

Psychological features of servicemen's psychomotor preparation in extreme conditions of activities

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R. T. Simko. Psychological features of servicemen's psychomotor preparation in extreme conditions of activities. The general description of the development of psychomotor preparedness of servicemen of the Armed forces of Ukraine in extreme conditions of activities is given in the article. It is stated that the servicemen's psychomotor development is influenced by their personal qualities. It is established that there is a certain correlation between the level of psychomotor preparedness and personality traits of subjects of extreme activities.

The psychomotor (physical) preparedness of servicemen is studied by means of establishing the level of development of such qualities as speed – running at 100 m, strength – tightening on a high bar, endurance – running at 1000 m, agility – possession of hand-to-hand combat techniques.

It is proved that psychomotor preparedness of servicemen is a process of development of their physical (psychomotor) qualities. An element of the psychological structure of psychomotor training of servicemen is the concept of their own psychomotor qualities that affect their personality traits.

It is revealed that servicemen with high personal anxiety in extreme situations can not fully disclose their psychomotor capabilities. A significant reduction in the level of personal anxiety with an increase in the level of psychomotor preparedness provides benefits in many extreme situations and allows you to feel comfortable.

It is established that the level of psychomotor preparedness of a subject of extreme activities affects such three classical factors as assessment, strength, activity.

Key words: psychomotor qualities, servicemen, extreme conditions of activities, personality traits, psychomotor preparedness.

Р. Т. Сімко. Психологічні особливості психомоторної підготовки персоналу в екстремальних умовах діяльності. У статті

подано загальну характеристику розвитку психомоторної підготовленості військовослужбовців Збройних сил України в екстремальних умовах діяльності. Констатовано, що на розвиток психомоторики військовослужбовців впливають їх особистісні якості. Установлено, що існує певний взаємозв'язок між рівнем психомоторної підготовленості й особистісними рисами суб'єктів екстремальної діяльності.

Досліджено психомоторну (фізичну) підготовленість військовослужбовців за допомогою встановлення рівня розвитку таких якостей, як швидкість – біг на 100 м, сила – підтягування на високій перекладині, витривалість – біг на 1000 м, спритність – володіння прийомами рукопашного бою.

Доведено, що психомоторна підготовленість військовослужбовців є процесом розвитку їх фізичних (психомоторних) якостей. Елементом психологічної структури психомоторної підготовки військовослужбовців є поняття про власні психомоторні якості, що впливають на їх особистісні риси.

Виявлено, що військовослужбовці з високою особистісною тривожністю в екстремальних ситуаціях не можуть повністю проявити свої психомоторні можливості. Значне зниження рівня особистісної тривожності зі зростанням рівня психомоторної підготовленості надає переваги в багатьох екстремальних ситуаціях і дає змогу почувати себе комфортно.

Установлено, що рівень психомоторної підготовленості суб'єкта екстремальної діяльності впливає на такі три класичні чинники, як оцінка, сила, активність.

Ключові слова: психомоторні якості, військовослужбовці, екстремальні умови діяльності, особистісні риси, психомоторна підготовленість.

Formulation of the problem. The personality traits influence on the level of psychomotor preparedness of servicemen. The study of the interrelation of human character traits and psychomotor readiness is an important scientific and practical task of psychology. The solution to this problem depends on the type of activities that is carried out under extreme conditions requiring a significant manifestation of psychomotor preparedness. Especially when its level depends on the effectiveness of the professional activities of the subject, the preservation of life and health [3; 6; 7].

Typically, servicemen operating in extreme conditions have a higher level of psychomotor readiness, a lower level of anxiety, a higher degree of concentration on external objects, a lower degree of dependence [5; 9; 10]. At the same time, the link between the performance of the activity in which it is necessary to identify a significant level of physical (psychomotor) qualities and personality traits

of the subject is complex and ambiguous. That is, on the one hand, the presence of certain psychomotor qualities makes it possible to predict behavior and success in solving professional problems, and on the other – such a forecast is not accurate [2; 4; 13].

Y. P. Ilin, comparing the personality traits of athletes and non-athletes, notes that athletes have social motivation, self-esteem, persistence, confidence, emotional stability, power and desire for dominance, to achieve a high social status [5, p. 188]. Instead, the specifics of the relationship between psychomotor preparedness of servicemen and their personal traits in extreme conditions of activities are still not clear.

The purpose of the article is to investigate the features of psychomotor preparedness of servicemen in extreme conditions of activities and its influence on personality traits.

In order to achieve the goal, a psychomotor preparedness for speed, strength, endurance, and agility was investigated among 30 servicemen of the demining center of the Main Department of Operational Support of the Armed forces of Ukraine in Kamianets-Podilskyi.

It is known that the speed has the following manifestations: the time of one movement, the time of response to the signal, the frequency of movements. A person has a weak correlation between these manifestations of speed or has not any. It is also necessary to take into account that in actual (and not in a laboratory) conditions of life the speed of movements is influenced by anthropometric features of a person [4, p. 136], morpho-functional features of muscle fibers and motor neurons.

Consequently, speed is a complex concept, the content of which comprises the features of physiology, and psychology [1, p. 19–20]. In our study, the speed indicator of the subject was its result in running at 100 m.

The ability of a person through muscular contractions to counteract external forces, overcoming external resistance is psychomotor quality – strength. One distinguishes the absolute and relative strength of a man. Relative strength is determined by the division of absolute force into the mass of a person. The ability to detect force, in addition to the mass of muscles, their structure and qualitative features, is influenced by coordination mechanisms (coordination of muscles of synergists and antagonists) and emotional-volitional processes of a person.

«Strength is almost entirely a physical feature of the body. It directly depends on the volume and quality of the muscle mass and indirectly from other circumstances» [1, p. 19–20]. We determined the strength of the subjects as a result of tightening on a horizontal bar.

The ability of a person to perform a long-term job, without degrading its quality and without reducing intensity, is called endurance. This psychomotor quality is tightly connected with volitional efforts, because after a fatigue, the maintaining the necessary intensity and level of work is possible only with the help of volitional efforts.

The expression of endurance of the subject is influenced by the motivation. The increase in the significance of psychomotor activity can increase endurance of man more than twice (for example, team competitions) [4, p. 144–145].

We studied physiological (psychomotor) quality of endurance in terms of running at 1000 m, taking into account the study of M. Illina, who proved that people with a strong and weak nervous system in performing work with high and medium intensity endurance due to different psychophysiological mechanisms may be the same.

The psychomotor quality of dexterity was investigated for possession of methods of hand-to-hand combat. In this capacity, all psychomotor findings are integrated. It is taken into account that «physical qualities are realized according to the corresponding laws, the main of which are the following: the need to understand the structure of each physical quality; elucidation of the nature of the most important elements of physical qualities; focusing on individual elements of physical quality; using self-adjustments to increase the limitations of physical qualities; search for additional landmarks in the mastery of the structure of a particular physical quality» [9, p. 63].

All subjects under the results of each test and in accordance with the established norms, received an assessment on a four-point system. Then the average score of each of the subjects was calculated, which represented his level of physical (psychomotor) preparedness. Then the subjects under study were divided into three groups. Representatives of the first group had a excellent level of psychomotor preparedness ($n = 8$), the second – a good one ($n = 16$), and the third – a satisfactory one ($n = 6$).

At the next stage of a study using the test of C. Spielberger, adapted by Y. L. Hanin [11, p. 75–79], self-esteem of situational and personal anxiety of servicemen was studied.

The STAJ method is a kind of combination of the three tests of «Kettel’s and Schaefer’s anxiety scales, the «anxiety» scale (MLS) of Shaylor and Welsh’s anxiety scales» [2, p. 310]. It fixes the anxiety that manifests itself in the person’s tendency to experience anxiety and fear in certain situations or in most circumstances without objective reasons. Situational anxiety is manifested only in specific situations. Personal anxiety means that a person perceives various threats (self-esteem, authority, health) to different circumstances of life, and this becomes his/her stable trait (A-trait). S. Spielberger conceptually examined anxiety from the positions of psychoanalysis [14]. Today it is unequivocally proven that excessively high personal anxiety directly correlates with neurotic disorders [8].

By the level of anxiety, the subjects can be divided into three groups. The first group comprises the subjects with a low level of anxiety (situational anxiety – 32,51±0,59, personality anxiety – 28,63±0,48). The second group – subjects with an average level of anxiety (situational anxiety – 37,03±0,72, personal anxiety – 32,92±0,61). The third group is surveyed with a high level of anxiety (situational anxiety – 46,28±0,67, personality anxiety – 38,44±0,71). The results obtained by us are presented in Table 1.

Table 1

The expression of personality traits (in points) of servicemen with different levels of psychomotor training

Level of expression of psychomotor preparedness	Situational anxiety, M±m	Personal anxiety, M±m
High level, n = 8	32,51±0,59	28,63±0,48
Average level, n = 16	37,03±0,72	32,92±0,61
Low level, n = 6	46,28±0,67	38,44±0,71

The significant decrease in the level of personal anxiety with the increase in the level of psychomotor preparedness revealed by us is explained by the fact that the high level of psychomotor qualities of the subject of activity is perceived by him as a factor that gives advantages in many extreme situations, allows us to feel comfortable.

Observations show that servicemen with high personal anxiety in extreme situations can not fully disclose their psychomotor capa-

bilities. Usually, they feel constrained (the motive for avoiding failure dominates), that limits the appearance of psychomotor qualities. At the same time, servicemen with an extremely low level of anxiety due to their lack of motiveness can not, as a rule, reveal all their psychomotor capabilities. Consequently, a certain level of anxiety is natural and necessary for a personality.

Then we applied the personality-based differential [8, p. 94–97]. The method of the semantic differential was developed by C. Osgood (co-authored), adapted by the staff of the psycho-neurological institute named after V. M. Bekhteriev for the study of personality traits in clinical psychological and psycho-diagnostic work [8]. This methodology, which is a kind of combination of the method of controlled associations and the procedure of sculpting [2], allows us to study three classical factors of the servicemen: assessment (A), strength (S), activity (A) (Table 2).

Table 2

**Expression of personality traits (in points) of servicemen
with different levels of psychomotor training**

Level of expression of psychomotor preparedness	Score, $M \pm m$	Power, $M \pm m$	Activity, $M \pm m$
High level, n = 8	10,24±0,41	13,84±0,32	5,18±0,33
Average level, n = 16	9,91±0,37	10,54±0,35	4,80±0,31
Low level, n = 6	6,82±0,29	8,39±0,26	4,68±0,24

The assessment (A) characterizes the level of self-esteem. «The high significance of this factor suggests that the subject takes himself as a personality inclined to realize himself as the bearer of positive, socially desirable characteristics, in a sense satisfied with himself» [8, p. 95], and for the low values, on the contrary. The results of the study showed that in the group with a high level of psychomotor preparedness, the factor of evaluation is 10,24±0,41, with an average level of 9,91±0,37, and with a low level of 6,82±0,29 points.

The factor of strength (S) characterizes the level of volitional personality manifestations. «His high values speak of self-confidence, independence, the propensity to rely on their own forces in difficult situations. Low values indicate insufficient self-control, failure to adhere to the accepted line of conduct, dependence on external circumstances and assessments» [8, p. 96]. Studies have shown that in the first group the factor of strength is 13,84±0,32,

in the second – 10,54±0,35, and in the third one – 8,39±0,26 points. Activity factor (A) characterizes the level of personality extraversion. «Positive (+) values indicate high activity, propensity to communicate, impulsivity; negative (-) – on introvertibility, certain passivity, calm of emotional reactions» [8, p. 96]. The results are as follows: the first group – 5,18±0,33, the second – 4,80±0,31, the third – 4,68±0,24 points.

Then, we used A. Assinger’s test [12, p. 45–48], which divides the studied subjects into three groups by the level of manifestation of aggressiveness: moderate aggressiveness; excessive aggressiveness; excessive peacefulness. The obtained experimental results are presented in Table 3.

Table 3

Expression of aggression (in points) of servicemen with different levels of psychomotor training

Level of expression of psychomotor preparedness	Aggressiveness, M±m	Efficiency in extreme conditions, M±m
High level, n = 8	43,73±0,96	10,17±0,39
Average level, n = 16	42,56±0,98	8,94±0,36
Low level, n = 6	37,82±1,23	6,79±0,31

We took into account the fact that the subjects with moderate aggressiveness (36–44 points) are sufficiently self-confident and ambitious. These are subjects with an adequate response to the circumstances with the realized need for self-assertion. Aggressiveness is both an emotional state and a feature of character that can represent the deep essence of man.

The second group is surveyed with excessive aggressiveness (45 or more points). Their behavior is more impulsive in the heat of passion, accordingly, there is anger and rage, there is some loss of self-control. At the same time, aggression, as a certain pattern of behavior, can be intentional to achieve the desired goal. It is possible to show brutality to other people, to neglect their interests and rights.

The third group is surveyed with excessive peace (35 points or less). Usually such a person’s behavior is conditioned by the lack of self-confidence, lack of determination. In extreme expressions, excessive peacefulness can be limited to depression.

Consequently, aggressive behavior of servicemen should have the best outcomes. At the same time, in difficult and dangerous conditions of professional activities of servicemen it can grow.

Among the subjects with a high level of psychomotor preparedness, the indicators of aggressiveness were $43,73 \pm 0,96$ points, and the subjects with an average level had $42,56 \pm 0,98$ points. The difference between arithmetic meanings ($0,17$ points) is statistically insignificant $p > 0.05$. The expression of this indicator of subjects with low level of psychomotor preparedness was $37,82 \pm 1,23$ points. The difference between the average arithmetic expression of aggressiveness of subjects with average and low level of psychomotor readiness ($4,74$ points) is statistically significant $p < 0.01$.

Observations prove that aggression as a motivated destructive behavior of the subject causes other people physical or psychological harm. «Psychologically aggressive behavior is one of the main means of solving problems associated with the preservation of individuality and identity, with the protection and growth of dignity, self-esteem, as well as the preservation and strengthening of control over the essential for the subject environment» [10, p. 11].

Consequently, aggressive (physical and verbal) actions can be a mean to achieve an important goal, a way of psychological disorientation or satisfaction of the need for self-affirmation.

The manifestation of the effectiveness of activities of servicemen in extreme conditions is a complex indicator of their professional skills. It is determined by a number of developed and formed psychological characteristics of the subject, which meet the complex conditions of its activities. Among the subjects with a high level of psychomotor preparedness, the indicator of the effectiveness of activities in extreme conditions was $10,17 \pm 0,39$ points, and the subjects with an average one had $8,94 \pm 0,36$ points. The difference between the arithmetic mean ($1,23$ points) is statistically significant $p < 0,05$. Among the subjects with a low level of psychomotor preparedness, the effectiveness of activities under extreme conditions was $6,79 \pm 0,31$ points. The difference between the average and arithmetic of this indicator of the subjects with a mean and low level of psychomotor preparedness ($2,12$ points) is statistically significant $p < 0,001$.

Psychomotor training of servicemen is a process of development of their psychomotor (physical) qualities. The elements of the psychological structure of psychomotor training of servicemen include: the concept of their own psychomotor quality of the subject; ideas about their own psychomotor qualities; specialized feelings and perceptions of manifestations of psychomotor qualities.

Conclusion.

1. Servicemen, as subjects of extreme activities, have a correlation between the expression of personality traits and their psychomotor readiness. That is, the influence of personality traits on the development of psychomotor qualities has been proved.

2. Psychomotor preparedness, along with other components of preparedness for action, determines the ability of the subject to perform it in risk-prone conditions.

3. The servicemen with a high level of psychomotor preparedness have the more pronounced those personality traits that are associated with the desire to fulfill their professional duties in extreme conditions of activities. At the same time, a desire for advantage in a situation can form an egocentric personality with excessive aggressiveness and other negative features.

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АДАПТАЦІЯ ДІТЕЙ РАНЬОГО ВІКУ В УМОВАХ ДОШКІЛЬНОГО ЗАКЛАДУ

Slavina N. S. Adaptation of children of early age in the conditions of a pre-school institution / N. S. Slavina // Problems of Modern Psychology : Collection of research papers of Kamianets-Podilskiy National Ivan Ohiienko University, G. S. Kostiuk Institute of Psychology of the National Academy of Educational Sciences of Ukraine / scientific editing by S. D. Maksymenko, L. A. Onufriieva. – Issue 40. – Kamianets-Podilskiy : Aksioma, 2018. – P. 363–373.

N. S. Slavina. Adaptation of children of early age in the conditions of a pre-school institution. The article presents the scientific and theoretical analysis of the state of development of the problem on adaptation of children of early age in the conditions of a preschool institution. It is determined that the problem of adaptation to the conditions of a preschool institution concerns a child aged 2–6 years. It turns out that the process of gradual entry into the world of widespread social connections and its development was called socialization. It is noted that socialization provides individualization, because only in social connections, communication, interaction, self-determination takes place in the socio-cultural space and self-awareness is developed. It is proved that the formation of a personality in preschool years is a progressive development of «Me» at every new stage of childhood. It is stated that the first impressions and first lessons of communication are taken by a child in the family: here he / she feels the attitude towards him / herself, observes the relationship between adults, takes over their forms of behavior, here the moral features of his / her character