Shchepankov S.M. Dynamics of psychophysiological states in the military aviation personnel of the peacekeeping mission during the service in countries of the African continent. - Manuscripts.

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The dissertation presents a theoretical generalization and a new solution of the actual problem on determining regularities of transformation in the psychophysiological state of troops of the aviation units of the peacekeeping contingent in their military service in countries of the African continent, and recommendations worked out for assessment of the fatigue level, including preventive and rehabilitation measures for its reduction.

It was established that climatic conditions for occupational activity of the aviation personnel of the peacekeeping contingent in Liberia, in comparison with similar conditions in Ukraine, are characterized by stable indices of high temperature and air humidity, absence of clear climatic seasonality due to the temperature factor and its availability by indices of fall-outs as well as by exceeding the threshold of the meteorological sensitivity, according to parameters of air temperature changes within a "dry" season. Maintaining the artificial microclimate in the helicopter cabine promotes formation of feeling of a better temperature comfort in the crew, higher resistance to the effect of air humidity and to fall-outs in the "rainy season", and causes the effect of worse adaptation to changes in the air temperature within a day. The work of ground aviation technical personnel in the open air results in better adaptation to changes in the air temperature within a day, but contributes to formation of a feeling of worse temperature comfort, reducing resistance to the effect of humidity and fall-outs in the "rainy season". It is determined that intensity of a pilot’s work is estimated according to Class 3.1 by the Classification of Work on intensity (2014). The main factor affecting the intensity of work of such specialists is a fixed posture and a great number of stereotyped work movements. The severity of work of an aviation technichian depends, mainly, on the muscular load and on the forced work posture, and is estimated by Class 3.1. The tension of the pilot of the helicopter is estimated by Class 3.3, that of a ground aviation technician – by Class 3.2. The work of the helicopter pilot is rather complicated by its content and character; he responsible both for the result of the work and for the life of other individuals. The work of ground aviation technicians is monotonous with high emotional load, and is characterized by keeing to periodic regulated breaks.

There were established the terms for adaptation for the peacekeeping contingent in Liberia, and better progress in adaptation in pilots as compared to technicians. According to indicators of anxiety and depression in pilots, the mentioned processes in them are much more successful than in the technician personnel. With at the beginning of the rotation of a great number of pilots (40.48%) with a low level of emotional stability due to expectations of probable

danger, their adaptation is developing during the first four weeks of staying in the mission. In the technician personnel the adaptation is more prolonged (about 6 weeks) and requires a psychological support and rehabilitation measures.

The signs of significant similarity and differences in the processes of adaptation in pilots and technicians have been found. The availability of the identity in the dynamics of depression and the psychological climate in the team was related on the effect of the same external factors, and the difference in reactive anxiety and willingness to take risk was associated with the specificity of their occupational activity. There were distinguished three periods, characterized by the synchronization of changes in psychological indicators of both groups: the initial period of adaptation to new conditions of occupational activity and vital activity in tropic conditions, covering about two months; the period of stabilization of the psychological state of the military personnel, which covers about 5 months, and the final period – the last two months of staying in the mission. These regularities should be taken into account when planning a schedule of work loads for servicemen and when carrying out preventive measures aimed at health preservation and high working capacity of a peacekeeping contingent.

It was shown that the transformation of the hemodynamic characteristics in the aviation personnel within 9 months indicates the gradual development of the state of chronic strain in them. The mechanism of development of such state in both groups is different both by expressiveness of changes in hemodynamic parameters and by the structure of interrelations between parameters of hemodynamics and psychological qualities, manifested as associations of characteristics in the functioning of the CVS with stable (in pilots) and quickly changing parameters (in ground aviation technicians) of the emotional state. It was established that the level of nervous-emotional strain in military pilots, quantified by the degree of the connectivity of psychophysiological characteristics after the service in the peacekeeping mission in Liberia, has increased by 1, 3 times. An algorithm for estimation of individual and group neural-emotional strain in the aviation personnel of the peacekeeping mission has been developed.

A long-term participation of the flight crew in the peacekeeping mission (for 9 months) caused development of signifuicant fatigue, which is confirmed by worsened indicators of the latent period of the simple ocular-motor reaction by 1,3 times, variability of simple ocular-motor reactions – by 2,1, reaction to a moving object before a mark – by 1,6, the number of reactions to a moving object before a mark – by 1,9, the number of reactions to the moving object after a mark – by 4,9, duration of reactions to a moving object after a mark – by 1,8, duration of orientations in the space in incorrect decision – by 2,0, the number of orientations in the space in incorrect decision – by 2,1.

The special rules have been worked out, which can help, by means of a combination of psychophysiological indicators, to control the level of fatigue in the aviation personnel after finishing the work in the mission.

According to the results of the study, a set of measures on regulation of the functional state, methods on training professionally important psychophysiological qualities in a peacekeeping contingent, engaged in the work in the African

continent, have been developed. The technology of formation and maintenance of the functional state of the aviation personnel for the peacekeeping mission at an appropriate level has been developed. It is shown that the distinguished combination of psychophysiological functions can be used to assess the professional suitability in occupational selecting and monitoring of the professionally important qualities in the aviation personnel for peacekeeping missions.

Key words: servicemen of the peacekeeping contingent, working conditions, work intensity, psycho-physiological qualities, functional state.