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Original Article

Psychological causes of fatigue in football players

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Abstract:
The purpose of the research is to find out empirically and theoretically substantiate the psychological causes of football players' fatigue. **Methods.** The ascertaining strategy of research and ranking of parameters has been applied. Valid and reliable psychodiagnostic methods have been used to measure parameters of professional maladjustment, self-assessment of psychophysiological state, differentiated assessment of performance, and the level of football players' emotional burnout. **Results.** It was found that the high level of football player's fatigue from the training-competitive cycle has been caused by a decrease in the efficiency of their psycho-functional systems: emotional changes (R=.920); a decrease in general activity (R=.810); a decrease in motivation to activity (R=.824); features of certain mental processes (R=.549); features of social interaction (R=.891). It has been shown that with a decrease in the indicators of the psychophysiological state, the feeling of fatigue increases: well-being (R=-.812); activity (R=-.840). As well as in relation to motivational factors of the appearance of fatigue: interest in sports (R=-.869); willingness to perform tasks (R=-.816). A statistically reliable inverse relationship has been established between all indicators of the psychophysiological state and predictors of fatigue: monotony, oversaturation, stress. It has been empirically established and explained that the drop in the level of football players' performance, as a result of fatigue, can be caused by external negative influences: experiencing psycho-traumatic circumstances (R=.924); "being cornered" (R=.896); a desire to curtail professional activity: reduction of professional duties (R=.936); changes in team's psychological climate: personal alienation (R=.924); changes in the emotional sphere: anxiety and depression (R=.882); inadequate selective emotional response (R=.867); emotional moral disorientation (R=.904); expansion of the sphere of emotional economy (R=.918); emotional deficit (R=.870); emotional alienation (R=.896). **Discussion and conclusions.** It has been summarized that football players with pronounced parameters of fatigue are much more often characterized by a deterioration in well-being, namely changes in the emotional sphere, a decrease in general activity and course of mental processes. At the same time, they are characterized by separate somatic vegetative disorders in sleep, peculiarities in social relations. In sports activities, they demonstrate reduced motivation and, accordingly, the lack of interest and motivation provokes a feeling of fatigue. It has been empirically found that the respondent football players with a pronounced feeling of fatigue demonstrate a high level of desire to stop their training and competition activities. These football players feel bored with monotonous, same-type activities and seek to change activity or diversify it.
Key words: monotony, mental state, health-saving technologies, identity, motivation, performance.

Introduction

Athletics, in particular football, put significant demands on the athlete due to the large number of competitions and excessive physical and psycho-emotional stress. Competition in limited conditions, peak activity in unexpected extreme situations, fierce competition for a place in the main team, require the player to make effective decisions quickly. At the same time, as evidenced by a number of studies, a football player should be characterized by: reliability, stress resistance, endurance, low level of anxiety, lability of mental processes, optimal psychophysiological and mental functional states (Popovych et al., 2021c; 2022a; Shcherbak, 2016), a dominant sense-value orientation to achieving a winning result (Popovych et al., 2019). Participation in competitive and training activities, high competition in the tournament fight for victory, the intensity of classes involves athlete's significant physical and psychological stress, which is accompanied by excessive physical and psycho-emotional stress that borders on human capabilities (Cheban et al., 2020; Popovych et al., 2023a; Pshenychna et al., 2019b). It should be noted that preparation for football competitions like the competitions

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themselves, is carried out constantly. The density of training and competition calendars, lack of psycho-emotional relief between meetings, significant stress, intensification of the athletes' training processes lead to the appearance of chronic fatigue, overloading of all organs and systems. Time limitation makes full recovery work impossible.

Training/participating in competitions in a state of fatigue exhausts the nervous system, leads to changes in the functioning of sensory and cognitive systems that are professionally important for athletes, prolongs decision-making time, creates a feeling of tension and self-doubt, provokes the appearance of negative changes in the emotional and volitional sphere. Which, in turn, leads to a decrease in willpower, determination, and self-control (Galan et al., 2018; 2021; Popovych et al., 2020a; 2021e; Pshenychna et al., 2019a). The outlined consequences are in the system of causal relationship and, in turn, lead to an increase in the number of mistakes made, excessive energy expenditure and impaired motor coordination. Therefore, in view of the intensification of training and the need to increase results, especially in the final phase of the competitive calendar, the issue of athletes' fatigue becomes even more important than during the training process. The priority is the problem of optimizing the psycho-physiological state, reducing the mental load and activating the recovery processes. Emotional intelligence of football players is a predictor of high tactical and technical training and a health-saving factor (Melnychuk et al., 2023; Popovych et al., 2021b; 2022c; 2022d; 2023b). Note that there are a number of studies on the psychology of sports that show that the internal properties of an individual are transformed into actual mental states of sports activity (Popovych et al., 2022b; 2022f; Prokhorenko et al., 2023c). Dominant mental states of athletes can be accompanied by expectations of victory, achievement of the desired result (Popovych et al., 2020b; 2021a), and be harbingers of defeat and unsuccessful performance or injury. The phenomenon of fatigue is complex, multi-component, contains physiological and mental aspects, and therefore requires a comprehensive and multi-directional research for the effective restoration of performance and the organism as a whole. In this regard we consider it expedient to focus the discussion of this problem on the possible causes of athletes' fatigue. Regardless of the type of fatigue - acute or chronic, several groups of causes of their appearance are distinguished, in particular: physiological, medical, material and technical, sports-pedagogical and psychological (Khraban & Silko, 2022; Monogarov, 1986). The identification of the reasons is quite conditional, since they are complex, ergonomic. Nevertheless, in the context of our topic it is expedient to focus on psychological reasons. These include: self-doubt, a low level of work capacity, a decrease in sports performance, changes in the functioning of the cognitive and emotional-volitional sphere, a low level of activity, an unfavorable social and psychological climate of the team (this especially applies to team and game sports). In addition to the above, D. Feigley (1984) identifies perfectionism and lack of self-orientation as determinants of fatigue.

In the work with fatigue caused by psychological determinants, the most often used recovery methods are focused on reducing neuropsychological tension, mental depression, increasing performance, as signs of reducing fatigue, optimization of cognitive and emotional spheres (Alves et al., 2012).

Hypothesis. The psychological content parameters of fatigue will have statistically reliable relationships with parameters of professional maladjustment, self-assessment of psychophysiological state, differentiated assessment of performance and level of emotional burnout.

The purpose of the research is to empirically find out and theoretically substantiate the psychological causes of football players' fatigue.

Material and Methods

Methodology. We consider the fatigue of football players as a temporary/permanent decrease in sports performance as a result of intensive single training or training cycle, football match/competition cycle (tournament), which has a physiological, mental and functional nature. The mental component combines cognitive, emotional-evaluative and conative elements. The complexity of the nature of football players' fatigue is due to the peculiarities of the training and competitive processes, which in turn requires a complex and multi-directional recovery of sport performance, taking into account physical and psycho-emotional components within time limits.

During the selection and development of the ascertaining research strategy, the following are taken into account: 1) the research of the physiological component of the training activity of football players (Cretu et al., 2021; Kozina et al., 2019; Marques et al., 2011; Strykalenko et al., 2019; 2021); 2) regularities of the educational component with the possibility of implementation in tactical and technical training (Blynova et al., 2022b; Fomych, 2023; Gumennykova et al., 2021; Kalenchuk et al., 2023; Kobets et al., 2021a; 2021b; Nosov et al., 2021a; 2021b); 3) adaptive and anticipatory resource of an individual (Blynova et al., 2022a; Paliichuk et al., 2018; Plokhikh, 2022; 2023; Plokhikh & Yanovska, 2022); 4) explication of life achievements (Hulias & Hoian, 2022) and value contradictions of youth (Halian, 2022); 5) modern studies containing an ergative component and superhuman extreme stress (Mamenko et al., 2022; Nosov et al., 2020a; 2020b; Zinchenko et al., 2021; 2022; 2023).

Participants. The empirical research was conducted during January - April 2023. 37 respondents - pupils of FC "Barsa" Junior High School (Sumy, Ukraine) took part in it. The sample included male representatives aged

16-17 years (*Me=16;* M=16.12; SD=±1.58). The psychological experiment was implemented at the place of the educational and training process of young football players. Participation in the research was confidential and voluntary, which made it possible to avoid random responses. Distribution of questionnaires took place with the permission of the administration and the ethics committee of the FC "Barsa" (Sumy, Ukraine).

Organization of research. In order to determine the content and psychological causes of football players' fatigue, work was organized in three research stages. The first stage involved contextualization of the research problem, definition of the conceptual basis. The second stage outlined methodological aspects of studying the subject, description of psychological tools and statistical methods, collection of empirical data. At the third stage, data processing and analysis were carried out, the obtained results were presented and discussed, limitations and prospects for further research were recognized.

Parameters of the experimental situation. The collection of empirical data took place not during the competitive period, but during the usual preparatory training session in order to exclude the influence of purely physiological factors on the studied condition of football players due to excessive game density, increased intensity of games and overloading of players. Fatigue as a mental state is the dependent variable in the research. The independent variable in this case is multidimensional, that is, it contains complex psychological characteristics (in particular, emotional burnout and indicators of professional maladjustment), reflects their formal and dynamic parameters.

Procedures, instruments and limitations of research. In the process of research, we encountered certain limitations in the study of the mental state of fatigue. First of all, such limits related to a clearly defined period of time, within which it is appropriate to research fatigue as a property of the athlete's mental activity. Like all other mental states, fatigue has a beginning and an end, it is determined by the peculiarities of the course and is reflected in the peculiarities of the mental processes, football player's behavior. That is, we are talking about subjective characteristics. Therefore, the problem of fatigue and its differentiation arises. Fatigue refers to performance. A football player's personal feeling of his condition can be significantly different from his external manifestations. External manifestations can correspond to completely different conditions. Taking into account various manifestations of the same state, as well as the same manifestations of different states, is an important condition for obtaining reliable data when diagnosing fatigue.

Each mental state is a complex reaction to the effects on the body, so it is possible to diagnose changes thanks to the fixation of manifestations of various physiological and psychological systems. At the same time, it should be taken into account that in order to compare the obtained indicators, it is necessary to have a personal standard of the condition of each football player. Such a personal standard of state is the background or indicator of an optimal mental state. Regarding the optimal mental state, it is expedient to determine the extent of the changes taking place. In general, the main difficulties in the psychodiagnostics of mental states are their multilevel and large number of factors affecting the state.

In accordance with the ascertainment strategy of the research and the formulated tasks, a valid and reliable psychodiagnostic methods are proposed: Professional maladjustment assessment test by M. Dmitrieva (2003); Method of diagnostics of emotional burnout level by V. Boyko (1999); Method of scaled self-assessment of psychophysiological state by O. Kokun (2012); Questionnaire "Differentiated evaluation of work capacity" S. Velychkovskaya, O. Leonova (Leonova, 1984).

For evaluation purposes of professional maladjustment, the Professional maladjustment assessment test by M. Dmitrieva (2003) was used. The test allows you to determine the individual's working capacity due to criteria: deterioration of well-being (emotional changes, peculiarities of individual mental processes, decrease in general activity, feeling of fatigue), somato-vegetative disorders, violation of the "sleep-wakefulness" cycle, features of social interaction, decrease in motivation to work.

The method of V. Boyko (1999) made it possible to study the level of emotional burnout at different stages of its progression: 1) tension (feeling of emotional exhaustion, fatigue caused by one's own professional activity); 2) resistance (emotional exhaustion); 3) exhaustion (psychophysical over fatigue, violation of professional communications, reduction of professional duties, violation of professional relationships, psychosomatic and psycho-vegetative disorders). Each of them is a reflection of varying degrees of personal fatigue. According to the method of scaled self-assessment of the psychophysiological state by O. Kokun (2012) such parameter indicators have been defined: well-being WB; activity (A); mood (M); performance (P); interest in sports (IS); willingness to perform tasks (WPT); confidence in one's abilities (COA).

Questionnaire "Differentiated evaluation of work capacity" (Leonova, 1984) was used to assess the level of expression of the main conditions of football players, which affect the reduction of sport performance and the results of professional activity. According to the α-Cronbach coefficient, the data by all methods were recorded in the range from α=.8 to α=.9, which corresponds to medium and high levels of severity.

Statistical Analysis. The Pearson's correlation coefficient (R) was used to study the relationship between the football players' fatigue variables. Statistical processing of empirical data was carried out using standardized packages of computer programs "IBM SPSS Statistics" version 29.0.0.0 (241), "Microsoft Office Word" and "Microsoft Office Excel". A statistically significant level of correlation is accepted at level p<.010.

Results

On the basis of the conducted research, it was found that football players with pronounced indicators of fatigue are much more often characterized by a deterioration of well-being, which is tracked in certain changes in the emotional sphere, a decrease in general activity and a special course of mental processes (in Tabl. 1).

Table 1. Correlations between indicators of professional maladjustment and differentiated assessment of performance

Parameters	Monotony	Oversaturation	Stress	Fatigue
Emotional changes	.671	.841**	.850**	.920**
Peculiarities of individual mental processes	.525	.550	.601	.549
Decrease in general activity	.475	.680	.716**	.810**
Fatigue	.540	.711**	.682**	.802**
Violation of the "sleep-wakefulness" cycle	.445	.624	.691	.772**
Peculiarities of social interaction	.663	.808**	.850**	.891**
Decreased motivation to work	.606	.783**	.766**	.824**
Somatic vegetative disorders	.622	.847**	.906**	.917**

Note: ** – statistical significance of p≤.010 (marked in bold).

The correlational analysis of the results of the Professional maladjustment assessment test by M. Dmitrieva (2003) and Method of scaled self-assessment of psychophysiological state by O. Kokun (2012) made it possible to establish interdependence between various aspects of football players' state of fatigue (Tabl. 2).

Table 2. Correlations between indicators of professional maladjustment and self-assessment of psychophysiological state

Parameters	WB	A	M	P	IS	WPT	COA
Emotional changes	-.777**	-.826**	-.858**	-.861**	-.839**	-.853**	-.855**
Peculiarities of individual mental processes	-.372	-.748**	-.514	-.602	-.764**	-.549	-.505
Decrease in general activity	-.647	-.748**	-.746**	-.749**	-.750**	-.764**	-.747**
Fatigue	-.685	-.633	-.681	-.678	-.626	-.703**	-.655
Violation of the "sleep-wakefulness" cycle	-.613	-.669	-.674	-.701**	-,736**	-.676	-.723**
Peculiarities of social interaction	-.797**	-.794**	-.801**	-.836**	-.863**	-.826**	-.877**
Decreased motivation to work	-.683	-.662	-.816**	-.816**	-.716**	-.702**	-.717**
Somatic vegetative disorders	-.798**	-.885**	-.891**	-.864**	-.889**	-.873**	-.901**

Note: WB – well-being; A – activity; M – mood; P – performance; IS – interest in sports; WPT – willingness to perform tasks; COA – confidence in one's abilities; ** – statistical significance of p≤.010 (marked in bold).

It was found that fatigue is the characteristic of athletes with a low level of emotional and motivational components of the psychophysiological state of the subjects, namely activity, mood, interest in sports, willingness to perform tasks, confidence in their abilities. A statistically reliable inverse relationship between fatigue and performance shows that football players' severe fatigue from the training and competition process leads to a decrease in the performance of their psycho-functional systems. Correlational analysis of the results of Method of diagnostics of emotional burnout level by V. Boyko (1999) and Professional maladjustment assessment test by M. Dmitrieva (2003) made it possible to find out statistically reliable relationships in the functional field of football players' fatigue (Tabl. 3).

Table 3. Correlations between indicators of emotional burnout and professional maladjustment

Parameters	EC	PIM	DGA	FF	VC	PSI	DMW	SVD
Experiencing psycho-traumatic circumstances	.893**	.492	.746**	.818**	.698	.811**	.767**	.849**
Self-dissatisfaction	.892**	.567	.698**	.701**	.640	.839**	.796**	.889**
"Being cornered"	.859**	.487	.745**	.667	.594	.861**	.751**	.857**
Anxiety and depression	.898**	,508	.763**	.707**	.629	.812**	.771**	.870**
Inadequate selective emotional response	.836**	.540	.684	.693	.595	.822**	.762**	.867**
Emotional and moral disorientation	.856**	.589	.772**	.716**	.703**	.880**	.806**	.870
Expansion of the sphere of emotional economy	.899**	.464	.686	.721**	.639	.807**	.778**	.875**
Reduction of professional duties	.908**	.605	.762**	.739**	.720**	.896**	.809**	.890**
Emotional deficit	.860**	.604	.671	.679	.570	.813**	.736**	.878**
Emotional alienation	.910**	.533	.746**	.679	.628	.819**	.760**	.884**
Personal alienation (depersonalization)	.937**	.600	.810**	.752**	.743**	.884**	.836**	.933**
Psychosomatic and psychovegetative disorders	.828**	.408	.706**	.663	.575	.779**	.672**	.820**

Note: EC – emotional changes; PIM – peculiarities of individual mental processes; DGA – decrease of general activity; FF – fatigue feeling; VC – violation of the "sleep-wakefulness" cycle; PSI – peculiarities of social interaction; DMW – decreased motivation to work; SVD – somatic vegetative disorders; ** – statistical significance of p≤.010 (marked in bold).

Experiencing psycho-traumatic circumstances (R=.818; p<.010), feeling of "Being cornered" (R=.667; p<.010), athletes' staying in a state of excessive psycho-emotional tension (anxiety and depression) (R=.707;

p<.010), inadequate selective emotional response (R=.693; p<.010), emotional and moral disorientation (R=.716; p<.010), expansion of the sphere of emotional economy (R=.721; p<.010), emotional deficit (R=.679; p<.010), emotional alienation (R=.679; p<.010), psychosomatic and psychovegetative disorders (R=.663; p<.010) provoke a feeling of fatigue (Tabl. 3). As level of self-dissatisfaction (R=.701; p<.010) and personal alienation (depersonalization) (R=.752; p<.010) among football players increase, a feeling of fatigue also grows.

Correlation analysis of the results of Method of scaled self-assessment of psychophysiological state by O. Kokun (2012) and Questionnaire "Differentiated evaluation of work capacity" by S. Velychkovskaya, O. Leonova (Leonova, 1984) is presented in Tabl. 4.

Table 4. Correlations between indicators of differentiated assessment of performance and self-assessment of psychophysiological state

Parameters	Monotony	Oversaturation	Stress	Fatigue
Well-being	-.543	-.772**	-.777**	-.812**
Activity	-.455	-.735**	-.839**	-.840**
Mood	-.450	-.760**	-.828**	-.854**
Performance	-.754**	-.781**	-.873**	-.866**
Interest in sports	-.558	-.796**	-.831**	-.869**
Willingness to perform tasks	-.504	-.828**	-.816**	-.816**
Confidence in one's abilities	-.593	-.747**	-.808**	-.871**

Note: ** – statistical significance of p≤.010 (marked in bold).

Correlational analysis of the results of Method of diagnostics of emotional burnout level by V. Boyko (1999) and Questionnaire "Differentiated evaluation of work capacity" by S. Velychkovskaya, O. Leonova (Leonova, 1984) are presented in Table 5.

Table 5. Correlations between indicators of differentiated performance assessment and the level of emotional burnout

Parameters	Monotony	Oversaturation	Stress	Fatigue
Experiencing psycho-traumatic circumstances	.600	.615	.826**	.924**
Self-dissatisfaction	.674**	.506	.857**	.874**
"Being cornered"	.621	.787**	.815**	.896**
Anxiety and depression	.580	.788**	.818**	.882**
Inadequate selective emotional response	.543	.809**	.700	.867**
Emotional and moral disorientation	.560	.836**	.817**	.904**
Expansion of the sphere of emotional economy	.613	.834**	.627	.918**
Reduction of professional duties	.668**	.830**	.881**	.936**
Emotional deficit	.669**	.697	.663	.870**
Emotional alienation	.417	.780**	.638	.896**
Personal alienation (depersonalization)	.627	.869**	.665	.929**
Psychosomatic and psychovegetative disorders	.556	.777**	.763**	.891**

Note: ** – statistical significance of p≤.010 (marked in bold).

According to the data presented in Tabl. 5, the drop in the level of football players' performance, as a result of fatigue, can be caused by external negative influences: experiencing psycho-traumatic circumstances (R=.924), "Being cornered" (R=.896) and desire of decreasing of professional activity: reduction of professional duties (R=.936); changes in the psychological climate in the sports team through personal alienation (depersonalization) (R=.924); shifts in the emotional sphere – anxiety and depression (R=.882); inadequate selective emotional response (R=.867); emotional and moral disorientation (R=.904); expansion of the sphere of emotional economy (R=.918); emotional deficit (R=.870); emotional alienation (R=.896). The complex of the latter can indicate the presence of emotional burnout. Growing psychosomatic and psychovegetative disorders also cause an increase in the level of fatigue (R=.891). Correlational analysis of the results of Method of diagnostics of emotional burnout level by V. Boyko (1999) and Method of scaled self-assessment of psychophysiological state by O. Kokun (2012) made it possible to find out the physiological component of emotional burnout (Tabl. 6).

Table 6. Correlations between psychophysiological state indicators and the level of emotional burnout

Parameters	WB	A	M	P	IS	WPT	COA
Experiencing psycho-traumatic circumstances	-.759**	-.812**	-.815**	-.812**	-.795**	-.817**	-.854**
Self-dissatisfaction	-.784**	-.838**	-.843**	-.818**	-.797**	-.814**	-.866**
"Being cornered"	-.800**	-.814**	-.851**	-.798**	-.760**	-.809**	-.858**
Anxiety and depression	-.793**	-.847**	-.854**	-.799**	-.801**	-.851**	-.869**
Inadequate selective emotional response	-.781**	-.805**	-.821**	-.767**	-.796**	-.856**	-.817**
Emotional and moral disorientation	-.836**	-.836**	-.845**	-.799**	-.833**	-.864**	-.840**
Expansion of the sphere of emotional economy	-.814**	-.843**	-.858**	-.804**	.786**	-.750**	-.852**
Reduction of professional duties	-.814**	-.849**	-.848**	-.883**	-.842**	-.840**	-.874**
Emotional deficit	-.779**	-.833**	-.859**	-.839**	-.826**	-.854**	-.861**

Emotional alienation	-.765**	-.865**	-.884**	-.816**	-.825**	-.857**	-.884**
Personal alienation (depersonalization)	-.820**	-.871**	-.902**	-.863**	-.867**	-.910**	-.896**
Psychosomatic and psychovegetative disorders	-.743**	-.831**	-.833**	-.763**	-.768**	-.845**	-.815**

Note: WB – well-being; A – activity; M – mood; P – performance; IS – interest in sports; WPT – willingness to perform tasks; COA – confidence in one's abilities; ** – statistical significance of p≤.010 (marked in bold).

It was found that the obtained correlations confirm that football players with severe exhaustion can be characterized as athletes who currently perceive playing football as psychologically traumatic (R=.812); dissatisfied with themselves and their results in football (R=.818); have a sense of hopelessness (R=.798), anxiety in training and competitive activities (R=.799), unstable emotional state.

Discussion

It should be noted that the representatives of the youth age, who made up the sample, are characterized by youthful maximalism, openness to new experiences, the desire to quickly achieve success, at the same time, psychological neoplasms related to the formation of worldview, life values and guidelines take place (Hudimova et al., 2021; Karpenko & Klympush, 2023; Vavryniv & Yaremko, 2022). It was acknowledged, that the outlined psychological components can impose certain limitations into the obtained results, affect predictors of fatigue, which can affect the purity of the research and characterize it as quasi-experimental.

The obtained results of the correlation between indicators of professional maladjustment and a differentiated assessment of performance (see Tabl. 1) indicate that respondents with high indicators are distinguished by separate somato-vegetative disorders in sleep, have difficulties in social relations. They show reduced motivation in sports activities. Accordingly, the lack of interest and motivation provokes a feeling of fatigue. Based on the results, we can state that the respondent athletes with a pronounced fatigue demonstrate a high level of desire to stop their training and competition activities. These football players, when performing monotonous, same-type actions that take place during working out practical skills, "home preparations", feel bored and seek to change the type of activity or diversify it. As a result of long-term workload, football players experience exhaustion and discoordination of the main mental processes.

The results obtained in our research are quite consistent with modern scientific works in the field of sports psychology, in particular, C. Raeder (2016) stated the negative impact of the athlete's emotional instability during long-term heavy loads during the training process, which, in turn, leads to overtraining, impaired adaptation and reduced performance (Raeder, 2016).

The research found that self-dissatisfaction, lack of confidence in one's abilities contribute to football players' rapid fatigue. This resonates with the data obtained by J. Dosil (2006): almost a quarter of the studied athletes suffer from overtraining, excessive loads and improper recovery methods after exhausting training. The author notes that such a condition often arises precisely because of dissatisfaction with one's own sports results (Dosil, 2006).

The obtained results are confirmed by experimental data on the study of perfectionism and imperfection in athletes. Thus, P. Bradley and N. Timothy (2013), D. Feigley (1984), T. Noakes (2012) state that athletes who are dissatisfied with themselves and their own results make excessive demands on themselves, spend much more time on training and make maximum efforts in order to gain fame and admiration for them. All these factors together lead to the appearance of fatigue and increase the risk of psycho-emotional burnout of athletes. Most often, this phenomenon occurs in high-class athletes (Bradley & Timothy (2013); Feigley (1984); Noakes (2012).

Differentiated assessment of football players' performance proves (see Tabl. 4) that as indicators of the psychophysiological state: well-being (R=-.812) and activity (R= -.840) decrease, the fatigue increases. The same trend is regarding the motivational factors of fatigue: interest in sports (R=.869) and willingness to perform sports tasks (R=-.816). A statistically reliable inverse relationship between all indicators of the psychophysiological state and predictors of fatigue (monotony, oversaturation, stress) was established. They make it possible to determine the extent of a football player's performance.

According to our data, with a decrease in the level of football players' motivation (decrease in interest in results, desire to perform sports tasks, confidence in one's abilities), the feeling of fatigue increases. F. Loch et al. (2021) note that it is extremely important for an athlete to be in a state of optimal psychological readiness. The formation of such an "achievement situation" will have a positive effect on the recovery process after natural fatigue and after training/competition.

Realized empirical research confirms that the state of increased anxiety and depression in football players, the experience of psychotraumatic circumstances, the feeling of "Being cornered" contribute to the constant athletes' fatigue. Similar ideas are argued by D. Druckman et al. (1991). Researchers claim that depression, irritability, lack of interest in life, negative life and professional attitudes are factors of psychological fatigue (Druckman et al, 1991). P. Brukner (1996) also emphasized the need to have formed self-control skills in stressful situations and a sufficiently high level of athletes' motivational psychological readiness, because they are of crucial importance for the victory of the team or athlete. C. Raeder (2016) proves that work capacity and sports performance depends on the athlete's stress level. Training and competition activities are very exhausting

and can negatively affect the athlete's emotional state. Therefore, the athlete feels an urgent need for proper conditions to restore the state of optimal readiness, otherwise it can lead to a decrease in motivation to achieve the goal, difficulties in concentrating on the result (Brukner, 1996; Brukner & Khan, 2019; Hawley et al., 1997).

Conclusions

1. It was summarized that by the concept of fatigue of football players, we mean a temporary/permanent decrease in sports performance as a result of intensive single training or training cycle, football match/competition cycle (tournament), which has a physiological, mental and functional nature. The mental component combines cognitive, emotional-volitional and conative elements. Fatigue is a functional state of the body that occurs under the influence of prolonged or intensive work and is accompanied by a decrease in sports performance.

2. The psychological causes of fatigue include: self-doubt, reduced performance, decrease in sports results, unfavorable psychological climate in the group, changes in cognitive (slowed perception and thinking, decrease in attention and memory functions), emotional-volitional and conative spheres.

3. Deterioration of well-being, which manifests itself in certain changes in the emotional sphere, a decrease in general activity and a special course of mental processes, significantly more often characterizes football players with pronounced indicators of fatigue ($p<.010$). Some somatic vegetative disorders in sleep, difficulties in social relations appeared. In sports activities, such football players show reduced motivation, and the lack of interest and motivation provokes a feeling of fatigue.

4. It was established that the respondent football players with a pronounced feeling of fatigue demonstrate a high level of desire to stop their training and competitive activities. When performing monotonous, same-type activities, such respondents feel bored and seek to change the type of activity or diversify it. It is important to identify the current state of fatigue and provide prevention and, if necessary, psychological and rehabilitation assistance.

5. Obtained empirical results and their theoretical substantiations are marked by scientific novelty. It is expedient to operationalize them in the educational and training and competitive processes of football players' sports activities.

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