



SOCIAL, HYGIENIC, MEDICAL AND DEMOGRAPHIC, SOMATIC AND DENTAL STATUS OF FAMILIES LIVING IN EXTREME CLIMATE CONDITIONS

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Results of complex research of the social and hygienic and stomatologic status of the families living in extreme climatic conditions of the North (Yakutsk) more than 10 years are presented. Parameters of social and hygienic, somatic, medico-demographic, stomatologic, orthopedic stomatologic the statuses are studied. Population of the surveyed families was characterized generally young (20-30 years) – (59.3 %) and an average (30-50 years) – (34.1 %) by age, with existence generally healthy adult members of the family (61.8 %) and children (0.03 % - (according to adults). At the same time the quantity of dysfunctional families on psychological factors makes 56.9 %. In 39.0 % of families it is noted at least at one member of the family of a disease of blood circulation or bone and muscular system. The greatest negotiability to stomatologic offices and clinics is noted concerning tooth prosthetics (87.8 %). Level of hygiene of an oral cavity according to Fedorov - Volodkina at children in all families is good. A hygienic index Bernadsky in Tchizhov's updating – Novikova for teeth and artificial limbs at adult members of the family – average (from 0.2 to 0.49) for all families. The complex assessment of parameters of the specified statuses as families as a whole, and each member of the family separately, gives the chance to reveal prime problems of health and social security of the families living in extreme climatic conditions of the North, allows to increase quality of rendering by it necessary social and medical care.

Keywords: family, social and hygienic status, medical and demographic status, somatic status, dental status, health, extreme climatic conditions of the North.

Analysis of the family as a social and biological system can identify patterns of structure, function and stage of development of the family, constituents, among other things, the basis of the formation and interaction of family with health. Family with various aspects of their activities and statuses - demographic, socio-economic, moral, psychological, has a direct and indirect impact on the health of its members. Family creates, maintains and develops the health of its members, thereby having an impact on public health (Artyukhov, Kapitonov, Novikov, 2001) (Grinina, Kicha, Vazhnova, Khalov, 1997) (Kesaeva, 2006) (Cubbins, Szaflarsk 2001).

At the present stage of development of primary care dental service the study of the state and the conditions of formation of the dental health of the family, study the structure of the state of dental care in the urban centers and the trends of its development, the operation of specific medical institutions of various forms of ownership by providing a comprehensive (family) dental care are considered to be relevant and important (Sohov, Sapgayda, Kabanova, 2011).

Northern areas are characterized by specific regional factors: climatic, socio-economic and environmental, that leads to different morphological changes of organs and systems that have a significant impact on health, including dental health. In this regard, the study of the influence of northern environment factors on the human body is relevant from the medical and social points of view.

In the North the intensity of the impact of risk factors for dental disease depends on the

adverse conditions: extreme continental climate with long low temperature in winter, lack of ultraviolet radiation, low mineralization, and an acute shortage of fluorine in the main water sources of drinking water. The high prevalence of dental diseases with predisposing risk factors in the population of the North dictate the need for increased prevention efforts based on evidence-based guidelines (Ushnitskiy, Zenovskiy, Vilova, 2008).

It is known that in modern conditions an important role in the prevention of dental diseases and dental activity (Grinina et al., 1997) (Sohov et al., 2011) belongs to the family. In relation to it studies aimed at exploring the social, hygienic, medical and demographic and physical aspects of the dental health of the population are an urgent problem of not only dentistry, but also medicine in general.

Materials and methods of the research. By methods of questioning and physical examination characteristics of the social, physical and dental status in 123 two-parent families in Yakutsk (surveyed in total - 411 people: men - 120, women - 120, children - 171) were studied by us. The age of the surveyed men and women ranged from 20 to 60 years of age and older, and children from 0 to 14 years. The study was conducted with the use of social hygienic card of dental patient, developed at the Department of Dentistry Postgraduate Medical Education Institute of Dentistry at SBEE HPE "Krasnoyarsk State Medical University named after Professor V.F. Voino-Yasenetsky" (Chizhov, Tsimbalistov, Novikov, 2005). The classification of overweight children of families by Novikov, Kapitonov (2010) were used in a study, the extent of marriage, the duration of residence of the family in the North, the overall composition, housing and feeding conditions of the family; own assessment of the overall health of each adult member of the family, assessment of children's health adult family members were investigated.

Determination of dental status was conducted using the author's study of dental health card of a family member, which reflects the gender, age, presence of comorbid medical conditions, regularity and nutritiousness of food; reasons for contacting the dental clinic (of which some - for fee); orthopedic dental status, type of malocclusion, classification of defects of dentition according to Kennedy, classification of edentulous jaws according to Oksman, the definition of hygiene index: according to Fedorov - Volodkina, according to Bernadskaya Chizhov - as modified by Novikov (2005), the index of the CUA, etc.

The results of the study. Among the surveyed families of Yakutsk marriage was registered in 73 families (59.3%). A big number of families 92 (74.8%) live in the city of Yakutsk (and generally in the North) for more than 10 years. The quantitative composition of the family is as follows: 2 people - 11 families (8.9%), 3 people - 68 families (55.3%), 4 people - 36 families (29.3%), 5 people - 8 families (6.5%).

In accordance with the extensive classification by Novikov and Kapitonov of the types of two-parent families with children (2010) the parameters of social and physical status of the families and their members were defined. Thus, the types of families in the demographic and health status (A) were: the fecundity of families: 1 - childless - 11 (8.9%), small families (one child) - 68 (55.3%); with two children - 36 (29.3%) having many (three or more children) - 8 (6.5%). At the same time indicators of age (by spouses) have characterized the following trend: young (under 20) - 6 families (4.9%), young (20 to 30 years) - 73 families (59.3%), medium (30 up to 50 years) - 42 families (34.1%), mature (50 to 60) - 6 families (12.0%), elderly (60 years and older) - 1 family (0.8%), with difference over the age of 10 years - 1 family (0.8%).

It should be noted that these health status of persons surveyed described the presence of some features: healthy (rarely ill family members) - 96 families (78.0%), and often ill family members - 11 families (8.9%), with chronically ill (patients) family members - 16 families (13.0%), persons with disabilities - 0 families (0.0%), with the mentally ill - 0 families (0.0%). Data on the medical and geographical status show more favorable situation of families in the health section, since a significant part of them refers to a group of rare ailing family members.

Further analysis of the data by types of families on social - hygienic status (B) showed the



following structure:

1. The level of education (by the head of the family) with higher education - 85 families (69.1%), with secondary special - 24 families (29.5%), with an average - 14 families (11.4%) with incomplete secondary - 0 families (0.0%), with an initial - 0 families (0.0%), with no education - 0 families (0.0%).

2. The level of provision (compared to the cost of living for a family member): high (up to 10 times) - 15 families (12.2%), above average (above 5-10) - 35 families (28.5%), middle (2-5) - 40 families (32.5%), low (1-2 times) - 29 families (23.6%), very low (below the average cost of living) - 4 families (3.3%).

3. The degree of well-being (in the image of life): prosperous - 25 families (20.3%); deviant (alcohol abusers) - 19 families (15.4%) dysfunctional for psychological relationships (quarrels, conflicts, etc.) - 70 families (56.9%) other - 9 families (7.3%);

4. The extent of employment in labor: both husband and wife - 99 families (80.4%), works one of the spouses - 14 families (11.4%) doesn't work either one of the spouses - 5 families (4.1%), pensioners, disabled family members - 5 families (4.1%).

5. Social status (revealed by head of the family): -employee's family 76 (61.8%); worker's family- 35 families (28.5%) family of farmers - 0 families (0.0%); soldier's families - 0 families - (0,0 %), pensioner's families - 5 families (4.1%), student's families - 3 families (2.4%) other - 4 families (3.3%).

By the living conditions of the families were divided as follows: good conditions were reported by 105 families (85.9%), satisfactory - 18 families (14.6%), bad - 0 families (0.0%). Under the terms of supply: good - in 100 households (81.3%), satisfactory in 23 families (18.7%).

In accordance with the applicable limit of children's health groups, adult family members attributed their children's health to the following groups: group 1 (chronic pathology absent, rare and easily flowing acute illness or lack of them) - 111 families (154 children) - 90.3%; group 2 - (presence of functional abnormalities, prolonged acute illness followed by a reconvalescent period) - 9 families (12 children) - (7.3%), group 3 - (chronic pathology, birth defects, the presence of functional abnormalities of the diseased system, caries tooth) - 3 family (3 children) - (2.4%).

By the health group adult family members were divided as follows: group 1 (recurrent violations of diet, sleep, rest, motoring, rare and easily flowing acute illness) - 76 families (61.8%), group 2 (frequent and prolonged acute illness, lethargy, irritability, sleep disturbances, impaired of appetite, low-grade fever) - 35 families (28.5%), group 3 (presence of chronic disease) - 12 families (9.7%).

The presence of comorbidities in each member of the family: none (note) - in 58 families (47.2%), circulatory system - in 23 families (18.7%), bone disease - muscular system - in 25 families (20.3 %), endocrine - family 1 (0.8%) respiratory - in 16 families (13.0%).

The reason for the dental clinic referring: consultations - 24 families (19.5%), dental treatment - 68 families (55.3%), removal of teeth - 51 families (41.5%); dentures - 108 families (87, 8%). It should be noted that many families referred to the dental clinic for more than one cause and they were different.

The presence of dentures in the upper jaw of adult members of the family: no prosthesis - in 72 families (58.5%), one bridge prosthesis of any adult member of the family - in 38 families (30.9%). There are more than one bridge of any adult family members - in 22 families (17.9%); bridge and partial denture - in 9 families (7.3%). The presence of prosthesis in the mandible: no prosthesis - in 72 families (74.0%), 1 bridge - in 29 families (23.6%).

Various pathologies of the temporomandibular joint was detected in adults in 68 families (55.2%). The need for prosthetics adult members of the family: on the upper jaw - in 43 families (34.9%) on the mandible - in 63 families (51.2%). Occlusion condition: orthognathic - (neutral) - 92 families (74.7%); prognathic - (distal) - in 24 families (19.5%); progenic-(mesial) - 9 families (7.3%) . The presence of defects of dentition by Kennedy (at least 1 family member): grade 1 - 9



families (7.3%), grade 2 - 20 families (16.3%), grade 3 - in 68 families (55.2 %), grade 4 - 4 families (3.3%). Hygiene according to Fedorov, Volodkina (for children up to 14 years) is good in all of the families 1.1-1.5.

The hygienic index of Bernadskayaas modified by Chizhov – Novikov (2005)for teeth and dentures (for adult members of the family) is - average (0.2 to 0.49) for all families. The index of the CUA (intensity)is very low (0 to 1.1) to 0 families (0.0%), low (1.2 to 2.6) –in 5 families (4.1%), medium (2.7 - 4.4) - in 48 families (39.0%), high (4.5 to 6.5) - 67 families (54.6%), very high - in three families (2.4%). It was revealed that the first component of the index component of useful activity is "P" component - in 72 families (58.5% of families), second component is the "U" - in 27 families (21.9% of families), the third - the component "K" - 24 families (19.6% of families).

Conclusions. Analysis of the results revealed that a greater number of families - 92 (74.8%) of the surveyed lived in the North for over 10 years, where the number of members of the family are 3 people - 68 (55.3%) and 4 - persons – 36 families(29.3%). By age gradation (age of spouses), the largest number of families surveyed are young families (20 to 30 years) - 73 (59.3%), and middle-aged (30 to 50 years) - 42 (34, 1%) and 78% of families (96) are healthy (or rarely being ill).

In addition almost 90% of adult family members - (109 families) have higher and secondary special education, where the most common level of provision (compared to the cost of living for a family member) of the families is in 15 families (12.2%): with average incomes (up to 2-5 times) - 40 families (32.5%) and middle-income families are more (5-10 times) - 35 families (28.5%).

But, at the same time there are few well-off families – only 25 (20.3%), the number of dysfunctional families by psychological relations (quarrels, conflicts, etc.) is 70 (56.9%) and deviant (alcohol abuse) - 19 (15.4%). It should be noted that the highest number of addressing to dental offices and clinics is about dentures - in 108 families (87.8%). The highest number of dental prosthesis is of the adult members of the family: in 22 families (17.9%) - more than one bridge fixed restorations, in 9 families (23.6%).

But at the same time a significant need in prosthetics of adult members of the family on the upper jaw was revealed- in 43 families (34.9%), in the lower jaw - in 63 families (51.2%). According to the index of coefficient of useful activity, more than half of all families surveyed - 115 (93.5%) have a high (4.5 to 6.5) - 67 families (54.6%) and medium (2.7 to 4.4) - 48 families (39.0%) rates. These facts accordingly influence the frequency of defects of dentition among the surveyed contingent and pathology of the temporomandibular joint (55.2% of households).

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