged 80 years. One of the important sections of this program is to assess the lifestyle of people to achieve the goal (to have 20 teeth at 80 years old).

A non-repeatable sample was used when a respondent filled out a questionnaire only once. After the completed questionnaires were received, general quality control of the information received was carried out, and questionnaires partially completed were selected. The completed questionnaires were informative, complete and selective, i.e., the data obtained was informative for the planned research, and there were no missed or unnecessary data that did not correspond to the goals and objectives of the study. Given the similar composition of the general population, this sample was adequate for the goals and objectives of the trial.

The sample population was formed by sex, age. By analyzing the questionnaires, we were able to determine: self-esteem of general and oral health, lifestyle, satisfaction with various aspects of life, quality of life in relation to the dental health of students, behavioral stereotypes of young people, which have an impact on dental and general health.

The survey was conducted in classrooms of higher educational institutions. The interviewees were explained the purpose and objectives of the survey (on average, within 3 minutes). All students (healthy and chronically

ill) took part in the research; the survey lasted 3-4 minutes. Participation in the research was voluntary.

The study consisted of three parts.

The first part included a student survey to determine the prevalence of symptoms of major dental diseases, student behavioral patterns, student attitudes toward dental visits, identify the presence of dentistophobia, and calculate the student dental health index. The data were analyzed based on determining the frequency distributions of student responses. Dental health index was defined in points.

The second part included 15 questions, which were related to the study of general health changes caused by problems in the oral cavity. This part of the study was analyzed based on frequency distributions of answers.

The third part included 20 questions, which included the study of various functions of general health of students, they were combined into 6 groups, characterizing different functions of the body and health self-assessment: physical function (6 questions), mental function (5 questions), role function (2 questions), social function (1 question), health perception (5 questions), pain perception (1 question). Answers for each group of questions were evaluated in points. The analysis of data from the third part of the study included comparison of the results with the data from the first part of the study and determination of correlation between the dental health index and students' general health indicators..

## RESEARCH RESULTS AND THEIR DISCUSSION

The results of all the studies were analyzed with a tender approach in mind.

For this part of the research, the NB questionnaire was adapted, which included a regrouping of questions, depending on the research focus. The first group of questions was aimed at studying the signs (symptoms) of major dental diseases (5 questions). The second group of questions was aimed at studying behavioral stereotypes of young people that influence the state of the oral cavity and characterize their life position (8 questions). The third group of questions (5) was aimed at studying the experience of students in various situations related to dental reception, which allowed to reveal the prevalence of stomatophobia among young people. The survey results were used to determine the frequency distribution of student responses.

The Student Dental Health Index was determined in accordance with the 8020 program's methodology, which provided a score on the answers to questions that characterize oral health and lifestyle of students. The assessment criteria for the Dental Health Index were as follows:

\* The 20 Score Index is an ideal value that shows a high level of oral health and the focus of students' lifestyle on achieving good dental health.

The index of 16 to 19 points indicates that a person's oral health is good and that their current lifestyle is appropriate for achieving a higher level of dental health. However, despite this, it was recommended that the current situation be improved by trying to eliminate the zero score responses (Table 1).

**Table1. Dental Health Index score for the program "8020".**

Nº	Answers	Questions	
		Yes	No
		scores	scores
1.	Do you have / Have you had gum swelling?	0	4
2.	Do you have / Have you had pain in your teeth?	0	3
3.	Do you often eat / snack between meals?	0	3
4.	Do you have a hobby?	3	0
5.	Do you have a family dentist?	2	0
	Do you go to the dentist as soon as you start dentisting?	1	0
6.	sia pain?		
7.	Do you have / did you have bleeding gums?	0	1
8.	Do you brush your teeth twice a day?	1	0
9.	Do you have your own toothbrush?	1	0
10.	Do you smoke cigarettes or tobacco?	0	1
	Total points	20	

The index of 11-15 points showed that the current state of health of the oral cavity is not very good, and behavioral stereotypes are aimed at worsening dental health. To save teeth under the «8020» program, you need to

revise your lifestyle and eliminate zero grade responses.

\* The index of 10 or less points indicates poor oral health and shows that existing habits are

unsuitable for health. It was strongly recommended to visit the dentist, to revise the lifestyle and try to improve this situation, trying to reduce the number of responses with zero score.

The total index of dental health of students was compared with similar data from a survey of foreign students. In addition, based on the results obtained, they conducted a comparative analysis of dental health indexes of students of different universities of Samarkand and ranked the data obtained in accordance with the average score of each university.

For all parameters of this part of the study, differences between the results of the survey of men and women were determined. Впервые был использован новый метод изучения взаимосвязи стоматологического и общего здоровья студентов с помощью русскоязычной версии вопросника «Health Survey» (HS).

For the first time it was found that the majority (62.9%) of university students had a high prevalence of symptoms of major dental diseases, and 46.8% experienced acute toothache. The lack of need in dental treatment was reported by 17.5% of students.

Students had changes in their general health due to oral problems more often than male students: 77.3% and 70.3% respectively (74% on average). For the first time, oral problems were found to be more likely to manifest in various types of mental discomfort (68.6% of students) than in somatic disorders (31.8% of students).

For the first time it was determined that behavioral stereotypes of the majority of students, especially men, are aimed at deterioration of oral health: irrational nutrition

(54.6%) and oral hygiene (20.0%), smoking (25.1%), irregular visits (90.6%) and avoidance of dentist in case of pain (50.6%). For the first time a high prevalence (80.9%>) of dentistophobia was established among university students, which was more typical for women than for men.

## CONCLUSIONS

For the first time determined the index of dental health of students, held a comparative tender characteristics of dental health indexes of students, which in most higher education institutions of the city, were higher for women than for men. For the first time determined the compliance of dental health index to the social image of general health of students of higher education institutions in Samarkand..

## REFERENCES

1. Association of cytokine gene alleles with the degree of severity of inflammatory periodontal disease in humans / A. V. Safonova [et al.] // Acta Naturae. -- 2011. -- T. 3, №. 1. -- С. 123-129.
2. Bobyleva, O.V. The state of health of students as a socio-ecological problem / O.V. Bobyleva // Vestnik. Tambovsk. un-ta. Series: Natural and technical sciences. - — 2013. - — № 3. - — С. 852–854.
3. Bulkina N. V. Modern aspects of etiology and pathogenesis of inflammatory periodontal disease. Features of clinical manifestations of refractory periodontitis (in Russian) / N. V. Bulkina, V. M. Morgunova // Basic research. -- 2012. -- № 2-2. -- С. 415-420
4. Vasilyeva, N.A.; Bulgakova, A.I.; Soldatova, E.S. Dental status characteristics of patients with inflammatory periodontal disease (in



- Russian) // Kazansky medical journal, 2017.- N 2.-S.204-210.
5. Interrelation of gene alleles of some cytokines with the progression rate and severity of periodontitis (in Russian) / O. A. Zorina [et al.] // Dentistry for all. - - 2011. - - № 2. - - C. 26-31.
  6. Species composition of the anaerobic microflora of the parodontal pocket depending on the stage of periodontitis / N. V. Zyryanova [et al.] // Dentistry. - - 2009. - - T. 88, № 4. - - C. 43-47.
  7. The occurrence of signs of periodontal tissue lesions and the nature of oral hygiene in children and adolescents in the Tver region / O. A. Gavrilova [et al.] // Upper Volga Medical Journal. - - 2012. - - T. 10, № 1. - - C. 29-32.
  8. Gavrilova, Yu.A. Chronic stress situations and disadaptation syndrome in students of medical school / Yu.A. Gavrilova // Topical issues of modern psychology: materials of III International Scientific Conf. (Chelyabinsk, February 2015). - Chelyabinsk: Two Komsomol members, 2015. - — C. 94-96.
  9. Grigorovich E. Sh. Mechanisms of immune regulation of the persistence of inflammatory infiltration in gum tissues of patients with chronic generalized periodontitis / E. Sh. Grigorovich, D. S. Cherkashin // Far Eastern Medical Journal. - - 2010. - - № 1. - - C. 86-89.
  10. Grudyanov, A. I. Etiology and pathogenesis of inflammatory periodontal disease // A. I. Grudyanov, E. V. Fomenko. - Moscow: Medical Information Agency, 2010. - - 96 c.
  11. Kotseva K., Wood D., De Backer G. et al. EUROASPIRE Study Group. EUROASPIRE III. Management of cardiovascular risk in asymptomatic high-risk patients in general practice: cross-sectional survey in 12 European countries. // EUROASPIRE. J. Cardiovasc. Prev. Rehabil. -2010.Oct. - Vol.17.-N5.-P.530-540.
  12. Li J, Wang R, Ge Y, Chen D, Wu B, Fang F. Assessment of microRNA-144-5p and its putative in inflamed gingiva from chronic periodontitis patients Jontal Period Res. 2019 Jun;54(3):266-277. doi: 10.1111/jre.12627. Epub 2018 Nov 18.
  13. Li L., Han M.X., Li S. et al. Hypoxia regulates the proliferation and osteogenic differentiation of human periodontal ligament cells under cyclic tensile stress via mitogen-activated protein kinase pathways. J. Periodontal ligament cells under cyclic tensile stress through mitogen-activated protein kinase pathways. 2014;3(85):498-508.
  14. Liu X, Chen Y, Chen X, Su J, Huang C. Enhanced efficacy of baicalin-loaded TPGS polymeric micelles against periodontitis. Mater Scieng C Mater Biol Appl. 2019 Aug;101:387-395. doi: 10.1016/j.msec.2019.03.103. Epub 2019 Mar 28.
  15. Liu X, Sun H, Yu M, Liu J, Yang B, Wu Y, Wang J. DDIT3 regulates cementoblast mineralization by isocitrate dehydrogenase 1 through nuclear factor- $\kappa$ B pathway. J Cell Physiol. 2019 Jul;234(7):11602-11609. doi: 10.1002/jcp.27811. Epub 2018 Nov 29.
  16. Magán-Fernández A, O'Valle F, Abadía-Molina F, Muñoz R, Puga-Guil P, Mesa F. Characterization and comparison of neutrophil extracellular traps in gingival samples of periodontitis and gingivitis: A pilot study. J Periodontal Res. 2019 Jun;54(3):218-224. doi: 10.1111/jre.12621. Epub 2018 Oct 8.
  17. Masumoto R, Kitagaki J, Fujihara C, Matsumoto M, Miyauchi S, Asano Y, Imai A, Kobayashi K, Nakaya A, Yamashita M,

---

Yamada S, Kitamura M, Murakami S.  
Identification of genetic risk factors of  
aggressive periodontitis using genomewide  
association studies in association with those  
of chronic periodontitis. J Periodontal Res.  
2019 Jun;54(3):199-206. doi:  
10.1111/jre.12620. Epub 2018 Oct 10. Review.