

Priority of motives for physical therapy among participants of military operations in Eastern Ukraine

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Abstract

Introduction. The study aim was to determine the leading components of the motivation to attend systematic physical therapy classes in demobilized combatants.

Methods. Theoretical analysis, sociological methods (questionnaire for prioritizing motives for rehabilitation), pedagogical experiment, as well as mathematical and statistical methods were applied. The research involved 110 demobilized soldiers who were undergoing rehabilitation.

Results. From among the proposed motives, the most significant ones were the combatant's desire to feel better, not to experience physical discomfort from the injury, and to have a good relationship in the family.

Conclusions. Post-traumatic stress disorder, which can develop in combatants, negatively affects the desire to undergo rehabilitation. The study of significant motives, depending on age, confirms the need to involve family members before the rehabilitation process commencement and the importance of providing official employment for young combatants after returning home.

Key words: soldier, post-traumatic stress disorder, motivation, rehabilitation

Introduction

Military operations in Eastern Ukraine, which have lasted for more than 6 years, undoubtedly affect the health and well-being of the entire population of Ukraine, but the greatest impact concerns the military who directly take part in the struggle. On April 13, 2014, the acting President of Ukraine, O.V. Turchynov, signed a decree on the beginning of the anti-terrorist operation (ATO) in Eastern Ukraine.

Participation in hostilities is considered to be a stressful factor of the highest intensity, which can cause post-traumatic stress disorder (PTSD). Combat operations participants experience an increase in destructive and deviant behaviour. The latter manifests itself in the development of various addictions, suicides, constant conflicts in the family, at work, with friends [1], committing crimes, a specific perception of pain [2].

The term 'post-traumatic stress disorder' (PTSD) was created by an American psychologist M.J. Gorgoza in 1980. It is a disorder of mental activity caused by a single or repeated action of a psychotraumatic situation (threat to life and physical integrity), which often occurs after the impact of a psychotraumatic factor. In accordance with the historical facts, the author of one of the first accounts of PTSD was the ancient Greek historian Herodotus, who described the battle of Marathon of 490 BC. He reported that an Athenian legionary who came out of the battle unharmed, completely lost his sight because he witnessed the death of his comrade [3].

Currently, PTSD is considered to be a mental disorder (F43.1 according to ICD-10) that develops in some individuals after traumatic events, such as natural and man-made disasters, shelling, bombing and other threats to life during war, sexual or physical violence, road accidents, torture, as well as other situations which are associated with a threat to their own or another person's life or physical integrity and

have caused severe fear, helplessness, or horror. Other emotional responses from patients include feeling of guilt, shame, anger, or emotional numbness.

Noticeably, almost the entire population of Ukraine is experiencing collective PTSD because there is an armed conflict in the country. Collective PTSD is characterized by the fact that a traumatic event affects everyone, the whole society, not only those who were a participant or victim of violence. Even when just facing somebody's injuries or death, a person becomes involved in a traumatic situation – a shock trauma from being an eyewitness [4].

According to statistics, every fifth combatant suffers from neuropsychiatric disorders in the absence of any physical injuries, and as for the wounded and crippled – every third [5]. Such disorders lead to a re-evaluation of their position in the society and uncertainty in the motivation to improve the existing state of health. Other effects begin to show up a few months after returning to normal living conditions. These are various psychosomatic diseases. Combatants, in comparison with healthy people, are 2–3 times more likely to suffer from diseases such as hypertension, gastritis, gastric ulcer, and duodenal ulcer. The general state of health is characterized by weakness, dizziness, decreased performance, headaches, heart pain, sexual disorders, sleep disorders, phobic reactions, etc.

One of the reasons for the development of health disorders is a long stay in the zone of a military conflict. A German scientist E. Dinter suggested that the stay of personnel for more than 30–40 days in a combat zone caused the unproductiveness of all military campaign. In fact, after reaching the maximum of moral and mental capabilities, which occurs in 20–25 days, soldiers' productivity begins to decline rapidly, owing to the exhaustion of spiritual and physical forces. In addition, the longer the period of stay in unusual, hard conditions, the more difficult the rehabilitation process and ad-

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justment to a normal lifestyle [6]. Thus, it becomes very evident that a large amount of effort and cooperation is required from the patient. Motivation, therefore, is a very important factor in achieving successful rehabilitation.

The aim of the study was to analyse and identify the leading motives that could influence and increase the effectiveness of rehabilitation among combatants.

Subjects and methods

The study involved 110 male participants of military operations in Eastern Ukraine who underwent treatment and rehabilitation at the Volyn regional hospital of war veterans. The subjects were included in the study after a preliminary conversation. All patients agreed to the processing of their data, and the questionnaires were conducted anonymously. The study did not involve females or males who did not provide their consent. The average age of the study participants was 37.09 ± 9.95 years (range: 21–56 years).

Measurements

To determine the leading components of the motivation to attend systematic physical therapy classes in demobilized combatants, we used a questionnaire [7] in which the priority of motives is presented on a scale of 1–10 (ranking of motives). The questionnaire contained 10 judgments, and the study participants were to rank them in the order of personal significance, with 1 meaning the most significant priority and 10 stood for the lowest priority for attending a rehabilitation course. The advantages of this questionnaire are simplicity in the perception of questions, unambiguity of respondents' answers, and informative content for the study organizers. The study participants gave their own answers in the proposed questionnaire. The survey was conducted anonymously.

The chosen questionnaire has shown its informative value in a study by Brindikov [7]. Our goal in the future, in the course of our work, is to check the reliability and validity of the questionnaire, as well as the possibility of its application in a different social group of people undergoing treatment and rehabilitation.

Statistical analysis

The statistical data processing was performed by using the MedStat program. The error and the average values were

calculated for the variation series which did not differ from the normal one. The median (*Me*), the median error (*m*), I and III quartiles (25% and 75%), and the Kendall correlation coefficient (*tau*) were calculated for the variation series whose distribution differed from the normal one at the significance level of $p \leq 0.001$ (chi-squared test of the distribution for normality).

Ethical approval

The research related to human use has complied with all the relevant national regulations and institutional policies, has followed the tenets of the Declaration of Helsinki, and has been approved by the Human Research Ethics Committee of Lesya Ukrainka Eastern European National University (ethical approval number: 2/2018).

Informed consent

Informed consent has been obtained from all individuals included in this study.

Results

All individuals involved in the study were favourable to participate, participated adequately and fully, and provided answers to the questions independently and anonymously.

When conducting the survey of the priority motives to consciously undergo a course of rehabilitation, we found that 'the desire to feel better' (2 ± 0.34) was in the first place among the weighty causes. The second position among the leading motives for rehabilitation was occupied by 2 desires: 'not to experience physical discomfort from the injury' (3 ± 0.42) and 'to have a good relationship in the family' (3 ± 0.36). The third place among the priority belonged to 'the desire to feel positive emotions such as joy, delight, pleasure, happiness from life again' (4 ± 0.32).

Among the less significant motives for being involved in physical therapy in a comprehensive rehabilitation program was 'the desire to return to normal life as soon as possible' (5 ± 0.26) (position 4). The fifth position was shared by the following motives: 'the desire to find a good job faster after returning home' (6 ± 0.26), 'the desire to improve the psycho-emotional state' (6 ± 0.28), 'the desire to improve the physical condition' (6 ± 0.35).

Two desires had the least motivating effect on the study participants to attend physical therapy classes: 'the desire to avoid condemnation by other military personnel' (7 ± 0.34),

Table 1. Priority of study participants' motives for rehabilitation

Motives	<i>Me</i> ± <i>m</i> (25%; 75%)	Position
1. The desire to feel better	2 ± 0.34 (2; 6)	1
2. The desire not to experience physical discomfort from the injury	3 ± 0.42 (1; 7)	2
3. The desire to avoid condemnation by other military personnel	7 ± 0.34 (3; 9)	6
4. The desire to return to normal life as soon as possible	5 ± 0.26 (5; 7)	4
5. The desire to have a good relationship in the family	3 ± 0.36 (3; 9)	2
6. The desire to find a good job faster after returning home	6 ± 0.26 (5; 7)	5
7. The desire to improve the psycho-emotional state	6 ± 0.28 (4; 8)	5
8. The desire to feel positive emotions such as joy, delight, pleasure, happiness from life again	4 ± 0.32 (2; 8)	3
9. The desire to be an example for others	7 ± 0.31 (5; 8)	6
10. The desire to improve the physical condition	6 ± 0.35 (4; 8)	5

Me – median, *m* – median error

Table 2. Correlation between the participants' age and motives for rehabilitation

Motives	Correlation coefficient (tau)
1. The desire to feel better	-0.004
2. The desire not to experience physical discomfort from the injury	0.057
3. The desire to avoid condemnation by other military personnel	-0.084
4. The desire to return to normal life as soon as possible	-0.044
5. The desire to have a good relationship in the family	0.162
6. The desire to find a good job faster after returning home	-0.128
7. The desire to improve the psycho-emotional state	-0.003
8. The desire to feel positive emotions such as joy, delight, pleasure, happiness from life again	0.008
9. The desire to be an example for others	-0.123
10. The desire to improve the physical condition	0.066

'the desire to be an example for others' (7 ± 0.31). The data concerning motivation priority are presented in Table 1.

When determining the correlation between the motives to attend physical therapy classes and the age of the combatants, we revealed that only 2 ratios were different from 0 ($p < 0.05$): tau = 0.162 between age and 'the desire to have a good relationship in the family,' and tau = -0.128 between age and 'the desire to find a good job faster after returning home' (Table 2).

Discussion

The results of the current study convincingly demonstrate that the identification of combatants' motives to undergo physical therapy plays a main role in the rehabilitation programme. The presence of PTSD can lead to a lack of motivation for recovery, which, in turn, will not translate into the effectiveness of rehabilitation. Determining the priority of the motives allows to influence the awareness of participating in physical therapy classes.

It should be noted that the issue of physical therapy motivational component is studied by scientists in different countries [8], investigating models of motivational programs [9] and features of achieving performance [10]. The results corroborate the recent studies in that almost 90% of combat operations participants need comprehensive rehabilitation [5] owing to their health status [11, 12].

The vast majority of previous studies focused on social rehabilitation among combatants: increased levels of aggression, anxiety [13], frustration; communicational and emotional problems that were manifested in all soldiers after returning from a combat zone [14]. According to Vorona [15], almost none of the fighters admits that they need psychological help and that they suffer from PTSD [15].

The analysis of the survey results and the correlation between the motives and age of participants in hostilities showed that the demobilized defenders of Ukraine primarily want to feel better. In this regard, during the course of treatment and rehabilitation, doctors and physiotherapists should mostly clearly focus the attention of patients on positive changes in their health, even minimal ones.

Determining correlations between motivations and the combatants' age implies a direct relationship between age and 'the desire to have a good relationship in the family' and an inverse correlation between age and 'the desire to find a good job faster' after a course of rehabilitation. This signals

the importance of conducting interviews, explaining the work issue with family members of combatants of all age categories, and ensuring state-guaranteed employment, especially for rehabilitated young people.

The authors are aware that the results are influenced by a number of subjective and objective factors, such as the state of health of the study participants during the survey, the state of material and technical support for the treatment and physical therapy process, and the state's timely comprehensive approach to the support and socialization of such individuals. The results may differ depending on the local mentality of combat participants, the length of stay in a combat zone, and the specifics of the rehabilitation clinic.

However, the obtained results will serve as valuable information for the study and improvement of approaches to increase the motivation of combat participants for comprehensive rehabilitation.

Limitations

Several limitations might have affected the results of the present study. The responses to the proposed questionnaire were chosen by the study participants themselves, and their results could be influenced by the presence of PTSD and a number of other factors. In the context of the study limitations, we believe that it is necessary to continue the investigation of the chosen topic in the future – to analyse in detail the factors that impact on the motivation to systematically take part in physical therapy classes.

Conclusions

The analysis of the components of motivation to attend physical therapy classes as part of a combatant's rehabilitation has an important applied value. Having identified the leading motives, we found out that regardless of age, the most important motive for military operations participants was 'the desire to feel better'. There is evidence of a direct correlation between age and 'the desire to have a good relationship in the family,' which confirms the need to involve family members (especially the wife) before the rehabilitation process commencement and conduct targeted consultations. The presence of an inverse correlation between age and 'the desire to find a good job faster' increases the importance of providing official employment for young combatants after returning home.

Disclosure statement

No author has any financial interest or received any financial benefit from this research.

Conflict of interest

The authors state no conflict of interest.

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