

PROGRAM OF STATISTICAL ESTIMATION OF PROCESSES, DETERMINED PLENTY OF OBJECTIVE FACTORS

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In many fields, including medicine, cosmetics, pharmaceuticals, sports, have to carry out a qualitative comparison of a large number of different, unrelated, randomly distributed features. In some cases, the number of significant factors than a few dozen, which complicates the efficient conduct meaningful analysis. We have to reduce the number of factors, guided by certain hypotheses. At the same time can be lost important information. There are a large number of statistical computer applications, but they all have a common drawback. This is a versatility, which does not allow working quickly with large sets of numerical and logical values.

We have developed an effective method of statistical evaluation of the processes for a large number of qualitative features. Testing of the method carried out in the analysis of indicators of technical and tactical activities football players the basic composition of FC "Metalist" for the period from 2012 to 2014. It is necessary to statistically determine the effect of a set of special exercises on the technical and tactical activities of the main players of FC "Metalist". Game Football Club is part of 39 people. Statistical data processing was carried out using an original computer program recorded in the code FORTRAN'90. Processing includes the formation of statistical databases, calculating activity coefficients players, their average values, confidence intervals and testing statistical hypotheses about the equality of expectations. The activity coefficient player certain tactical and technical action is the number of active steps per unit time. The assumption of normal distribution of the activity coefficients tested separately.

The proposed method has allowed to quickly and accurately perform a statistical analysis of 42 criteria of 45 matches. The results obtained for the whole team of the FC "Metalist" as a whole, for players on the playing roles and individually for each player. Analysis of the results showed no linear correlation between the activity and the time of the experiment. The average value of the exact activity coefficients of the players FC "Metalist" for the period of the experiment was significantly ($p < 0.05$) increased by 32 – 39%. Activity coefficients of FC "Metalist" higher than average command of his rivals not less than 20%. The proposed program is suitable for statistical analysis of normally distributed random variables given large arrays experimental data in the pharmaceutical, cosmetics and medicine.