ORIGINAL ARTICLE

CONTENTS

Trauma-informed training as a means of stabilizing the negative impact of stressful and destructive factors of war on the inner world of future specialists

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ABSTRACT

Aim: To determine the conditions for the implementation of trauma-informed training as a means of stabilizing the negative impact of stressful and destructive factors of war on the inner world of future specialists.

Materials and Methods: 1,100 students studying in the conditions of martial law took part in the experimental work.

Results: As a result of the negative impact of the stressful and destructive factors of the war on the inner world, the future specialists the following manifestations of the deterioration of the health were established: depression (99%), sudden change of mood (92%), worsening of well-being during sudden changes in the weather (66%), irritability (52%), aggressiveness (11%), anger (7%). It was found that future specialists wanted to postpone completing the educational task until later, as they perceived it as very difficult (79%).

Conclusions: The conditions for the implementation of trauma-informed studying were formulated as a means of stabilizing the negative impact of stressful and destructive factors of war on the inner world of future specialists. 1. During the organization of learning, teachers take into account the fact that psycho-traumas, which are caused by stressful and destructive factors of war, disturb students until they experience them. 2. Teachers take into account the traumatic experience of future specialists. 3. The teachers' actions aim to restore future professionals' sense of security, reestablish contact with other study participants, and regain control over their own lives and studies.

KEY WORDS: experiences, traumatic experiences, medical complaints, stabilization during studies at a higher education institution

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INTRODUCTION

The solution to various problems in the conditions of military actions on Ukraine's territory, including the war's impact on the life of Ukrainians and the organization of education for the adult and younger generations, is widely presented in scientific articles. We focused only on the research results that will prove our research's relevance in terms of medical and pedagogical emphasis.

After the first year of the Russian invasion, an increased prevalence of stress, anxiety, and post-traumatic stress disorder symptoms among Ukrainians was recorded; in particular, it was established that the most vulnerable group was refugees, who felt much worse than displaced persons [1].

In other articles, various categories of displaced persons negatively affected by war's stressful and destructive factors were identified as research objects. The results of these studies are:

1. Identification of three groups of factors that negatively affect the subjective well-being of students of grades 1-10 in the conditions of the introduction of martial law on the territory of Ukraine. These are [2]: 1) factors associated with external influences on the organization of student education (shelling, air raids, problems in the family (regarding students of grades 1-10); training in bomb shelters, training as an electronic student (regarding students of grades 1-4)); 2) factors related to the emotional and physiological states of the teacher (states of depression or nervousness of the teacher (regarding students of grades 1-10); illness of the teacher (regarding students of grades 1-4)); 3) factors related to cognitive processes, emotional and physiological states of students (dissatisfaction of physiological needs (I want to eat, sleep), safety needs (I feel anxious), negative emotional manifestations, a decrease in cognitive activity and cognitive independence (regarding students 1-10 classes)).

2. Identification of seven groups of influencing factors on the process of organizing distance learning in the conditions of military operations, including subjective factors of negative impact on the personality and results of distance learning (self-limitation; focus on the learning result; avoidance of tasks; pessimistic behavior; low general level of self-esteem; low level of involvement in educational work) [3].
3. Generalization of data on the primary actions of teachers during the education of students during the period of martial law in Ukraine [4]: 1) during direct interaction, teachers, first of all, paid attention to the psychological state of students (if necessary, provided psychological support; provided exercises for psychological relief; used techniques for regulating the emotional state; allocated more time for collective performance of exercises and tasks; balanced informed students that an "air alarm" signal had been announced, reminded them how to act in this case).
4. Generalization of data on stressors. It was established that during the introduction of martial law on the territory of Ukraine, students were most worried when, due to the conduct of military operations in the territory of their residence, constant air raids, and lack of electricity supply and communication, they could not join synchronous e-learning and directly interact with the electronic teacher and electronic students. Significantly, 96 % of student respondents constantly felt the need to study educational material by interacting with an electronic teacher and students. 78 % of student respondents noted that interaction during study helped them overcome anxiety caused by military actions, maintain the pace of study, learn new educational material faster and more effectively, and experience positive emotions. All student respondents said they dream of live communication with the teacher and fellow students [5].
5. It has been established that most students studying during the war in Ukraine have an average and low vitality level. A direct connection of vitality with a solid and mobile nervous system, as well as hyperthymic and demonstrative accentuations of character, has been revealed. The inverse relationship is associated with the vitality of pedantic, unbalanced, dysthymic, and exalted accentuations of character, all personality disorders [6].

AIM

To determine the conditions for the implementation of trauma-informed training as a

means of stabilizing the negative impact of stressful and destructive factors of war on the inner world of future specialists, in particular, future teachers and future public health specialists.

MATERIALS AND METHODS

A total of 1,100 people took part in the study. These are future teachers (in particular, future teachers of primary classes, future teachers of preschool education institutions, and future managers of the primary education quality system) and future public health specialists who studied for two years in higher education institutions in Ukraine (Borys Grinchenko Kyiv University, O.O. Bogomolets National Medical University). The study participants for the period of its conduct belonged to the category of persons who were negatively affected by the stressful and destructive factors of the war.

The work uses a set of research methods: general scientific (analysis, synthesis, comparison, systematization, generalization) and empirical (observation, individual interviews, anonymous testing, and testing to identify a tendency to loneliness as typical behavior of a future specialist).

Anonymous testing included the following questions [7]:

1. What group of people do you identify with? (List of groups to be selected: a) with the 1st group, that is, those who are injured as a result of the negative impact of stressful and destructive factors of war and feel the need for treatment (respiratory and immune systems, abnormalities in the work of the gastrointestinal tract) because it has significantly worsened their state of health; b) with the 2nd group, i.e., with those who are injured as a result of the negative impact of stressful and destructive factors of the war, feeling the deterioration of their health, engage in self-medication; c) with the 3rd group, i.e., those who are traumatized as a result of the negative impact of stressful and destructive factors of war, experience a deterioration in their health, in particular, increased irritability, aggressiveness, short-term outbursts of anger, a sharp change in mood, depression, worsening of well-being during sudden changes the weather; d) with the 1st and 2nd groups; e) with the 1st and 3rd groups; e) with the 2nd and 3rd groups; g) with the 1st, 2nd and 3rd groups.
2. If you identified yourself with the first group, choose the direction of treatment that you needed. (List of treatment directions for selection: a) treatment of the respiratory system; b) treatment of the immune system; c) treatment of the respiratory and immune systems; d) treatment of the gastrointestinal tract; e) your answer option).
3. If you identified with the 2nd group, write down the means you use for self-medication.
4. If you identified yourself with the 3rd group, choose the dominant manifestation or dominant manifestations of the deterioration of your health. (List of states to choose from a) increased irritability; b) aggressiveness; c) brief outbursts of anger; d) a sudden change in mood; e) depression; f) deterioration of well-being during sudden changes in the weather).

5. What desires did you most often feel during training, which takes place in the conditions of military operations on the territory of Ukraine? (Wish list for selection: a) desire to retire; b) the desire not to perform the educational task because it is perceived as too tricky; c) your option as desired).

The loneliness test was carried out to distinguish cases of loneliness as a result of the negative impact of stressful and destructive war factors on the inner world of future specialists (future teachers and public health specialists) from loneliness as a typical behavior of a future specialist.

The test to determine the tendency to loneliness consisted of 12 questions (1. After classes, can you go for a walk around the city alone? 2. Do you consider it a catastrophic situation when you have no one to go on vacation with (no company)? 3. In two hours, you have an exciting meeting. Can you do something to occupy yourself at this time? 4. Do you like to look at the flames of a fire? 5. When doing something important, do phone calls annoy you? 6. Do you like to walk? 7. Can you meet New Year alone and remain in a good mood? 8. How many guests do you invite to your birthday? 9. Do you feel free in the company of four strangers? 10. What will you do if you are in a foreign city and need help finding the right street? (Answer options: a) ask a passerby; b) turn to Google for help; c) try to find it yourself). 11. Do you like gifts? 13. Did you dream of becoming an actor?).

Processing of results: 1) 1 point each for the answer "yes" to questions No. 1, 3, 4, 5, 6, 7, 10b, 12. 2) 1 point each for the answer "no" to questions No. 2, 8, 9, 11. 3) 2 points for answering "yes" to question No. 10c.

Analysis of the results: More than 8 points – the respondent is prone to loneliness and likes to think and analyze different situations. 4-8 points – the respondent is moderately sociable and sometimes seeks to be alone to organize thoughts and feelings. But after spending a short time alone, you enjoy talking to people. Less than 4 points – the respondent is very sociable.

The coefficient (Kz) was used – the ratio of the sum of positive answers to the total number of questions. The Kz coefficient was calculated according to the formula:

$$K = \frac{X_P \cdot 100\%}{P},$$

where:

X_p – the number of negative answers ("no") of all respondents;

P – the maximum possible number of positive answers ("yes") in the group;

P = (number of respondents) x (number of questions).

The researchers followed all protocols and procedures required by the Biomedical research Ethics Committee and conform to the directive of the Ukrainian Legislation on health care, Helsinki Declaration 2000 and European Society Directive 86/609 on human participation in biomedical research to ensure adherence to all standards for adequate protection and well-being of participants.

RESULTS

According to the results of an anonymous questionnaire, the respondents identified themselves with the group of people who were injured as a result of the negative impact of stressful and destructive factors of war and sought medical treatment (96 % of cases) because they felt a significant deterioration in the state of the respiratory system (74 % of cases), respiratory system and gastrointestinal tract (22 % of cases) (Fig. 1).

Also, respondents (78 % of cases) identified themselves with the group of people who resorted to self-medication (took pills advised by friends or close relatives; drank herbal teas). Most respondents (69 % of cases) initially engaged in self-medication and only then turned to a doctor (Fig. 2).

All respondents identified themselves with the group of people who experienced a deterioration in their health as a result of the negative impact of the stressful and destructive factors of the war. After analyzing the complaints of the respondents, we found the following dominant manifestations of health deterioration: depression (99 % of cases), sudden change in mood (92 % of cases), worsening of well-being during sudden changes in the weather (66 % of cases), increased irritability (52 % of cases), aggressiveness (11% of cases), outbursts of anger (7 % of cases).

After analyzing the respondents' complaints, we found manifestations of deterioration of well-being, which lecturers should take into account when organizing training (Fig. 3).

Most often, the respondents felt the desire to sleep (97 % of cases), to postpone the completion of the educational task for later because it was perceived by them as very difficult (79 % of cases), to be alone (56 % of cases), to be near relatives, to be constantly on the phone with them (12 % of cases), to rest in nature (5 % of cases).

As a result of comparing the results of the anonymous testing with the test results to determine the tendency to loneliness, it was established that loneliness is typical behavior only for a small part of the respondents (3% of cases). Regarding a significant part of the respondents (53 % of cases), the manifestation of the desire to be alone was caused by the negative impact of the stressful and destructive factors of the war on their inner world. The same influence caused an inadequate perception of the complexity of the educational task and delay in its completion, the obsessive desire to contact loved ones, and the constant feeling of them next to you.

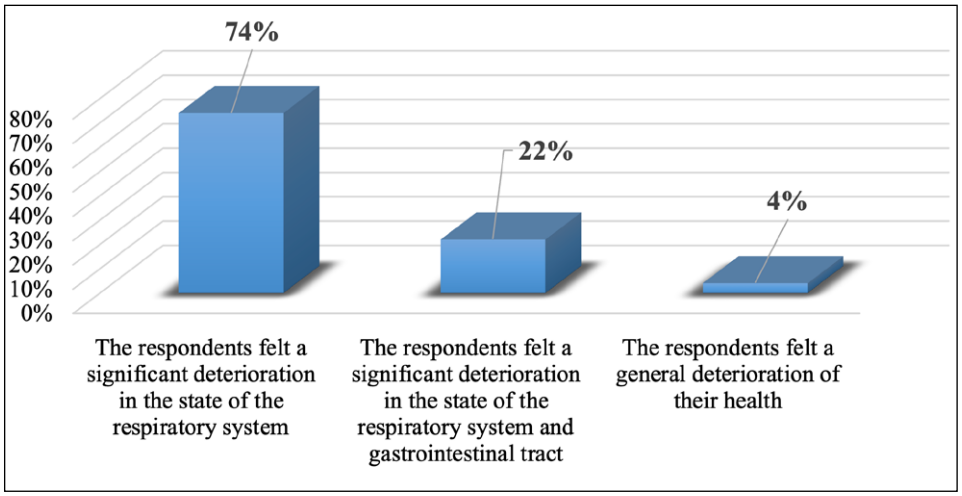

Fig. 1. The respondents sought medical treatment.

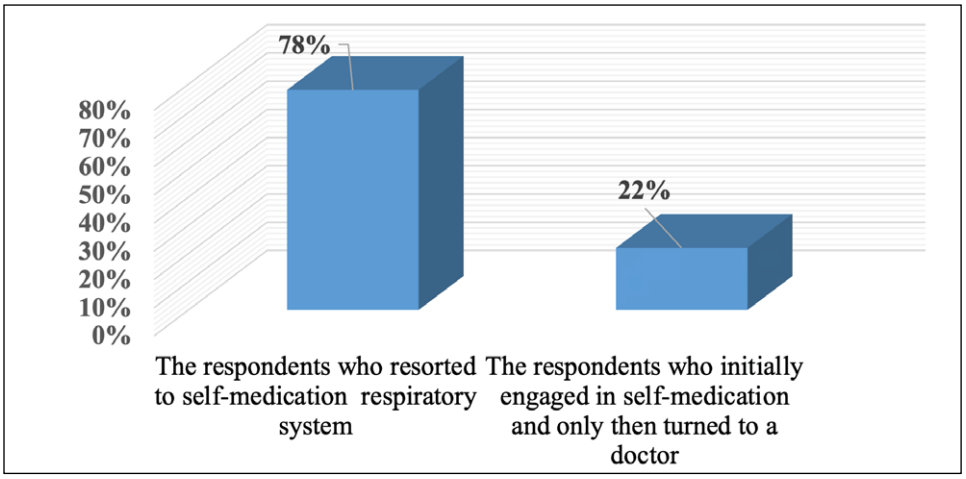

Fig. 2. The respondents resorted to self-medication.

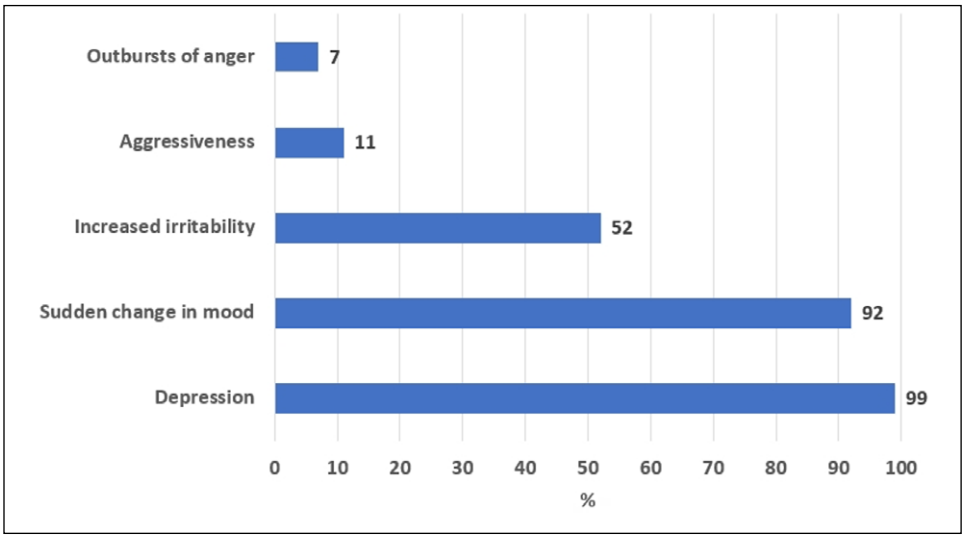

Fig. 3. The complaints of the respondents, which lecturers should take into account when organizing training.

DISCUSSION

Experimental data indicate that the negative impact of the stressful and destructive factors of the war on the inner world of future specialists after the two-year Russian invasion of Ukraine caused an increase in the level of morbidity among future specialists. For comparison, we used data from articles in which the results of research by scientists in the pre-war period were made public. These are the conclusions of scientists. 1. Almost half of the students who participated in the study feel the influence of a factor (anxiety) that increases the likelihood of emotional burnout. Up to 50 % of respondents are in the first phase of emotional burnout or have already passed it [8]. 2. A significant decrease in the functional reserves of the student's body was the result of intense and long-term performance of educational activities

with the simultaneous experience of "negatively" colored actual emotional states generated by events during educational activities or events that occurred before that in professional activities or family relationships [5].

According to generalized data covering the pre-war period and the annual period of hostilities on the territory of Ukraine [1], the prevalence of stress among Ukrainians in 2012 was 45 %; in 2016 – 50%; in March 2022 – 53 %, after the end of the war year – 80 %. According to the results of our research, at the end of the second year of the war, the spread of stress reached a mark of 96 %. However, we must emphasize the limitations of our study. This is the coverage of the experiment only by persons who received higher education during the full-scale military invasion of the territory of Ukraine. Our study did not include other reports of Ukrainians.

As a result of individual interviews, information was obtained about the traumatic experience acquired by future teachers and future public health specialists. In this study, we did not focus on the entire palette of types of traumatic experiences but singled out only those traumatic experiences that were typical for all respondents without exception. These are 1) fear of shelling; 2) anxiety in anticipation of night and morning shelling; 3) concern about the condition and life of relatives, friends, acquaintances, and soldiers; 4) increased sensitivity to sounds in the environment; 5) experiences during sleepless nights; 6) loss of self-control during training in the warehouse, constant distractions to information about the state of events during the "air alarm" signal.

A person's inner world is a structure open to influences and changes. The person himself is involved in the processes of influence and change. S. Maksymenko structures the processes that take place in the inner world of a person according to the direction of actions [9]. First, a person changes, structures, and develops his inner world with the help of psychological means.

Over time, the inner world becomes a means of self-management for a person.

The change in the form, structure, and integrity of value-meaning formations in the inner world of a person is caused by his experiences. The appearance of changes as a result of experiences is necessary to prioritize meanings and values and build cause-and-effect relationships in the value-meaning formations of his inner world.

Scientists explain the essence of the experience process in different ways. In the context of the implementation of trauma-informed training for future teachers and future public health specialists, we use the scientific work of S. Maksymenko [9, 12] and M. Papuchi [10, 11], which explain:

1. The essence of experience (Experience is a representation to oneself of what is happening in the surrounding world, the human body, in the middle of the individual).
2. The essence of the process of experiencing (Experience arises from an impression. The process of experiencing is the process of "transferring" something that is not yours into your own).
3. Functional purpose of the process of experiencing (The process of experiencing is a bridge connecting conscious and unconscious processes; what contributes to a person's awareness of this or that state; what structures a person's inner world; something that becomes a mechanism for starting a structure-creating interaction in the inner world of a person).

Therefore, the basis of the implementation of trauma-informed training is the presence of the impact of psycho-trauma on the inner world of future specialists. In particular, we took into account the fact that psycho-traumas caused by stressful and destructive factors of war have an impact on the inner world of future teachers and future public health specialists. First, psycho-traumas significantly slowed down or even stopped the process of structuring and restructuring the inner world of future professionals. Secondly, what was not covered by structuring in the inner world is perceived by future specialists as alien to them and something that constantly confuses and traumatizes them. Thirdly, impressions, sensations, and emotions not experienced by future specialists remain alien to them, unmastered by their inner world, and pass into the unconscious, forming a structure that does not correspond to the inner world. Fourth, the direct or indirect activation of this structure during training causes negative states and high emotional tension, which, in turn, causes several negative changes in the health of future specialists.

CONCLUSIONS

The implementation of trauma-informed training contributes to the stabilization of the negative impact of stressful and destructive factors of war on the inner world of future specialists if three conditions are met. 1. During the organization of training, teachers take into account the fact that psycho-traumas, which are caused by stressful and destructive factors of war, disturb students until they experience them. 2. During the organization of training, teachers take into account the traumatic experiences of future specialists. 3. The teachers' actions aim to restore future professionals' sense of security and their own ability, reestablish contact with other study participants, and regain control over their own lives and studies.

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CONFLICT OF INTEREST

The Authors declare no conflict of interest

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