

THE PROBLEM OF QUALITATIVE AND QUANTITATIVE HEALTH ANALYSIS

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In this article hygienic and functional-physiological approaches at identifying psycho-physiological conditions among students are considered. Research methods: sanitary-hygienic, medical-statistical-depth study of individual health.

Health monitoring is an observing system, which includes data collection, aggregation, analysis of current situation, forecasts for selecting priorities and decision-making in order to develop measures for preservation and improvement of public health.

There are diverse methodological principles and approaches to the health assessment and study. Summarizing the commonly used methods and techniques of studying health, we can identify the main groups of methods:

- Methods of statistical data study;
- studying of psychophysiological health indicators;
- Sociological methods of health study.

In most modern research they use statistics and sociological methods. Statistics, as well as sociological, methods allow giving a general description of the situation, for example, in different time intervals. Besides, among the obvious advantages of these methods one can mention the fact that they can cover a problematic situation quickly and see the patterns and the contradictions of this or that phenomenon, but at the same time, information allows to assess the health state by actual levels of morbidity only. Health is a continuous process of qualitative and quantitative characteristic change. The main drawback is that data of the visits to the hospitals do not reflect the true sickness rate. Firstly, there is no reasoned value attitude to their own health as necessary life resources; secondly, the qualitative aspects are ignored, primarily differences in disease severity. Sociological methods, such as questionnaires, allow taking into account the qualitative aspect of health partially, but a major limiting factor is questionnaires are subjective and reflect the social and economic factors of life. Using sociological information about population health state is reasonable and useful as an additional means of public health assessment and of health policy effectiveness [1, 2].

During the research we shouldn't underestimate the role of methods reflecting the adaptive capacity of the body or of the group, especially under conditions of high chronic disease. This group of methods includes, for example, the method of allocation of groups of health, developed in 70 - 80-ies. This typology is based on the analysis of medical statistics. However, due to the labor intensity and cost they are not frequently used in the study and identification of risk factors.

A look at the problem at every level makes it possible to identify patterns and characteristics, "invisible" on the other levels.

In our study we used methods of individual health analysis, along with statistical methods macropopulation analysis, in order to analyze the health of macropopulation as well as to rank the factors.

The first stage of the study included an analysis of students health state. The analysis of the students' incidence based on medical and statistical methods of research was carried out on the materials of the official medical statistics of 2005–2011. In addition, there used in-depth methods of medical and statistical investigation according to medical examinations of 2007–2013. To estimate the dynamic range of changes in students' functional indicators, we made the selection of students' medical cards and chose the ones with continuous training. The analytical system included a statistical processing of the data - descriptive statistics, correlation and regression analysis, evaluation and determination of the reliability of intergroup differences; median test (additionally for intergroup differences of average values). The data was considered to be sufficient at a significance level of $p < 0,05$.

The ranking places, respectively, are held by the respiratory diseases – 25,07%, acute respiratory infections of the upper respiratory tract – 22,05%, diseases of the genitourinary system – 6,63%, diseases of the musculoskeletal system and connective tissue – 5,32% , diseases of female pelvic organs – 4,80%. Respiratory diseases and diseases of the musculoskeletal system are leading at the same place in the rank structure of the total sickness rate of students. Speaking about the genitourinary system sickness rate, we identified significant differences in the proportion of total morbidity and, thus, different ranking positions in the structure of overall morbidity of students - the second and fourth places. Diseases of the nervous system and circulatory system diseases also have different ranking places, seventh and eighth, while marked with the same specific gravity (2%) in the overall students' sickness rate in the two compared educational institutions. Different positions in the

overall morbidity structure of students are also identified in eye and adnexa Disease, in digestive system, skin diseases and subcutaneous tissue. The number of general and primary morbidity didn't not make it possible to distinguish differences according to nosology forms of morbidity. Harmonic mean of general morbidity cases among students in two comparable institutions totaled 0,77 and 0,52.

Estimation of total frequency rate and the frequency rate of primary morbidity identified differences among the youth of the two educational institutions. Analysis of the primary disease quantity during the study period showed significant growth on respiratory diseases (0,8, $p < 0,05$) and acute respiratory infections (0,82, $p < 0,05$) with established significance for students of one educational institution. Thus, it was concluded that there were certain differences in the incidence of students of two different profiles.

The study of individual health outcomes of students in different profiles allowed investigating the pathological prevalence of diseases among students, as well as not only quantifying prevalence, but also the quality one. There were significant differences in the average morbidity of the students of Information Profile ($2,31 \pm 2,47$, $p < 0,05$), and between-group differences in the incidence of primary students of technical and humanities profiles- tend to be authentic. The growth and the relative share of the primary disease is also marked with significant differences. The growth of the primary disease was 1,9 times higher; the relative share was 1,33 times bigger. Changing of personal health by assessing the medical examination revealed a degraded health state in mentioned profile [3]. Thus, 5,14% of students move from health group D2 to D3, which is not observed in the second group [4].

We identified the basic forms of nosological classes, on which they observe the increase in general incidence to the end of studying.

Thus, in-depth statistical methods reveal the dynamics of the health change and the degree of that change; it allows us to develop effective corrective measures on the nosological entities that require mandatory supervision of persons with risk.

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