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ALGORITHM OF THE ANALYSIS OF PROFESSIONALLY IMPORTANT QUALITIES FOR POLICE OFFICERS (PSYCHODIAGNOSTIC APPROACH)

The results of a study of professionally important qualities for police officers are stated. Based on these results the algorithm for forming of an individual psychological profile of police officers is created. The new system of factors, reflecting professionally important individual psychological characteristics of police officers, are marked out.

Keywords: *professionally important qualities, psychodiagnostic tests, psychological scales (parameters), klaster analysis, factor analysis.*

Reforming of the organs of internal affairs imposes new requirements to the psychological service of the MIA, in particular to the selection and distribution of the staff [1]. One of the basic problems of psychological service consists of the creation of alternative psychodiagnostic toolkit which would satisfy the modern scientifically proved norms (informative, validity and reliability). The solution to this problem will allow to reconstruct psychogramms of the principal views of the activities of MIA employees, to create system of indicators for the definition of criteria of professional suitability of militia employees. Above mentioned system of indicators should be specific for the psychological profile, which is based theoretically and methodologically on the corresponding psychodiagnostic batteries. Recent studies (e.g. [2-4]) have confirmed that the criteria for the selection of special divisions will play an important role in the success of professional activity that is associated with the fact of the impact of psychological and psychophysiological characteristics of the personality on the performance of their duties. Thus, the solution of this problem is closely related to the study of the personality-typological features of the employees and is the urgent task of the practical psychology. The study has for an object to justify the selection of the

battery and the creation on its basis of the technological level an analysis of the empirical evidence for the formation of a card of the personality-typological features of MIA employees (on an example of practical psychologists). Research considers two problems:

Psychological-psychophysiological – the research of the personality-typological characteristics of the MIA employees (cadets CUI) on the basis of a new interpretation of the correlation and factor matrixes;

Mathematical application of the newest mathematical methods of data processing and their complex application for the analysis of the received statistical material.

The first problem consists in an allocation of such individual and group elements which have extreme values of parametres (for example, persons, who are included into the group of risk or have low adaptable possibilities) and will allow to find out a psychological measure of readiness of operative group or the separate employees to the performance of official duties. Diagnostics of group dynamics and revealing of psychological characteristics of group – an underlying cause of administrative decisions concerning microclimate correction in the collectives of MIA subsections that provide an assistance for the improvement of the efficiency of their work.

Mathematical methods are applied in some stages. The first are the basic characteristics of the aggregate (point and interval individually for each indicator: average, variance, standard deviation, coefficient of variation, skewness, kurtosis and corresponding confidence intervals). Processing of an empirical material at this stage is resulted in [5]. On the second – the interference and difference of the signs is estimated. The modern condition of the development of methods of the correlation analysis, an estimation of statistical hypotheses and a problem of their application in psychodiagnostics is described in the monography [4], by the results of the testing of cadets in [6] the correlation analysis by the newest and traditional techniques, on which basis several new laws of signs are revealed, is carried out, and the received calculations have made a basis of this research. At the third stage

of allocation of homogeneous groups it is spent on persons and signs. With reference samples (they are called educational) group is held by the discriminant analysis, in the absence of their methods of cluster analysis [7]. The fourth stage - methods of the factorial and componental analysis - the most developed means of the studying of the structure of set. An underlying cause of these methods are assumptions, concerning an existence of signs which directly are not observed (they have the name of factors or a component). To invent and estimate them it is possible only in the course of research of the received data from initial signs, where the quantity of signs by which each of respondents is characterized.

Thus, mathematical data processing is reduced to the complex, stage-by-stage analysis of sample on each of four stages, and an ultimate goal of this analysis are revealings and interpretation of latent factorial model (FM). The factorial model represents further an underlying cause of the formalized techniques of an estimation of professional qualities and selection of the MIA employees as the element psychograms. We will notice, that for today does not exist any psychogram in the directions of the MIA activities (psychogram is its integral part) which would satisfy the experts in full.

Theoretically psychogram unites in itself some personal levels: psychological, psychophysiological, motivational, behavioural, social, professional etc. Offered factorial and cluster models considers first two levels. The analysis of corresponding scientifically-practical materials, functional duties and standard documents which regulate the activity of the practical psychologist, has allowed to define the approximate list of the desirable personality-typological characteristics of the psychologist-ideal factorial model. In the course of professional selection the practical psychologist compares ideal and empirical models and draws a conclusion about the degree of conformity of the candidate for position.

In the creation of the system in different directions of researches were engaged J. P. Guilford (1959), R. B Cattell (1970), V.F.Petrenko (1988), D. Pibodi (1993), V. I. Pohilko (1984), L. L. Thurstone (1955), With. \exists Osgood (1957), G. Shmelev [8], O. R. Malhazov [4], V. A. Jadov (1988). From them we will note "system V5" (G.

Shmelev): extravercy-introvercy, sociability, consciousness, emotional instability, intelligence (in understanding of an openness to new experience) and "the system E-R-A" (E. Osgood): an estimation, force, activity (evaluation-potency-activity). In the construction of factorial models the important role plays a psychosemantic direction of psychology (V. F. Petrenko, G. Shmelev, D. Pibodi). Modern researchers agree that these systems do not respond fully to the mathematical and psychological correctness, (firstly informality, shaft and reliability, and, secondly, crosscultural and situational firmness [9]). It is necessary to carry research which was spent by O.R.Malhazov [4] on the student youth Olympics sports and was aimed at the identifying of the psychophysiological, psychological and motivational components of individual athletes and support of basic differences between bright extraverts and introverts. Unfortunately, within the limits of MIA similar factorial structure till now is not created, therefore and research in these directions remains actual.

In this work the psychological structure - factorial model of the person which differs from specified classical, on a material of interrogation of cadets of 1–3 courses is constructed. Allocation of subgroups of factors by results of multidimensional testing has allowed to define group tendencies and individual characteristics of cadet's youth.

In the course of psychological diagnostics the battery from 5 techniques (Leongard-Shmishek, by G.Ajzenk, the Tepping test, L. Terstoun, J. Streljau) which have passed full check on the informality, validity and reliability [4], has been used. Their second feature – communication with variety of physiological characteristics, such as a course of sensomotor and informative processes (a threshold of distinction of visual sensations (Petrov's ruler), accuracy of 10 perceptions of a second interval, accuracy of reproduction of the set efforts, reaction on POP, etc. It is necessary to notice the volume and speed of switching of attention, that for more thorough diagnostics, i.e. For specification of psychological filling of characteristics of the basic battery of techniques and concrete behavioural displays in a typical situation it is necessary to add techniques

on motivation (motivation of educational activity and persistence of the informative motives, diagnostics of level of uneasiness of the person (Taylor), techniques of definition of the level of the subjective control, Elers, Schubert, Gorbov-Shult). Nevertheless owing to labour input of the general problem at this investigation phase we will be limited only to 5 specified base techniques. The factorial model offered on their basis differs from the systems formed on the basis of especially psychological indicators with use of tests and various sociological techniques.

The basic toolkit of the construction of modern psychological models - the factorial analysis (FA), its application - a challenge for practical psychologists. Complexity consists in the fact that the methods of the factorial analysis demand knowledge of higher mathematics. Reductions of the quantity are replaceable (a reduction of data) and definition of structure of interrelation between replaceable (classification replaceable) are main objectives of FA.

FA is the powerful instrument of the search of latent laws of the investigated phenomenon and remains for today the most popular method of the analysis of data [9-10]. To the most widespread technicians of the factorial analysis carries a method of the main things a component, not weighed least-squares method, generalized least-squares method, methods of the maximum credibility, factorization of the main axes, an alpha factorization and a method of the analysis of images, and for the reference of factors - варимакс, a straight line oblamin, kvartimax, eqvimax and promax. As an experience of many practical psychologists shows, psychodiagnostics problems in the greatest measure referred to the method of the main things a component with the following reference varimaks. This approach is realized by us in the program MathCad-10 with control calculations in the system SPSS-11. Factorization (on the basis of 5 involved tests it has been generated 28 parametre-replaceable) has shown five most influential factors, which are presented in the table 1 as the reduction of factorial loading (see Tab. 1).

Let's consider more detailed results of the factorial analysis. The first factor includes 13 scales, but on the basis of the "most powerful" of them we can interpret it, as "social adaptability". In understanding of a social direction (social fitness, social distinguishments and harassments) it is characterized with excitability, requirement of leadership and dialogue (communicability). These properties as a whole specify of an accessory in the social sphere. The second factor can be defined, how "vigour" (in value of intellectual activity) as the parametres included in it are characterized by a power estimation, i.e. internal and external intellectually-emotional expenses. Scales which are included in the third factor, are allocated with dominating communication of the intellectual activity (imagination, dream) with the world of feelings. Therefore after C. E. Osgood and G. Shmelev (B5) we name it "estimation" [8]. The factor 4, "physical activity", does not possess, as other factors, the difficult psychological structure. The parameters, included in it, are characterized by the domination of external structure. They are characterized by the domination of external activity in a combination with a phase of a dysthymia, that is atypical enough for the psychodiagnostic researches. Probably, such unilateral communication of a depressive phase (an interpretation of the variant dysthymia by Shmishrck technique), is explained that people with domination of physical activity (permanent requirement for physical activities) constantly are in a condition of moral weariness, as a consequence of that. The fifth factor is mainly the cluster of inborn traits (physiological indicators) that characterize the nervous system or temperament. This factor includes settings of the tepping-test and extraversion-introversion according to H. J. Eysenck. From here and the factor name - "heredity" (genotype).

Thus, the system of factors of a kind: "social adaptability" - "intellectual activity" - "estimation" - "physical activity" - "heredity" is constructed.

Let's make some remarks. First, the received system co-ordinates with the results of cluster analysis spent on the same set by a method "sheaf" [6], where also it is received by five latent signs with similar interpretation and considerable

influence on a variation of a dispersion of the genetic factor (a scale of the tepping-test and extraversion after H. J. Eysenck) is revealed. Secondly, the allocated factors with some stretch include global E-R-A factors (so, for example, the first factor which can be defined in general as a force or social domination), and to coordinate with system V5 (factors of the big five) that confirms the research of G. Shmelev also proves their supersituational (superselective) firmness. The calculations spent in program SPSS-11, have confirmed the received conclusions. Some differences do not influence essentially the structure of the constructed model. Received results require the further specification at the expense of expansion of the battery of techniques which satisfy modern psychodiagnostic requirements, and application of other sets according to testings of the cadet youth.

According to the author, the offered approach and the factorial model can be used for the creation of the psychogram components for the professional selection on the position both of the practical psychologist, and other specializations in the system of law enforcement bodies.