



STUDY OF RISK FACTORS AT PSYCHIATRIC EXAMINATION OF SELECTEES

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Abstract

Studies on the role of social and biological factors in formation and development of mental disorders in infancy, their delayed manifestation at adolescence and junior age are reflected in numerous works.

The number of young men with risk factors in anamnesis, with characteristic features of personality makes a rather large group according to both literature data and results of our studies. However, according to scientific publications, even being practically healthy the recruits experience great difficulties at allocation into military units with high health status requirements.

Clinical study of 147 young men called up for military service included detection of complaints with estimation of the psychical state, collection of anamnesis about diseases they had, their pre-morbid medical and psychological characteristics, behavior, and interpersonal attitudes. Special attention was paid to detection of harmful factors of the perinatal period.

Unfavorable sociobiological factors of perinatal period in anamnesis of young men called up for military service and detected personal features can be considered the basis for risk group identification and provision of corresponding precautionary actions during the period of military service.

Generalizing work experience gained by Military-Medical Committee and the results of our studies, we have to emphasize: those selectees, who are risk factors carriers, experience difficulties during military service, if involved in units with high requirements to health. Detection of risk factors at complex medical examination and comparison of data with the clinical diagnosis allowed us to evaluate their role and significance, high probability of their participation in formation of not only characteristics of personality, but mental disorders as well.

Health of a man in special or extreme conditions, the effectiveness of his activity are closely connected with reliability of his psyche: whether the person evaluates and reacts adequately to the changed conditions. Indeed, disorders and peculiarities of personality stipulate the highly complex and low predictability of behavioral reactions at interpersonal attitudes in complicated situations. Prevalence of personality pathology in the structure of all mental disorders is noted both at selectees and at soldiers, who are considered ineligible for military service.

At examining selectees, the complexity of medical check-up becomes necessary, as well as application of methods, which could complement clinical research by studies on peculiarities of the personality. Psychological testing, which we performed using Lyusher's color test, refers to such kind of methods.

Identification of risk group can be highly significant for prognosis of reactions and behavior of recruits in extreme cases and, to a certain extent, for timely detection and prevention of critical situations.

Keywords: sociobiological risk factors, perinatal period, characteristics of personality.

INTRODUCTION

Labor of a military servant, both in general and extreme conditions, differs by high nervous and emotional stress. A soldier should be capable to rather high volitional tension, capable to keep steady-

ness under the influence of emotional stresses, as far as military service makes higher demands to his neuropsychic sphere.

Studies on the role of social and biological factors in formation and development of mental disorders at infancy, their manifestation at adolescence and junior age are reflected in numerous works.

According to both literature data and results of our studies, the number of young men with risk factors in anamnesis, with specific characteristics of

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personality makes a rather large group. However, though practically healthy, they experience great difficulties at allocation into military units with high requirements, have difficulties with adaptation to conditions of military service, as a result of which, according to literature data, decompensation can develop in these youths, especially during the first months of service [Koshes R., Rothberg J., 1995].

Influencing organism as a whole, mentioned states cause disorders in activity of all systems and particularly have a significant influence on metabolic processes, vegetative nervous system resulting in vegetative lability (vegetative stigmatization).

However, as mentioned above, the consequences of this influence do not always manifest at once; the relation between them is not always evident: considerable time passes before these or those symptoms manifest as character anomalies or pathocharacterologic reactions [Piven B., 2002].

The affection of a developing brain and disorders of neurohumoral regulation caused by it might become a basis for disharmonic course of perinatal and postnatal ontogenesis. Therefore, according to G.E. Sukhareva, "psychopathologic characteristics and dynamic of post-infectious and posttraumatic changes depend not only on harmful factor, its aetiology, ruggedness and sharpness of activity, but also on the age, at which the child got affection of brain" [Sukhareva G., 1974].

I.Y. Gurovich and co-authors also noted, if immature brain is affected, then, alongside with changes of psychical functions, the disorder of brain development dynamics takes place and its potential capabilities get affected as well [Gurovich I. et al., 1992]. The result of that all is complexity of the clinical picture of a residual state. The harm caused by the disease declares itself either by disorder of intelligence development, or predominant manifestation of "emotional-and-volitional disorders in the form of psychopathy-like, apathy-abulia states, irreversible cerebrostenic syndromes. Often this picture is complicated by not right interrelation of a diseased child with the environment, which makes his psychical state even worse" [Sukhareva G., 1974].

Dynamics of residual organic states caused by affection of brain is followed by insufficient regulation by the central nervous system (CNS), which deranges adequate adaptation of an organism; that is why even minor exogenous factors can cause inadequate reactions in future.

According to G.E. Sukhareva, the largest group of residual organic manifestations in childhood and adolescence after such harms as infections, traumas, etc. make psychopathy-like states, in the clinical picture of which disorders of emotional-and-volitional sphere and attractions generally occur; however, with the lapse of time, intensity of these manifestations decreases. In contrast, at expressed cerebral affection at early stages of ontogenesis and occurrence of development defect, formation of organic psychopathies takes place [Sukhareva G., 1974].

Thus, the anomaly of development occurring on the base of residual cerebral inefficiency is considered a pathogenetic base of the given group of disorders. In future, early cerebral affection brings to different defects of CNS formation, to its disharmonic development. Moreover, researchers of this problem emphasize that at CNS early affection by infectious and toxic agents, damage of not entirely formed structures and disorder in germs of future complex systems take place.

MATERIAL AND METHODS

Clinical study of 147 young men called for military service included:

- detection of complaints with evaluation of psychical state;
- collection of anamnestic data about the diseases they had, premorbid medical and psychological characteristics, behavior and interpersonal attitudes.

Special attention was paid to detection of harmful factors of the perinatal period.

RESULTS

Study on anamnestic data of the examined group allowed to detect a number of unfavorable sociobiological factors in all selectees (Table 1).

Table 1 testifies that by frequency of occurrence infections at perinatal age were on the first place: 29.9%; headaches made 25.4 % cases, craniocerebral injury: 17.7%, hereditary load: 17.0%, speech disturbances: 11.6 %, obsessions: 10.9%, spasmodophilia and hyperthermic spasms: 10.2%, incomplete family: 9.5 %, bringings to police: 5.4 %, asphyxia: 4.8 %, enuresis: 2.7 %.

In combination these factors (two or more) were identified at 9.52% of psychically healthy selectees, at 19.0% psychically healthy subjects with accentuation of character, at 14.96% with psychopathy, as well as at all those with neurosis (10.2%), at all ex-

amined persons with organic affection of CNS (8.1%), and at 6.8 % with oligophrenia.

Thus, in anamnesis of 101 (68.6%) from 147 persons examined by us, unfavorable sociobiological factors were detected. Psychically healthy subjects, including those with character accentuation, made 42 (28.7%). Table 2 reflects mentioned data.

DISCUSSION

Represented data testify to the presence of risk factors, which, according to the above-mentioned literature, declare themselves as pathogenic and play a definite role in development of mental disorders and changes of a person, changes of the affective sphere. However, the state of emotional-and-affective sphere, as well as variety of emotional disorders have a great importance in detection of personal characteristics of a man.

Naturally, not always their presence at practically healthy subjects speaks about pathology. However, even at practically healthy people minor vegetative disorders, nervous reactions, aberration in the emotional sphere at everyday troubles are noted. Hence, it is necessary to take into consideration the role of these factors involvement as pathogenic ones, not only in people with accentuation of character, with states marginal to norm, but even at practically

Table 1.
Unfavorable sociobiological factors at examined selectees by frequency of occurrence

No.	Risk factors	Absolute numbers	% P±m
1.	Infections at perinatal period	44	29.9 ± 3.8
2.	Headaches	38	25.4 ± 3.6
3.	Craniocerebral injury	26	17.7 ± 3.2
4.	Hereditary load	25	17.0 ± 3.1
5.	Speech disturbances	17	11.6 ± 2.6
6.	Obsessions	16	10.8 ± 2.6
7.	Spasmophilia and hyperthermic spasms	15	10.2 ± 2.5
8.	Incomplete family	14	9.5 ± 2.4
9.	Bringings to police	8	5.4 ± 1.9
10.	Asphyxia	7	4.8 ± 1.8
11.	Enuresis	4	2.7 ± 1.9

Table 2.

Prevalence of risk factors in the examined group

Diagnosis	Selectees (n=147)	
	n	% P±m
Mentally sane	14	9.52±2.4
Mentally sane with accentuation of character	28	19.0±3.2
Psychopathy	22	14.96±2.9
Neuroses	15	10.2±2.5
Organic affections of CNS	12	8.1±2.3
Oligophrenia	10	6.8±2.1
Altogether	101	68.6±3.8
Uncovered	46	31.4±3.8

healthy persons, to which the experience of activity performed by military- medical committees testifies. Young men, being bearers of risk factors and being involved into military formations with high requirements to their health state, experience difficulties in army [*Military Psychiatry, 2001*].

According to S.Yu. Palatov, mentioned factors of biological and micro-social character can bring to manifestation of personal disorders, become a base for further development of mental disorders, patho-characterologic reactions, etc. [*Palatov S., 1999*]. However, the above-mentioned status is not always revealed and appropriately evaluated at diagnosis.

Hyperthermic spasms, infections, intoxications occurring as a results of craniocerebral injuries and pregnancy, unfavorable psychological climate in family, etc. – all these harmful factors are able to bring to anomalies in psychical development, formation of deviant behavior, dysfunction of cerebrum with changes of personality, particularly those of organic type. At expressed affection of brain, these factors can facilitate formation of psychoorganic syndrome, reduction of intellectual processes [*Dmitrieva T., 1997; Nicol R., Hoile O., 1998; Butorina N., Kuprin I., 2002*].

According to B.N. Piven, detection of clinical signs of the psychoorganic syndrome expressed even in a mild form (dizziness, headaches, poor tolerance of heat, trips in transport, etc.) is, one of the most important phases of the diagnostic process [*Piven B., 1998*].

However, these signs are often omitted at clinical

diagnosis. At residual pathology the occurrence of mildly expressed somatovegetative disorders is considered as situational complaints of hypochondric character, as adjusting, “studied” ones. Consequently, personal peculiarities are not clearly qualified and fail to be taken into account as significant, while deviant behavior is often considered situational, conditioned with mobilization, expert situation, and eagerness of the selectee to aggravate his state with the aim of avoiding mobilization.

According to P.B. Gannushkin, there is an intermediate sphere between disease and health that is characterized by states, which have nothing in common with disease or health, whereas in the sphere of emotional phenomena it is more difficult to detect the board between health and disease than in somatic sphere, and the intermediate “stripe”, which parts mind health from mind disease is very wide. There are numerous transitional stages between normal and pathologic phenomena, and the disease turns out to be closely related to health [Gannushkin P., 1933].

Thus, the mentioned risk factors can play role in formation of these transitional stages and detection of these risk factors at early period will allow to take preventive medical measures in due time: in childhood and adolescence and then at the age of selectees and soldiers. Observation over somatic health and psychical development from infancy-juvenile age and regular prophylactic medical examinations will favor psychical health strengthening in the mentioned contingent, as well as prophylaxis of formation and development of a person according to organic, neurotic, pathocharacterologic, psychopathic type, thus facilitating prevention of pathocharacterologic reactions, decompensation and, consequently, prevention of adaptation disorders in soldiers, especially during the first months of service.

Taking into consideration the above stated, at expert decision-making the similar factors should serve as signals for more accurate study of the examined ones in general, and, of course, in the aspect of revealing personal features conditioned by risk factors.

Health of a man in extreme conditions and effectiveness of his activity are closely connected with reliability of his psyche and degree of appropriateness, at which the person evaluates and reacts to the changed conditions. Disorders and peculiarities of personality stipulate the hardness and low predictability of behavioral reactions at interpersonal attitudes in complicated situations. Prevalence of per-

sonality pathology in the structure of all mental disorders are noted both at selectees, and at soldiers, who were considered ineligible for military service [Tiganov A. S., 1999; *Military Psychiatry*, 2001].

Thus, at examining selectees the complexity of medical check-up becomes necessary, as well as usage of methodic procedures, which could complement clinical investigation by study on peculiarities of personality. Psychological testing refers to those methods, which we used applying Lyusher’s color test [Walneiffner H., 1976; Sobchik L., 2000; Bazima B., 2001; Butorina N., Kuprin I., 2002].

Summarizing data of psychological study in selectees with the use Lyusher’s color test and analyzing the value of studied factors, we detected that the highest indices of susceptibility to decompensation were recorded at psychopathies and accentuations of character, especially at emotional stress. Moreover, characteristics of personality corresponded to clinical ones.

Consequently, pathocharacterologic features of a person, accentuation of character, especially in combination with harmful sociobiological factors in anamnesis, should be considered as potential risk factors.

Generalizing data of work experience gained by military-medical committee and the results of our studies, we have to emphasize that the selectees, who are carriers of risk factors, experience difficulties in army, if they are involved in units with high requirements to health [*Military Psychiatry*, 2001]. Risk factors detected at complex examination and their comparison with clinical diagnosis allowed us to evaluate their role and significance, the high level for probability of their participation in formation of not only personality characteristics, but mental disorders as well.

In the examined group, unfavorable sociobiological factors at perinatal period and peculiarities of emotional personality reactions were studied and analyzed. Heredity, diseases at perinatal period, unfavorable family conditions, neuroinfections, intoxications, craniocerebral injuries, stress, – all these factors were considered in anamnesis of the examined cohort. As known, the residual injury, if occurring as a result of mentioned factors, plays an important role in brain dysfunction [ICD-10]. Naturally, these risk factors are marked in anamnesis of practically healthy young men as well, not causing any pathological changes, but their presence, according to both literature data and our psychological study, testifies to “readiness” for occurrence of inadequate emotional reactions, vegetative disorders, neurotic

states, in particular at non-psychotic mental disorders, marginal states, accentuations of character.

According to our data, the specific weight of these perinatal pathogenic factors in subjects considered psychically healthy, including those with accentuation of character, made 28.6 % in the group of 147 selectees.

Personal characteristics, manifested as emotional instability, readiness for emotional disorganization also refer to risk factors. At psychological testing personal "deviations" were revealed in 68.6 % of the mentioned group. These risk factors can declare themselves in special situations in the form of psychopathic or personality character. Mere characteristics of personality specify the most complexity and low predictability of behavioral manifestations at complicated situations under conditions of military service, which are conditions of psychical tension for a person.

Naturally, at making diagnostic conclusion, the mentioned sociobiological factors in anamnesis of the examined young men, peculiarities of personality should be taken into consideration and serve as a base for comprehensive clinical-and-psychopathic and psychodiagnostic examination. It is reasonable to prepare personal characteristics for people of the risk group called for military service. The characteristics can be used at solving problems of completing military units, professional orientation and selection, allocation of mentioned cohorts to this or that subdivision, taking into consideration peculiarities of personality.

Presence of unfavorable sociobiological factors in anamnesis of selectees at perinatal period and identified personal characteristics can be considered a basis for risk groups identification and implementation of corresponding preventive measures during the period of military service.

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