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## **Mechanisms of formation of maladaptation states among internship doctors and approaches to their correction**

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### **Abstract**

A doctor's adaptation to medical activity has a great influence on the effectiveness of his professional activity. The objective: to explore individual psychological predictors of the formation of maladaptation states of internship doctors for the development of a system for their diagnosis, correction and psychoprophylaxis. A comprehensive clinical-psychological, psychodiagnostic and clinical-anamnestic examination of 213 internship doctors of the first year of training at Kharkov National Medical University, 116 women and 97 men, aged 22-25 years old had been conducted. It had been established that internship doctors are characterized by feelings of internal tension and dissatisfaction, decreased mood, irritability, anxiety, long-term uncertain negative emotions, unmotivated fears, self-doubt, doubts about making decisions, decline in intellectual activity in conjunction with increased exhaustion and withdrawal mercurial attention. We have developed a system of medical and psychological support during the professional training period depending on the type of disadaptation. The psychotherapeutic complex in the internship doctors included the use of rational psychotherapy, autogenous training (psychotonic version of Shogham-Mirovsky), art therapy, progressive muscle relaxation by Jacobson, cognitive-behavioral therapy of Beck, autogenous training in the modification of Lebedinsky - Bortnik, etc. were used. The results of a three-year catamnestic study proved the effectiveness of the proposed system of psychotherapeutic correction of disorders of adaptation, positive dynamics of the mental state was noted, the

maladaptive states were reduced; 92.6% of the examined recurrences of the violations of adaptation did not occur.

**Key words: internship doctor, maladaptation, psychological support.**

Changes in higher medical education, its integration into the European educational space requires new approaches to postgraduate medical training. The role of a doctor is decisive and leading at all stages of the medical-diagnostic and rehabilitation processes. The profession of a doctor is of great social importance, since it is the responsibility of health professionals not only for the physical health of the patient who entrusts the doctor with his life, but also for his mental health and social and psychological rehabilitation [1, 2, 3].

The main influence on the effectiveness of the professional activity of a doctor has its adaptation to the medical activity, due to the interaction of social, psychological and biological factors [4].

In the emergence and consolidation of the maladaptive reactions of doctors, a special role is played by individual psychological patterns of reactions, personality traits, type of compliance and those behaviors that the doctor implements in professional activities [5, 6].

The main tasks of postgraduate education of physicians, especially during the period of reformation, are to ensure both the improvement of professional training of interns and the provision of medical and psychological support of the doctor during the period of adaptation to professional activity [7, 8].

The foregoing stipulated the relevance and necessity of this study.

The purpose of the study is to explore individual psychological predictors of the formation of maladaptation states of internship doctors for the development of a system for their diagnosis, correction and psychoprophylaxis.

In order to achieve this goal, in compliance with the principles of bioethics and medical deontology, it was conducted a comprehensive clinical-psychological, psychodiagnostic and clinical-anamnestic examination of 213 internship doctors of the first year of training at Kharkiv National Medical University, 116 women and 97 men, at the age of 22-25 years old.

The study took place in three stages. The first stage included screening of adaptation levels among the internship doctors. There were the main group (internship doctors with signs of maladaptation) and control group (internship doctors with a sufficient level of adaptation). At the second stage it was conducted a comprehensive analysis of clinical manifestations and mechanisms of the formation of adaptation disorders among the internship doctors. At the

third stage, the developed system of complex psycho-correction and psychoprophylaxis influences was tested and a comparative evaluation of their effectiveness was conducted.

The results of the study indicated that the adaptation of the internship doctors to professional activity has to be considered as a dynamic, multifaceted and integrated process of development of skills to meet the requirements to the doctor in the period of his adaptation to professional activity. Regarding the results obtained in the study, 44.3% of men and 31.4% of women are adapted for professional activity. We distinguished three main levels of adaptation of a doctor to professional activity:

1. The high level (14.1% of surveyed internship doctors, 24.2% of men and 12.3% of women) – people have high level of work capacity, psychological comfort, availability of reserves for overcoming critical situations, objective difficulties connected with disadvantages in the modern organization of the medical process.

2. The average level (20.2% of the examined internship doctors, 20.1% of men and 19.1% of women) - reduction of working capacity and psychological comfort in crisis situations and in the presence of shortcomings in the organization of the medical process, with a rapid recovery in their resolution and preserving psychological comfort outside the working process.

3. The low level (65.7% of the internship doctors, 55.7% of men and 68.6% of women) - development of maladaptation states, psychological discomfort in everyday life. Constant feeling of dissatisfaction with themselves and their professional activities.

The risk factors for the development of adaptation disorders of the internship doctors include difficult working conditions, a lack of positive emotions at work and off work; awareness of inadequate level of competence; low level of motivation, lack of economic incentives; imperfection of the mechanisms of psychological protection; lack of self-regulation skills; conflicts in the medical environment; lack of professional communication.

A complex of biological factors that determine the defect of the morph functional substrate of the brain and contribute to the development of adaptation disorders in the examined internship doctors were distinguished: frequent catarrhal diseases (36.9%), craniocerebral traumas (16.3%), chronic tonsillitis and tonsillitis (22.5%), transmitted neuroinfection (5.6%), chronic somatic pathology (38.5%), alcohol abuse (4.1%), use of toxic substances (1.3%).

The abovementioned factors determine the biological basis and can be considered as basic in the formation of maladaptive states, the risk factors of which are the acquired defect

of nonspecific systems (mainly limbic) of the brain, which underlies the notions of “personality neurology”.

The results of the study indicated that internship doctors with impaired adaptation are characterized by feelings of internal tension and dissatisfaction (92.3%), decreased mood (63.1%), irritability (45.6%), anxiety (86.1%), long-term uncertain negative emotions (58.7%), unmotivated fears (38.2%), self-doubt (44.1%), doubts about making decisions (53.7%), decline in intellectual activity (18.9% the surveyed noted difficulties in understanding the input information) in conjunction with increased exhaustion (62.8%) and withdrawal mercurial attention (32.3%).

The data obtained during the study allowed to systematize the manifestations of maladaptive reactions and to highlight the following variants of maladaptive reactions among the internship doctors.

Asthenic reaction was characterized by the predominance of weakness, lethargy, rapid exhaustion, irritability, increased susceptibility to previously neutral stimuli, apathy, adynamia against the background of vegetative-visceral paroxysms, mild expressiveness of anxiety and depression on the Hamilton scale.

Hyperesthetic reaction was manifested by irritability, restlessness, impatience, increased with tiredness and tension, tendency to short or prolonged affective reactions, increased sensitivity to previously neutral stimuli, severe or moderately expressed anxiety and easily expressed depression on the Hamilton scale.

Anxiety-depressive reaction was determined by the dominance of the general anxious-depressive background mood, depression, irritability, hyperesthesia, feelings of anxiety, waiting for misfortune, internal tension, anxiety with the inability to relax, sleep disturbances, and severe or moderate anxiety and depression on the Hamilton scale.

Psychosomatic reaction was manifested by the development of psychosomatic diseases, concentrations of attention on the state of somatic distress, which was promoted by vegetative paroxysms, more often cardiovascular type, depressive and anxiety disorders within the framework of the light episode on the Hamilton scale.

Asthenia-apatitic reaction was characterized by manifestations of asthenia, combined with inactivity, indifference, lack of interest in communication on the background of low mood, apathy with moderate anxiety and depression on the Hamilton scale.

The addictive variant was significantly more characteristic for men; it was characterized by excessive use of alcohol, the use of narcotic and toxic substances, the gradual loss of situational control in the administration of psychoactive substances, as well as

the formation of various non-chemical types of dependence, depressive and anxiety disorders in the mild or moderate episode on the Hamilton scale.

In order to prevent and correct the disorders of adaptation to the professional activities of the internship doctors, we have developed a system of medical and psychological support during the professional training period, which involves the use of integrated psychotherapeutic and psycho-educational effects; establishment of the purpose of psychotherapy as an effect on pathogenetically significant biopsychosocial factors of the development of maladaptation; differentiation of tasks and amount of psychotherapy and psychocorrection according to the type of disadaptation.

The psychotherapeutic complex in the internship doctors with asthenic and astenopathy variants of maladaptation included the use of rational psychotherapy, autogenous training (psychotonic version of Shogham-Mirovsky) and art therapy.

In hyperemesis, short-term psychodynamic psychotherapy of Karvasarsky, cognitive training, progressive muscle relaxation by Jacobson, art therapy were used.

The main forms of psychotherapeutic influence with anxiety-depressive variant were personality-oriented psychotherapy, cognitive-behavioral therapy of Beck, autogenous training in the modification of Lebedinsky - Bortnik, art therapy.

In the psychosomatic version, it was used personality-oriented psychotherapy, Beck's cognitive-behavioral therapy, and the method of segment training according to V.I. Sukhorukov as a method of psychic self-regulation.

Psychotherapeutic program with addictive variant included indirect psychotherapy according to Velvovsky and autogenous training in the modification of Lebedinsky - Bortnik.

The results of a three-year catamnestic study proved the effectiveness of the proposed system of psychotherapeutic correction of disorders of adaptation among the internship doctors, while the positive dynamics of the mental state was noted, the maladaptive states were reduced; 92.6% of the examined recurrences of the violations of adaptation did not occur.

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