

*Materials of Conferences***THE COMPUTER METHODS FOR THE DATA PROCESSING AND ANALYSIS**

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At present, a specialist of any profile, daily, should be solved many challenges, having related with the production organization, the activity efficiency improvement of the staff, the marketing, and etc. It is quite needed the quality information and the data informed use, for the actions taking and the right decisions making. Therefore, the important skill to be obtained, to be presented and to be explained all the necessary data have already become for the modern manager.

In the most cases, the decisions making is practically borne the probabilistic character in its nature. It is not always, the right decisions are practically led to the desired effect. But the more accurate, and more reliable are the analysis results, the sooner you'll be reached the desired final result. And, therefore, the adequacy of the used analytical techniques and their methods, the receiving correctness, and the data measurement have been become the particular important aspect. So, the efficient solutions are not practically based only on the human intuition or the reasoning, but they are usually based on the accurate, reliable, valid, timely information.

The methods widespread introduction of the data analysis in daily practice has been stimulated the personal computers spreading. However, for the meaningful operation, the user must have to be possessed some certain and the definite training: to be understood the situations, in which the various statistical methods are being applicable, to be known their possibilities and the limitations, to be able correctly to interpret the results.

What methods are used in that or another case? This is depended on the research aim and the analyzed data nature and their character. And the main goal of the quantitative researches – is the accurate information getting and its analysis on the basis of the comprehensive statistical data processing and their analysis.

In the processes of the data processing and their further analysis, as a rule, the following main stages are presented: the data collecting and their entering; the data visualization; the data processing and their conversion; the statistical analysis; the results presentation.

At present, the statistically analysis programs, having operated in the «Windows» environment, are the most widely used software program.

The Analysis Package is the most affordable software tool to be analyzed in the «Excel» spreadsheets, which is designed to be solved the complex statistical and the engineering challenges. It has the basic tools in itself, with which it can be performed the following operations: the descriptive statistics; the regression analysis; the variance analysis, the exponential smoothing, and the other types of the analysis. For the data analysis performing, by means of all these tools, it should be specified the input data and to be selected the options parameters; the necessary analysis will be conducted by means of the appropriate statistical and the engineering macro – function, and the obtained result will be placed in the output range. If it is necessary to be performed the work in the «Linux» operation system, for the statistical analysis carrying out, it is quite possible to be used the «Gnumeric» spreadsheets, as there is the «statistical analysis» component in this program [1]. The processing and the data survey analysis of the KU «Bolashak» students have been performed, with the use of the computer – based methods of the data. So, the obtained data analysis results have already been used at the arrangements and the measurements development to be improved the students' environment and their learning conditions [2].

So, the «Statistica» special system is practically one from the modern packages of the information technologies, having produced the data statistical processing. This special Program is practically allowed the real possibility to be obtained the descriptive statistics; the frequency tables; the conjugation; the use of the variance; the regression; the multivariate analysis and the other analysis methods; the wide range of the linear and the non – linear modeling tools; the support for the continuous and the categorical predictions; the models' automatic selection. So, this program using is practically given the highest accuracy, the results obtaining reliability of the data processing [3].

So, one of the most obvious methods for collecting, so – called the primary data, is consisted in the questionnaires using (e.g. the questionnaire). Just after the collection, the encrypted records coding is being conducted in one of the well – known special coding methods, and the obtained results are being recorded into the table, and more often into the «Excel» tables. Then, the prepared survey results are being imported into the «STATISTICA» system. So, the researches, having carried out among the students' KU «Bolashak» from 1 to 4 courses of the various specialities and the vocations, in an amount of 100 people, have already

been obtained and collected, as the initial data. After that, the special questionnaire has been developed, having consisted in ten questions. According to the survey data, the data encoding scheme has already been compiled. One of the «Statistica» presented advantages is, that instead of the numerical data may be displayed and the text data, having obtained by the text editor tags. So, it should be noted, that although the text labels display, the numerical values (e.g. the codes) are practically used at the system analysis carrying out.

So, the frequency table's construction is preceded by many types of the analysis. The frequency tables' construction is also built in the «STATISTICA» system and that by the different methods, depending on the type of the data presentation. In order to be constructed the frequency table, the variables have already been specified, and the categorized diagrams have already been built, corresponding to all these variables. So, there is the possibility to be built more complex diagrams in the «STATISTICA» system, depending on the variables number. So, the crosstabulation obtained results (e.g. the contingency) have been visualized with the categorized diagrams and the 2D-, 3D-diagrams, having selected the required number of the variables. The main purpose of the summary diagrams construction – this is the answer to the question, whether there is any link between the crosstabulated variables. In the most cases, the analysis performing – this has been become clear and reliable. However, much caution is needed in drawing the conclusions on the relationships nature between the variables, having based only on the outward difference between the crosstabulated data [4]. As a result, it can said, that the use of the computer processing methods and the techniques has quite been justified, because this is increased the data reliability level, that can be practically used for the further findings and the correct decisions making.

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and Education in the Modern World: The Proceedings of the International Scientific and Practical Conference. – Karaganda: «Bolashak – Baspa», 2013. – P. 269–272.

The work is submitted to the International Scientific Conference «Actual problems of science and education», France (Marseilles), June, 2-9, 2013, came to the editorial office on 25.04.2013.

#### NANOMATERIALS BASED ON GAMMA-ALUMINA OF LABELED TECHNETIUM-99M FOR LYMPHOSCINTIGRAPHY

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During recent years a significant increase in interest towards utilizing radioactive colloid nanomaterials in medicine has been registered. Their implementation in oncology is based upon a possibility of a quick and efficient revelation of «guarding» lymphatic knots, and also their ability to mark autolexics in order to diagnose inflammatory processes. Short-life masurium-99m is the most demanded radionuclide as a marker of autolexics. First of all, it is defined by its cellular-physical characteristics: a relatively short T1/2 (6,02 h) and energy of  $\gamma$ -radiation of 0,1405 MeV that provides for a small exposition dose, but also a significant penetration ability that is need for radiometric evaluations.

A defining factor in selection of radioactive indicator for certain researches is a size of colloid particles. Thus, for example, it is known that an optimal size of particles for radionuclide lymphoscintigraphy equals 20–100 nm. Such particles are discharged from tissues with a speed that does not allow them to penetrate blood bed. Particles of size less than 20 nm can easily enter the blood bed. It complicates visualization of lymph nodes.

This works studies processes of placing radioactive mark  $^{99m}\text{Tc}$  on aluminium gamma-oxide in presence of a restoration agent of stannum. In order to increase an output of nano-colloid of size up to 100 nm and radiochemical clearness of preparations, we used ascorbic acid, natrium pyrophosphate, and gelatin. Results of medical-biological tests of preparations are provided. The work also shows their functional suitability to carry out radionuclide lymphoscintigraphy.

The work was submitted to International Scientific Conference «Innovative medical technologies», Russia (Moscow), May, 21-24, 2013, came to the editorial office on 24.04.2013.