



Student Activity Ensures Adaptability in War Conditions

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Abstract

The article presents the results of an empirical study of the influence of an individual's activity on his mental state, under stressful conditions. The following indicators of students' mental states were measured: "calmness-anxiety", "energy-fatigue", "exaltation-depression", levels of low mood, and the manifestation of anhedonia. A comparison of students' mental state indicators was carried out. Two groups of students were distinguished: those with positive indicators of adaptation to stressful conditions and those with reduced indicators of such adaptation. The differences between the groups were analyzed, according to the following parameters: the presence of activities based on new interests, the main types of activities (to which students devoted more time and energy), self-education, and self-development. It was concluded that employment in various types of activities is associated with the manifestation and possible adjustment of the mental state of the individual.

Keywords: Students, Activity, Adaptability, Stressful conditions of war, Emotional states, Low mood, Level of anhedonia

Literature Review

The concept of personality adaptability and its meaning

The new realities of Ukrainian society, in the context of a full-scale war started by Russia, made it necessary to restructure the usual way of life of citizens and find a way to adapt to abnormal living conditions. When faced with constant stressors, we reach a certain level of adaptability – the ability to analyze and adequately perceive the environment, thanks to which we remain whole personalities, and transform reality as per our ethical and moral guidelines.

This achievement of adaptability, by young students, is very important. At this age, a person acquires new social roles: a citizen with the right to vote, a specialist, an independent person (able to take care of herself), a new family member, a father, or a mother. Yu Ilyina¹ states that: "If a person has adaptability, then he can tolerate life changes much easier, can adequately orient himself in any

(especially unpleasant) situation, has the higher emotional stability, and is also able to change, which does not scare him, but only inspires him". N Kordunova, I Mudrak, N Dmytriuk² Note: Adaptability as a personality trait is important for a person's adaptation to activities in extreme conditions, its longevity, and professional reliability.

We share the idea of Professor O Kokun³ that it is appropriate to consider the adaptability of an individual to specific tasks, that he solves at work. Therefore, we chose the field of activities to study the adaptability of student youth.

War as a complex of extreme conditions

War is one of the extreme conditions – an exceptional, special, extraordinary circumstance that threatens the life and health of people, influences stress factors, are perceived and evaluated as dangerous, difficult, hopeless situations – as a result of which anxiety and emotional tensions increase, and causes a traumatic effect

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on the human psyche (MIA, order №747 dated 31.08.2017). In these extreme conditions of war, many situations arise that cause the appearance of specific emotional states like stress, effects, and frustrations.

Psychological consequences of experiencing stress during the war

A Poltavaska⁴ defends the opinion by stating that extreme situations are emotional because they actualize awareness of one's powerlessness, the risk to one's health, and uncertainty of the situation. They cause intense emotions and feelings disorganizeizes activities.⁵⁻⁷

T Tytarenko⁸ notes that long-term military trauma can lead to various consequences: a significant decrease in the level of psychological health of an individual, loss of a sense of subjective well-being, increased resilience, the emergence of new life perspectives, and activation of one's life creation.

According to research by the Institute of Social and Political Psychology (ISPP, 2022), half a year after the beginning of the full-scale war in Ukraine, representatives of all demographic groups and regions of the country rated their psychological well-being quite highly (6.7 points out of 9 possible). The respondents' self-esteem indicators were higher and their ability to self-regulate and master their emotions was significantly lower, at the same time. As it turned out, the vast majority of respondents (more than 90%) showed at least one of the symptoms of post-traumatic stress disorder.

Therefore, the emotional sphere of a person can serve as a kind of indicator of his adaptability to extreme conditions.

Factors of stress resistance of the individual in extreme conditions

Today it is accepted that in extreme conditions the stress resistance of an individual contributes to psychological reliability, psychological preparedness, and the functional and psychological state of the body. V. Korolchuk⁹ substantiates that all the determinants of stress resistance are structural components of the personality: orientation, experience, mental processes, neurodynamics, temperament, characters, and abilities. Other researchers support such opinions.¹⁰⁻¹² Since the entire structure of the personality is involved in the formation of stress resistance, in our opinion, it is appropriate to study it through the plane of activity.

The value of activities to overcome stress by the individual

According to S. Maksymenko,¹³ any human activity is a conscious activity that manifests itself in a system of actions, aimed at achieving a set goal. Through this activity, the personality devel-

ops, and a whole spectrum of its psychological characteristics gets manifested: peculiarities of the mental processes, properties of the nervous system, abilities, motivation, and mental states. Each of the specified characteristics is not only revealed in the activity but also affects its effectiveness. Therefore, our emotional states and stress experienced affect our communication, education, and work. We assume that various types of activities provide an opportunity for the individual to regulate his emotional sphere and achieve adaptability in the conditions of war.^{14,15}

The goal

The goal of this article is to highlight the results of an empirical study of the influence of an individual's activity on his mental state under stressful conditions.

Measurements

We have developed comparative, empirical research. A block of questionnaires (questionnaire, A. Wessman and D. Rix's "Self-Assessment of Emotional States" method) and scale evaluation (The scale of low mood (sub-depression) from the questionnaire of V. Zung, The anhedonia scale of Stait-Hamilton) were used. The study collected data on (a) respondents' activity and (b) indicators of their mental states: calmness – anxiety, energy – fatigue, elation – depression, the degree of mood reduction and the depth of the depressive state, and the severity of anhedonia.

The research contains two parts, which is due to the specifics of the comparative study.

The first part collects information on the activities of respondents during the war. A survey was used, for this purpose, during which the respondents had to choose the answers to the question: "What types of activities have you been engaged in during the last year?"

The answer options given were as follows:

- a) Housework
- b) Studying at the university
- c) Work (earning money)
- d) Volunteering
- e) Meeting friends (spending leisure time together)
- f) Traveling
- g) Studying outside the university
- h) Other

Respondents were also asked to answer an open question: What type of activity did you engage the most in (dedicated more time, effort, attention)?

The next question was: Did you have any new interests during the last year, for which you learned something new (read something, took some courses of training, watched video materials, etc.)?

The presented answer options were as follows: a) yes, b) no.

In the second part of the research, we studied mental states: calmness – anxiety, energy – fatigue, elation – depression (was diagnosed by the A Wessman and D Rix's "Self-Assessment of Emotional States" method), the degree of mood reduction and the depth of the depressive state (studied by The scale of low mood (sub-depression) from the questionnaire of V Zung), the severity of anhedonia (studied using The anhedonia scale of Stait-Hamilton).

Program SPSS.24.0 was used to compare the indicators of the mental states of students with different activities. Frequency analysis was used to determine the percentage of research, with different levels of mental states. Fisher's ϕ -angular transformation was used to calculate the reliability of differences between independent groups of people, according to the criteria of the individual's mental states.

Results and discussion

The application of the described methods made it possible to obtain the following results.

The emotional state of the students

The day on which the research was conducted was particularly stressful for Ukrainians because it was the anniversary of the beginning of the war in the country, and new threats were expected on that day.

At the same time, as evidenced by the data in Figure 1, most of the respondents had a "calmness – anxiety" (43%), "energy – fatigue" (54%), and "elation – depression" (68%). A third of the respondents were dominated by anxiety (30%), fatigue (34%), and a small proportion – depression (15%). There was also a share of respondents who experienced positive emotional states: calmness (27%), energy (12%), and elation (17%).

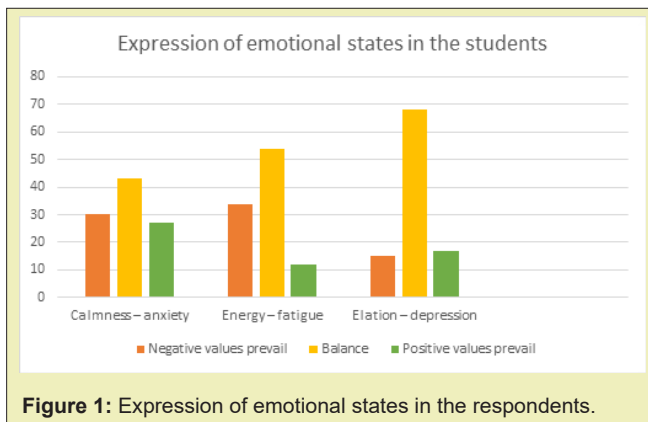


Figure 1: Expression of emotional states in the respondents.

A similar distribution of indicators of emotional states (see Table 1) was observed in groups of respondents, separated by the stage of the study at the university, by the preferred place of residence during the year of extreme war conditions (Ukraine or another country), by gender, by the specialty of the students ("psychology" as one that additionally develops the ability to cope with stress, and other specialties).

Indicators of sub-depression of the respondents

The data in Figure 2 shows that the vast majority of respondents (73.5%) did not experience a decrease in mood, one-fifth (20.5%) showed signs of a slight decrease in mood, and a small percentage (6%) showed a significant decrease in mood, a deep decrease in mood was not found in any of the respondents.

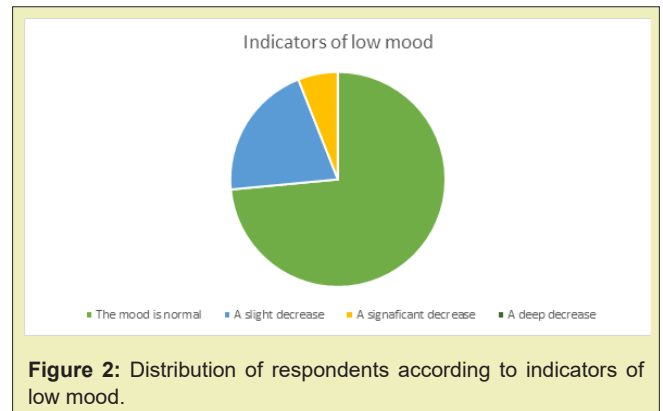


Figure 2: Distribution of respondents according to indicators of low mood.

A similar distribution of low mood indicators is also observed in different subgroups of the respondents (see Table 2).

Indicators of anhedonia of the respondents

The data in Figure 3 shows that the vast majority of respondents (77%) have preserved the ability to enjoy various aspects of life, a small number of respondents have indicators of a low level of anhedonia (8%), reduced (11.5%), average (2.5%) and elevated (1%). A high level of anhedonia was not found in the respondents.

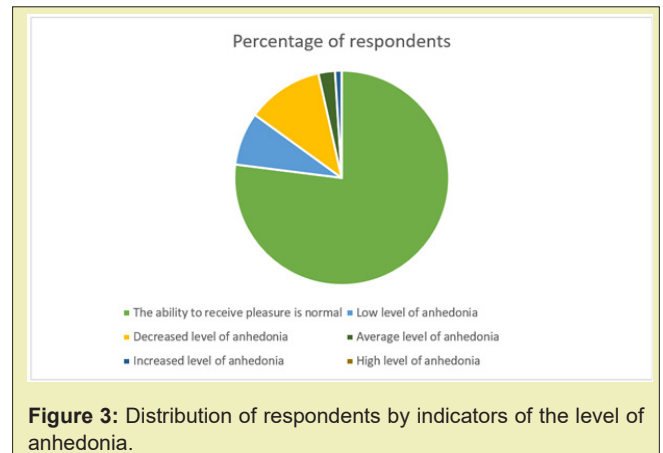


Figure 3: Distribution of respondents by indicators of the level of anhedonia.

Table 1: Results of frequency analysis of indicators of emotional states in the respondents.

Groups of respondents	N respondents	% respondents by indicators								
		Calmness-anxiety			Energy-fatigue			Elation-depression		
		Expressed anxiety	Indexes balanced	Calm prevails	Pronounced fatigue	Indexes balanced	Energy dominates	Expressed depression	Indexes balanced	Sublimity dominates
1 course	55	38	36	26	27	67	6	13	78	9
2 course	8	25	54	21	29	57	14	11	68	21
3 course	9	33,3	33,3	33,3	44,5	44,5	11	22	56	22
4 course	7	57	43	0	43	43	14	43	57	0
1 st year of master's degree	49	22	41	37	39	43	18	18	57	25
2 nd year of master's degree	7	0	86	14	43	43	14	0	86	14
Respondents who spent most of their time in Ukraine during the year of the war	131	28	44	28	33	56	11	13	70	17
Respondents who spent most of their time outside Ukraine during the year of the war	24	42	37	21	37,5	46	16,5	29	54	17
Master's students of the specialty "Psychology"	16	12,5	50	37,5	37,5	56,25	6,25	19	56	25
Master's students of other specialties	40	22,5	45	32,5	40	37,5	22,5	15	62,5	22,5
Researched female	119	34	44	22	36	54	10	16	71	13
Researched male	36	17	39	44	25	56	19	14	58	28
Masters of the 1 st year of the female sex	27	22	52	26	37	52	11	15	70	15
Masters of the 1 st year of the male sex	22	23	27	50	41	32	27	23	41	36
The sample as a whole	155	30	43	27	34	54	12	15	68	17

A similar distribution of respondents according to the levels of manifestation of anhedonia is observed in different groups of respondents Table 2.

The obtained results may indicate that the vast majority of students adapted to the stressful conditions of the war. They could feel the joy of life. At the same time, even while showing a good mood, students did feel restlessness/anxiety, fatigue, and depression. In addition, there was a share of students whose mental state required additional attention and psychological help.

Comparison of the indicators of the mental states of the respondents with the help of cross tables made it possible to distinguish the following groups:

1. Those who balanced on the border between peace and anxiety, energy and fatigue, elation, and depression, and maintaining a normal mood and the ability to enjoy life – 22%;
2. Those who kept calm, balanced on the border of energy and fatigue, elation and depression, maintained a normal mood and the ability to enjoy life – 8%;
3. Those who felt anxious, balanced on the border of energy and fatigue, elation and depression, maintained a normal mood and the ability to enjoy life – 5%;

4. Those who felt calm, energetic, elated, maintained a normal mood, and were able to enjoy life – 4.5%;
5. Those who felt calm, balanced on the edge of energy and fatigue, showed elation, maintained a normal mood and the ability to enjoy life – 4.5%;
6. Those who felt anxious, tired, and depressed, had decreased mood and showed a low level of anhedonia – 4.5%;
7. Those who balanced on the border between calmness and anxiety, elation and depression, felt tired, maintained a normal mood and the ability to enjoy life – 4%;
8. Other groups of respondents showed a decrease in one or more indicators of mental states – no more than 3%.

As we can see, the combination of indicators of the mental states of the respondents is quite diverse. At the same time, the groups indicated under numbers 1, 2, 4, and 5 could be considered as well adapted to stressful conditions, since they have either positive indicators of mental states, or a balance of positive and negative indicators of mental states, or a combination of positive and balanced indicators.

To test our hypothesis about the possible influence of the dominant types of activities on the stressful conditions of war, we will

analyze these types of activities in the respondents. At the same time, we will distinguish two groups of them: a) well adapted to extreme conditions, б) with reduced indicators of adaptation to extreme conditions.

Table 2: Results of frequency analysis of indicators of low mood and level of anhedonia in the respondents.

Groups of respondents	N respondents	% respondents by indicators									
		Low mood				Level of anhedonia					
		The mood is normal (no decrease)	A slight decrease in mood is clearly expressed	A significant decrease in mood	Deep decrease in mood (sub-depression)	The ability to receive pleasure is normal	Low	Reduced	Average	Increased	High
1 course	55	73	20	7	0	80	9	7	4	0	0
2 course	28	75	25	0	0	79	7	14	0	0	0
3 course	9	56	22	22	0	56	22	11	11	0	0
4 course	7	72	14	14	0	86	0	14	0	0	0
1 st year of master's degree	49	80	16	4	0	72	6	16	2	4	0
2 nd year of master's degree	7	57	43	0	0	100	0	0	0	0	0
Researched who spent most of their time in Ukraine during the year of the war	131	77	18	5	0	79	8	10	1,5	1,5	0
Researched who spent most of their time outside Ukraine during the year of the war	24	58	33	8	0	63	8	21	8	0	0
Master's students of the specialty "Psychology"	16	87,5	12,5	0	0	82	6	6	0	6	0
Master's students of other specialties	40	72,5	22,5	5	0	72,5	5	17,5	2,5	2,5	0
Researched female	119	69	23,5	7,5	0	80	6	11	3	0	0
Researched male	36	89	11	0	0	67	14	14	0	5	0
Masters of the 1 st year of the female sex	27	78	15	7	0	74	3,75	18,5	3,75	0	0
Masters of the 1 st year of the male sex	22	82	18	0	0	68	9	14	0	9	0
The sample as a whole	155	73,5	20,5	6	0	77	8	11,5	2,5	1	0

Activities of respondents with different indicators of mental states

The method of Fisher's angular transformation was used to find out the differences in the types of activities of the respondents, with indicators of adaptability and reduced adaptability to long-term stressful conditions. Differences were analyzed according to the following parameters: engagement in activities based on new interests, main types of activities (to which students devoted more time and energy), self-education, and self-development.

A comparison of the percentage of the respondents of both groups who carried out activities related to their new interests showed the following: Respondents with indicators of adaptability to stressful conditions significantly more often (at the level of statistical significance $p \leq 0.001$, $\varphi_{emp} = 2.75$) resorted to activities to satisfy new interests than respondents with reduced indicators of adaptability (87% and 69%, respectively).

An analysis of the types of activities carried out by the respondents during the previous year showed the presence of common and distinctive features. Thus, common for both groups is the pursuit of such activities as the main ones: performing household duties and taking care of the family, communicating/spending time with children and friends, studying, and self-development.

At the same time, the respondents with indicators of adaptability to stressful conditions also named the following types of activities: hobbies, sports, personal life arrangements, spending time on themselves, cooking, and raising children.

The respondents with reduced indicators of adaptation to stressful conditions named the following types of activities: travel, needlework, creativity (of various kinds), playing Dota, and lying in bed.

As can be seen from what has been described, the decreased indicators of students' mental states are also combined with such

activities that provide the possibility of "escape" from reality, the avoidance of activity. At the same time, students with preserved positive indicators of mental states are more likely to engage in life-affirming activities.

In both groups of respondents, the following types of activities were found, which are focused on self-development and self-education. However, in the adapted group, more students (21%) engaged in various types of self-education (studying outside the university, reading books, learning a foreign language) than in the group with reduced adaptation indicators (11%). The application of Fisher's angular transformation method confirmed the statistical significance of such differences ($p \leq 0.001$, $\varphi_{emp} = 4.6$).

Limitation of the application of the obtained results

The results were obtained from a sample of respondents from one university, without differentiation of the level of students' stressful experiences.

Conclusion

The conducted research gave grounds for the conclusion that employment in various types of activities is associated with the manifestation and possible adjustment of the mental state of the individual. Preservation of positive characteristics of the mental states of student youth in stressful conditions is facilitated by the emergence of new interests and activities to implement them. Engaging in life-sustaining activities (hobbies, sports, self-employment, spending time raising children, cooking), in addition to the necessary everyday tasks and the main activity (work, study) contributes to maintaining a normal mental state. The greater the number of types of activities a person carries out under stressful conditions, the better the chances of restoring his mental state. Activities aimed at self-development and self-education, and the development and satisfaction of cognitive interests, can play an important role in ensuring the resourceful mental state of an individual.

In general, as evidenced by the results of our research, in long-term stressful conditions, student youth can remain calm, overcome anxiety and fatigue, avoid depression, maintain a fairly high mood, and feel joy from various aspects of life. Some of the life-affirming activities can be offered as a method of psychological assistance for those students whose indicators of mental states are low, thus expanding the scope of their interests and creating opportunities for their satisfaction, forming readiness for self-education and self-development.

Ethical Foundations

This research was conducted as per the principles of the APA for human research. The students were provided with a set of forms of these methods, approved by the ethics committee of the Department of Psychology of the National University of Life and

Environmental Sciences of Ukraine. The research was anonymous, the participants were informed that their responses would be treated confidentially, and anonymously, and all data would be analyzed in a generalized form without any conclusions about respondents. Participation in the study was voluntary. Students of 1-5 courses of the National University of Life and Environmental Sciences of Ukraine were involved, with a total of 155 persons. The research was conducted on February 24, 2023.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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