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Deliverable 5 .3. 3 Toolbox for Equal Health Provision

Analysis of the psychological effects on the medical staff of the beneficiary from the Covid-19 pandemic & burnout syndrome; development of solutions on how to address these (guidelines and consultation manual)

1. INTRODUCTION

In the modern dynamic world of intense impact of factors of different nature on the individual, the emotionally stressful state is increasingly increasing and covers all social groups.

It is a well-known fact that the 21st century is full of uncertainty, with potential and real threats to people's lives and health. Threatening the basic human need for security increases anxiety and provokes the appearance of physical and mental disturbances. The real critical accidents in which people fall, often lead to the release of symptoms of acute and post-traumatic stress, which in turn and in combination with the professional conditions create a favorable ground for the manifestation of burnout syndrome.

At the present time, the interest in the research and study of the mentioned phenomena increases even more after the addition of the COVID-19 pandemic to the traditional causes of PTSD, such as accidents, military actions, natural disasters, serious crimes, violence against the person .

The intensity of the impact of such events on the psyche is sometimes so strong that personality traits no longer play an essential role in the genesis of PTSD. Its mental manifestations are accompanied by psychosomatic disorders. The general patterns of occurrence of PTSD do not depend on what specific traumatic events have caused these disorders - it *is essential that they have an extreme character that is beyond ordinary human experiences and causes intense fear for one's own life, terror and a sense of helplessness.* It is important to note that not only the situation is traumatic, but also the subjective ideas of what could happen in future (deterioration of condition, death, etc.).

The critical situation in which the individual finds himself has a strong impact on all spheres of his functioning - family, social life, work environment and professional relationships. The effects of trauma can affect a person's relationships, work, health, and overall outlook on life. People experience events differently. What may be traumatic for one person may not be for another. After experiencing a traumatic event, it is normal for a person to feel scared and react in a fear response triggered by the brain's "flight, fight or freeze" system. But most reactions and symptoms of fear dissipate after a short period of time. People who continue to experience these symptoms to the point that they affect their daily functioning in life may be diagnosed with post-traumatic stress disorder (PTSD).

In March 2020, the World Health Organization announced its assessment that COVID-19 could be classified as a pandemic. This marked the beginning of a period of crisis whose end no one could foresee. The pandemic had a strong impact on the whole society, but the medics were subjected to the greatest pressure and tension. They were expected, on the one hand, to react quickly, and on the other hand, that their reaction be adequate to the situation. Medical professions are one of those that are associated with experiencing high levels of occupational stress. In the period of the pandemic, the stress that people experience during and after a crisis and the so-called post-traumatic stress was added to it.

2. RESEARCH HYPOTHESIS, GOAL, TASKS

The main goal of the present study is *to look for specific features in the clinical picture and the manifestation of the symptoms of post-traumatic stress disorder and occupational burnout in the studied sample, selected by the staff of the MBAL - town of Ardino, with different specifics of activity and to propose adequate and /or innovative control and prevention methods.*

Working hypotheses

1. **Hypothesis 1.** There is a correlation between perceived stress during the Covid-pandemic and clinical manifestations of PTSD and burnout syndrome.
2. **Hypothesis 2.** The indicators age, marital status, total work experience, experience in the current hospital, held position (managerial or executive) influence the occurrence of PTS and the "burnout" syndrome.
3. **Hypothesis 3.** The degree of manifestation of burnout symptoms after the Covid-pandemic is determined by the degree of manifestation of PTSD symptoms.
4. **Hypothesis 4.** The use of various coping strategies allows more successful coping with PTS and burnout syndrome.

The tasks before the present study are to follow:

1. What are the strongest stressors for the subjects during the Covid-pandemic.
2. The relationship between perceived stress and PTSD manifestations as a result of the Covid-pandemic.
3. Is there a "burnout syndrome" after the Covid-pandemic and is it determined by the experienced post-traumatic stress.
4. What is the influence of socio-demographic factors on the experience of PTS and "professional burnout".
5. To what extent does the use of coping strategies increase the individual's natural resilience in a crisis situation.

The object of the present study is the detection of PTSD syndrome and " *burnout* " among the staff of MBAL - Ardino and the consideration of the severity of their manifestation. The sample included in the study is 17 people, which represents 30% or 1/3 of the total staff of the hospital.

- Doctors - 1 person examined - 4% or 1/20 of the doctors in the hospital;
- Nurses - 14 respondents - 66% or 2/3 of the nurses;
- Non-medical staff - 2 subjects - 20% or 1/5 of the non-medical staff.

3. RESEARCH METHODS

The psychometric tool includes a questionnaire that contains 4 parts:

1. Socio-demographic part - gender, age, marital status, education, specialty, total work experience, experience in the current hospital, currently held position
2. A survey to investigate the sources of stress during the Covid-pandemic, which contains 35 statements rated on a 6-point scale.
3. Self-report questionnaires for perceived stress modified for the present study – PCL-C, MScombPTSD, Derogatis Clinical Questionnaire – SCL-90-R. The methodologies are standardized for the composition of the Bulgarian Army for the study of contingents after returning from participation in international missions. Maslach Self-Assessment Questionnaire (MBI – K 01), to measure the severity of burnout, with 22 items in 3 sections – Emotional Exhaustion, Depersonalization/Dehumanization and Personal Achievement/Effectiveness.
4. Questionnaire - selection of strategies for coping with stress, containing 20 statements rated on a 6-point scale.

Statistical methods for processing the received data:

1. Descriptive analysis:

- Analysis of variance (means and standard deviations).
- Frequency analysis (of demographic data).
- Correlation Analysis (Dependencies and Relationships)

2. Statistical analysis was performed using the Excel software package.

3. RESULTS OF THE RESEARCH

3.1. Sample profile

The studied sample includes 17 people, which represent 1/3 of the entire staff of the hospital. The average age was 52.1 years, and the subjects were women between 40 and 60 years old. The youngest respondent is 28 years old, and the oldest is 68 years old. In terms of marital status, married persons predominate. The composition of the sample is mainly nurses, occupying mainly executive positions, with more than 30 years of work experience, spent entirely in this hospital. *(Table 1)*

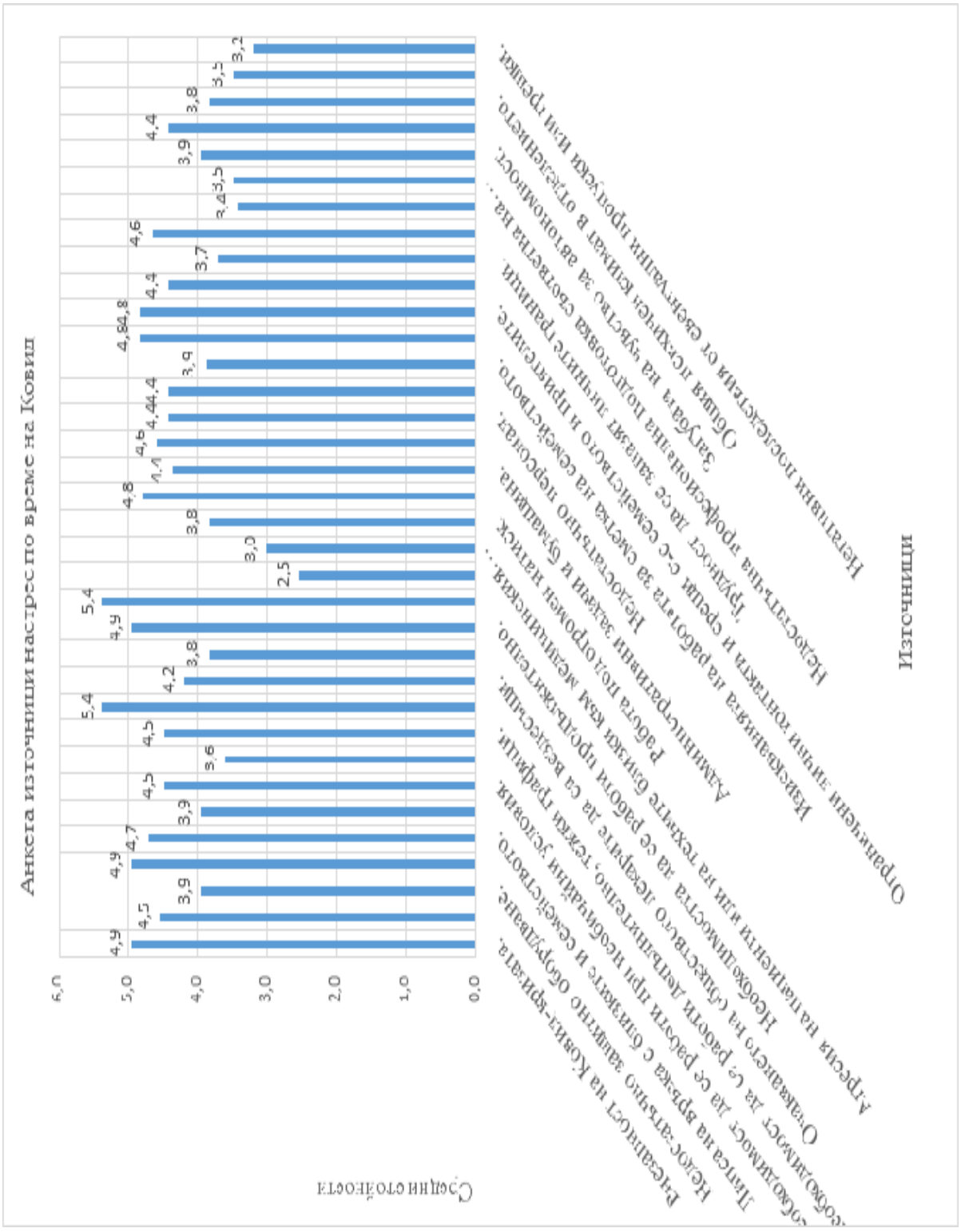
Table 1. General profile of the studied sample

indicators	*number and relative share (%)*	*indicator*			*Total*
		men	*women*		
1. gender	number	0	17		0
	resp. share (%)	0	100		100%
2. age		*Up to 50 years*	*Over 50 years*		
	number	8	9		17
	resp. share (%)	47%	53%		100%
3. marital status		*lonely*	*family*		
	number	1	16		17
	resp. share (%)	6%	94%		100%
4. composition		*doctors*	*honey sisters*	*non-medical personnel*	
	number	1	14	2	17
	resp. share (%)	6%	82%	12%	100%
5. general work experience		*up to 20 years*	*from 20 to 30 years*	*over 30*	
	number	3	5	9	17
	resp. share (%)	18%	29%	53%	100%
6. internship in this hospital		*up to 10 years*	*over 10 years*		
	number	3	14		17
	resp. share (%)	18%	82%		100%
7. position held		*managerial*	*executive*		
	number	2	15		17
	resp. share (%)	12%	82%		100%

3.2. **Sources** of **stress (stressors)**

In the current study, only those specific to the pandemic period were included in the assessment of stress sources. The aim is to track the subjective assessment of the subjects for their impact strength, on the one hand, and on the other - how far these specific stressors are related and influence the development of PTSD and burnout syndrome. The subjects were offered a questionnaire containing 35 statements, including atypical stressors, mainly characteristic of the period of the Covid pandemic. Their evaluation is carried out on a 6-point scale, containing ratings from "not a source at all - 1" to "constantly a source - 6". (Chart 1)

Chart 1



The ranking made by the researched persons shows that the suddenness of the Covid crisis has the greatest impact on them, which leads to the feeling of unpreparedness, confusion and disorientation, fear of infection and transmission of the infection to relatives and family, social isolation and the limited contacts with family, relatives and friends, the constant risk and the need to work under unusual conditions, heavy schedules and busy everyday life. Due to the great emotional involvement with the patients, they point to the higher mortality of people than usual as the most difficult to bear. Ardino is a small town where people are bound together by family,

friendship, neighborhood or professional ties and know each other directly or indirectly. The entire working life of the majority of the researched has passed in this hospital and they have met their patients more than once. It is this specificity that explains the greater emotional engagement with the patients, and hence the sadness experienced at the loss of each one of them.

The lowest in the ranking of stressors are those such as the lack of medicines and vaccines, patient aggression, lack of social support from colleagues and supervisors, insufficient professional training. *(Table 2)*

The rating of each of the stressors is an indicator of its duration and intensity of impact. The items that received the highest ranking positions (between 5.4 points and 4.5 points) were rated as "often a source" and "constantly a source" of stress. Those factors of the environment, whose power of impact is the weakest, are mostly evaluated as "usually not a source" and "definitely not a source" (between 3.4 points and 1.0 points). The stressors occupying the middle positions are most often rated "sometimes a source" and "usually not a source", and their average values are between 4.4 points and 3.5 points. Such are, for example, the shortage of personnel, daily making of important decisions, administrative tasks and paperwork, society's high expectations of doctors, work demands at the expense of personal interests, awareness of one's own limitations, various organizational features of the environment, etc. similar. These are actually the stressors that medics usually face in their daily work with or without a pandemic and to which they have built up some resistance. *(Table 2)*

(Table 2)

SOURCES OF STRESS AT YOUR WORK DURING THE PANDEMIC		
	Wed. Art.	Content of the question
10	5.4	Higher patient mortality than usual.
14	5.4	Fear that you might infect people around you.
5	5.0	Lack of contact with loved ones and family.
1	4.9	Suddenness of the Covid-crisis.
4	4.9	Lots of work to do.
13	4.9	The need to work long hours.
24	4.8	Need to take risk.
25	4.8	Limited personal contacts and meetings with family and friends.
18	4.8	Work at high risk of infection.
28	4.6	Emotional engagement with patients.
20	4.6	A feeling of isolation.
2	4.5	Unpreparedness, confusion and disorientation.
7	4.5	Need to work under unusual conditions.
9	4.5	Need to work extra, heavy schedules.
21	4.4	Understaffed.
22	4.4	Lack of previous experience in dealing with a pandemic situation.
26	4.4	Difficult or sometimes impossible contact with patients.
32	4.4	The need to make important decisions daily.
19	4.4	Administrative tasks and paperwork.
11	4.2	Society expects doctors to be ubiquitous.
3	3.9	Insufficient protective equipment.
31	3.9	The loss of a sense of autonomy.
23	3.9	The demands of work at the expense of family.
12	3.8	Realizing your own limitations.
17	3.8	Working under enormous pressure.
33	3.8	The general mental climate in the ward.

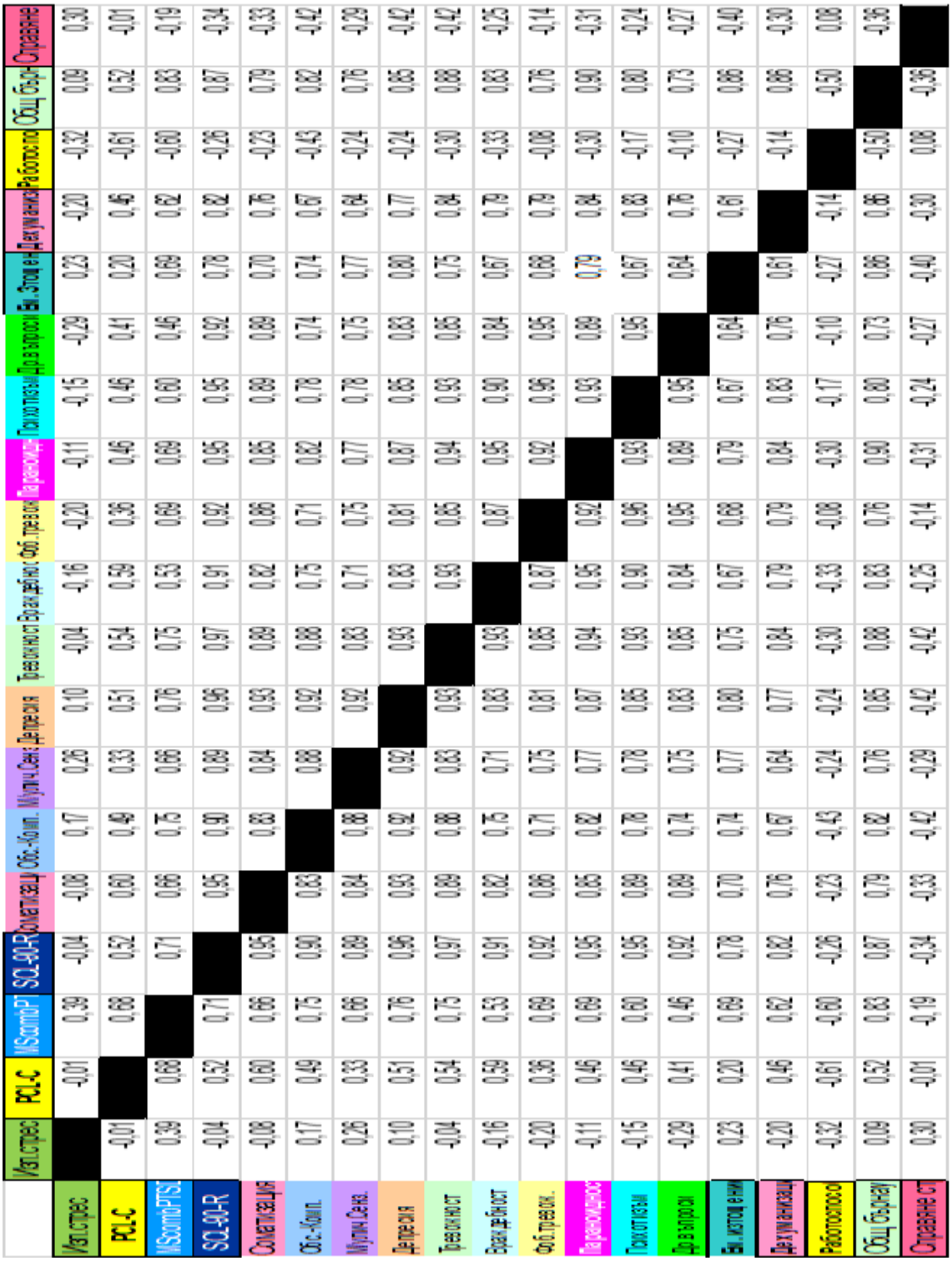
SOURCES OF STRESS AT YOUR WORK DURING THE PANDEMIC		
	Wed. Art.	Content of the question
27	3.7	Difficulty maintaining personal boundaries.
8	3.6	Poor leadership and insufficient support from superiors.
30	3.5	Losses in the ranks of the class.
34	3.5	Lack of emotional support from people outside of work
29	3,4	Insufficient professional training corresponding to the requirements of the situation.
35	3.2	Negative consequences of possible omissions or errors.
16	3.0	Lack of social support from colleagues.
15	2.5	Aggression of patients or their relatives towards the medical staff.
6	1.0	Shortage of medicines and vaccines.
common	4.2	

From the correlation analysis, it can be seen that there is a weak to moderate degree of association between the indicated sources of stress and the other studied components (perceived stress (PCL-C, MScombPTSD) , the clinical scales of the SCL-90-R and MBI – K 01 – BOS) . Of some significance is the correlation with MScombPTSD , the clinical scales "obsessive-compulsiveness", "interpersonal sensitivity", "phobic anxiety" of the SCL-90-R and the scales of the MBI - K 01 - BOS - "emotional exhaustion", "dehumanization", "ability to work"

The more significant correlation between sources of stress and posttraumatic experiences testifies to a positive association between the two components. Increasing the intensity of the impact of stressors can increase the level of traumatic experiences. The slightly higher direct correlation with the specified clinical scales can be explained by the specific conditions during the pandemic related to the imposed precautions - wearing masks, continuous disinfection of hands, objects, clothes, premises (OCD - behavior and manifestations of phobic anxiety), isolation, closure, limited social contacts, distancing from others - reduces interpersonal sensitivity.

Some weak correlation with the MBI-K 01 scales for measuring burnout syndrome was observed. The direct correlation with the "emotional exhaustion" scale is an indicator of accumulated fatigue as a result of the specific environmental pressure. The negative correlation with the "dehumanization" scale shows that regardless of accumulated fatigue and physical exhaustion, an attitude of emotional engagement and empathy with their pain and suffering is maintained towards the patients. This atypical phenomenon can be explained by the specific pandemic situation hiding a threat for each individual. The need to work under unusual conditions, with extended schedules, to take on additional shifts and tasks are environmental factors that, together with emotional exhaustion, lead to a decrease in work capacity, which explains the inverse correlation with the same scale. *(Table 3)* . The interpretation of the obtained results shows that apparently the sources of stress, although they influence the subjects, do not lead to PTSD and burnout syndrome by themselves, which explains their weaker correlation. Between the two sides of this process: sources of stress and stress in its various manifestations, there are a number of factors, such as - personal predisposition, accumulated life and professional experience, health status, social support, organizational factors, etc.

Table 3 Correlation analysis



Based on the individual assessments, three degrees of intensity of the sources of stress are formed - "low", "moderate/medium", "high". *(Table 4).* 29% or about 1/3 of the surveyed persons defined the intensity of impact of stressors as strong. The ratings they gave for the individual criteria varied predominantly between "often a source of stress" and "constantly a source of stress". The highest individual score is 5.7 points *(Chart 2)*

Table 4

Results according to sample mean norms						
Results - degree	low		average		high	
Test methods	No. IL	% IL	No. IL	% IL	No. IL	% IL
Ex.stress	7 pcs.	41%	5 pcs.	29%	5 pcs.	29%
Coping with stress	3 pcs.	18%	8 pcs.	47%	6 pcs.	35%

41% defined their degree of impact as minimal. The lowest individual score was 2.9 points (Table 4 and Graph 2). Over time, on the one hand, they most likely adapted to the unusual environmental influences, and on the other hand, using various coping strategies, they managed to minimize the external pressure. The fact that the research is being conducted almost a year after the end of the Pandemic is also not insignificant. Distance in time from the traumatic event also affects the way it is evaluated.

Chart 2

3.3. EXPLORING THE DETERMINANT RELATIONSHIP BETWEEN PERCEIVED STRESS, PTSD, AND BURNOUT SYNDROME DURING THE COVID PANDEMIC

3.3.1. A study of perceived traumatic stress

According to the existing classifications, the situations of natural disasters, technological accidents, military actions, severe accidents, violence against the person, etc. are indicated as traumatic, but pandemics do not appear among them. The reason for this is that modern society has not faced such a situation. By its nature, however, it fully meets the criteria describing traumatic situations: they subject a person to an extreme, intense impact with a threat to the life and health of the individual and/or his loved ones, which sharply violates his sense of safety. These situations can be either short but with a very powerful impact, or prolonged or repeated.

Consequently, post-traumatic stress disorder is defined as a non-psychotic delayed reaction to traumatic stress caused by the above-mentioned events capable of causing virtually any mental disorder in any person.

Based on the above, the purpose of this part of the research is to establish the level of perceived (traumatic) stress during the Pandemic. Did this lead to manifestations of post-traumatic stress disorder and did they, in turn, create conditions for the manifestation of burnout syndrome?

The methods used to determine the presence of traumatic stress and post-traumatic stress disorder are self-assessment questionnaires - PCL-C, MScombPTSD, Derogatis' clinical questionnaire - SCL-90-R, standardized for BA, for the study of contingents after returning from participation in international missions. The Maslach Self-Assessment Questionnaire (MBI – K 01) was used to measure the severity of the burnout syndrome.

The PCL-C self-report questionnaire was modified for the present study to track traumatic experiences related to the Covid pandemic. It contains 17 statements rated on a 5-point Likert scale, the answers to which range from "not at all true - 1" to "completely true - 5".

The mean of total perceived stress was 36.6 and the standard deviation was 12. For comparison with studies of military personnel participating in international missions, the total perceived stress was 17.80 and the standard deviation was 1.5. *(Table 9).*

The most frequently given ratings of the respondents gravitate around the answers "somewhat true" to "completely true" - for the highest rated items, and from "there is some truth" to "not true at all" - for the lower rated items. For individual statements, the highest average score is 2.9 points, and the lowest - 1.2 points *(Chart 3)*

The MScombPTSD questionnaire is a 35-item instrument designed to measure combat-related PTSD, with a civilian survey option. The Mississippi Scale (MS) covers the entire range of PTSD symptoms. The statements in the questionnaire were modified, emphasizing the experiences of the respondents during the Pandemic. The rating is on a 5-point Likert scale - from "not true at all - 1" to "completely true - 5". The average value of total stress for the subjects was 66.4, and the standard deviation – 18.9. For comparison, among BA servicemen who participated in international missions, the mean values were 48.4, and the standard deviation was 14.3 *(Table 9).* Mean scores for individual items ranged from 3.0 to 1.0. *(Chart 4)*

Chart 3

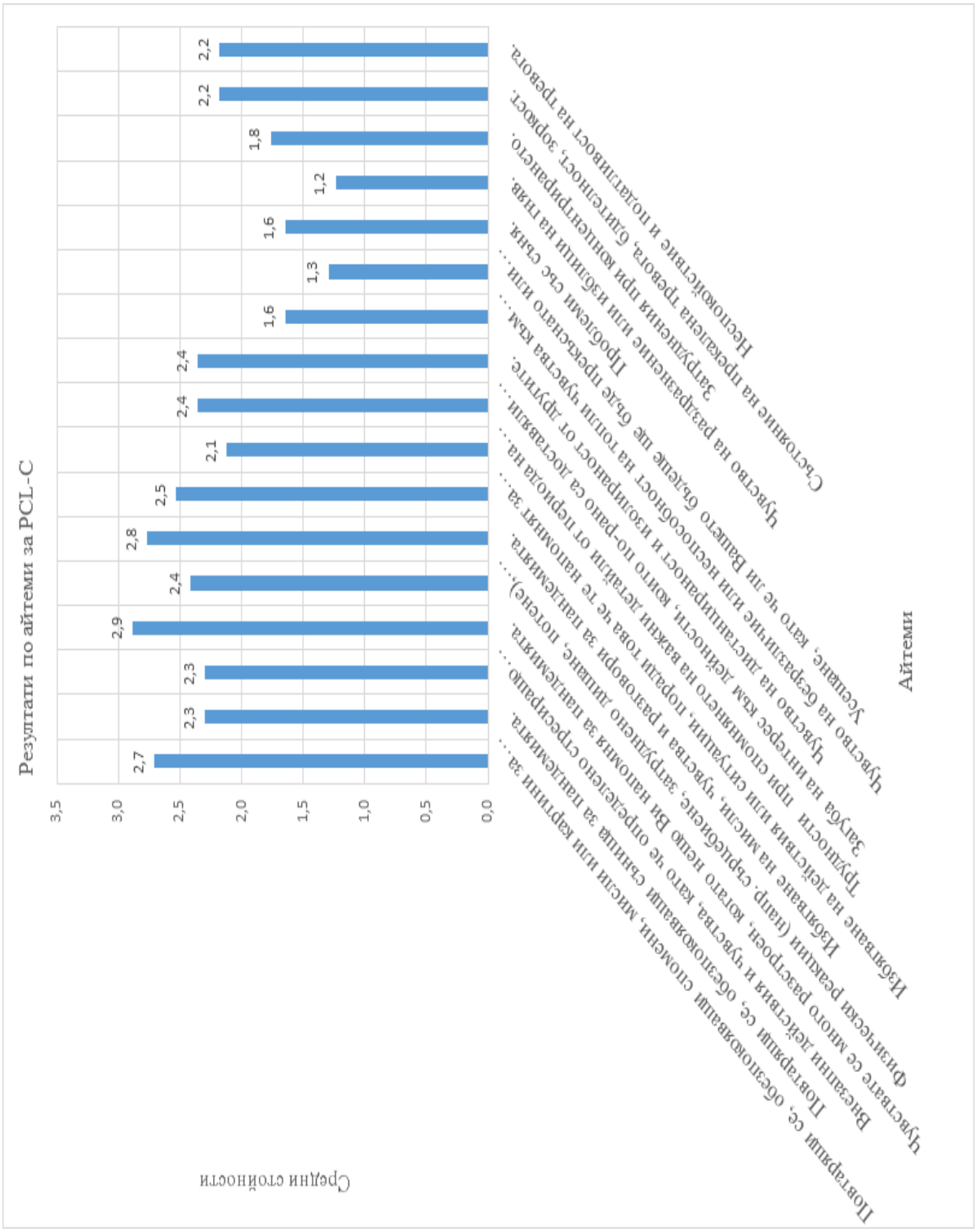
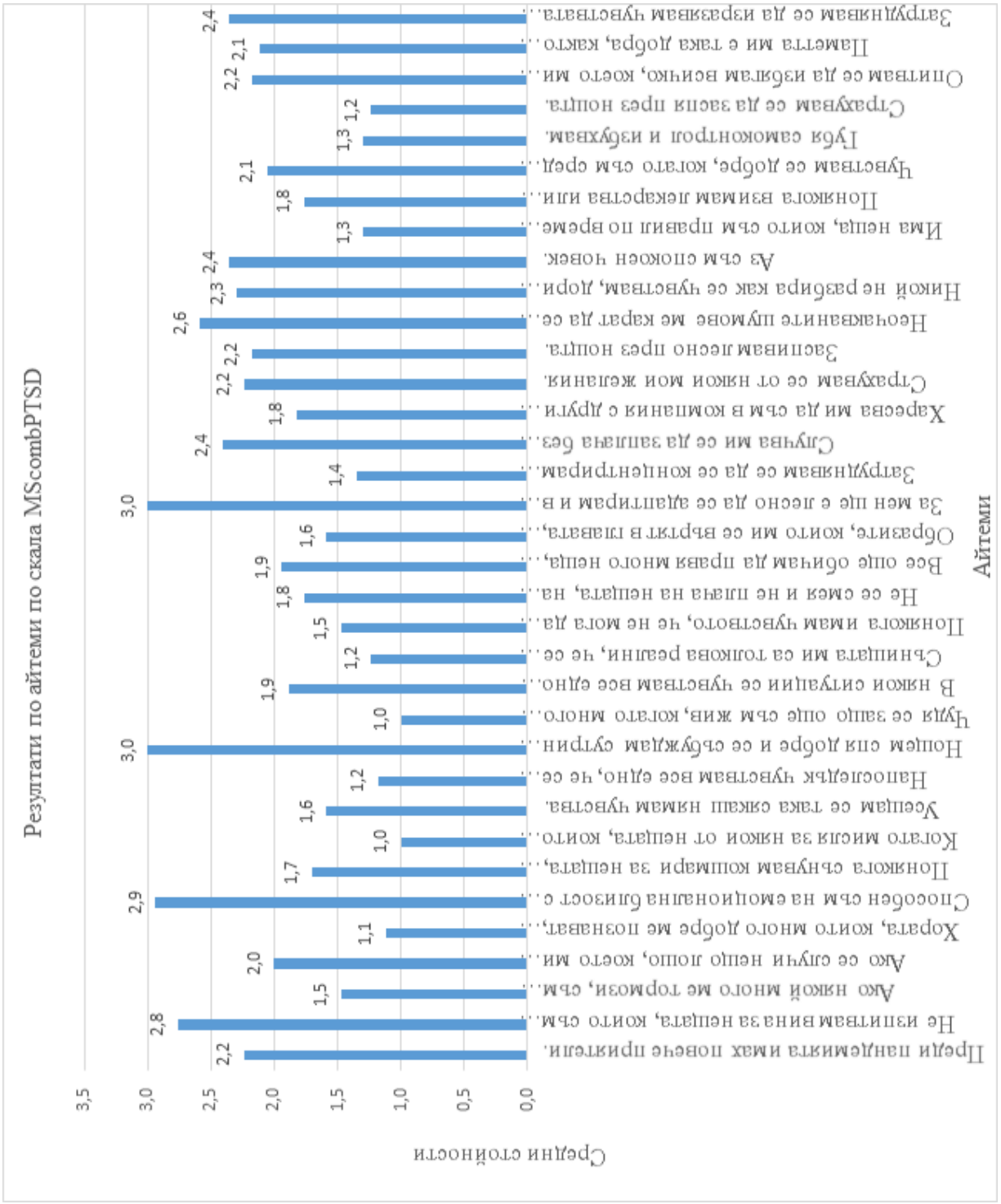


Chart 4



The highest-ranking items were usually rated in the range of "somewhat true" to "completely true." The statements placed in the lower part of the ranking were evaluated mainly as - "there is a little truth" and "not true at all".

Tables 5 and 6 show how the ranking of the respondents looks like in terms of the traumatic stress they experienced during the Covid-pandemic. (*Tables 5 and 6*).

Still in a moderate to strong degree, the subjects feel upset when something reminds them of the Pandemic, avoid thoughts, feelings and conversations about it. Memories and pictures of

that moment still have a disturbing character, which is why they seek to avoid situations that bring them back to that period. Unpleasant memories are accompanied by vegetative manifestations - palpitations, difficulty breathing, sweating, etc. Subjects note that they still experience reduced interest in some of the activities that previously excited them. With a moderate degree of manifestation is the feeling of loneliness and distance from other people. Problems falling asleep and quality of sleep are reported, with no indication of nightmares and disturbing dreams. Unexpected and sudden stimuli - noise, light, smell, tactile sensations cause anxiety. At certain moments, they experience difficulties with emotional self-control - causeless anxiety, sadness, crying.

In summary, it can be said that the subjects had separate experiences characteristic of all four types of PTSD symptoms - "obtrusive memories", "avoidance", "negative changes in mood and thinking" and "changes in physical and emotional reactions", without any type emerging as dominant, and their strength of manifestation is moderate to slightly elevated.

The ranking of the items in the two methods shows an aspiration of IL to return to normality.

Table 5

PSL-C - TRAUMATIC STRESS RESEARCH QUESTIONNAIRE		
no	Wed. Art.	Content of the question
4.	2.9	You feel very upset when something reminds you of the pandemic.
6.	2.8	Avoiding thoughts, feelings and conversations about the pandemic.
1.	2.7	Recurring, distressing memories, thoughts, or images about the pandemic.
7.	2.5	Avoiding actions or situations because they remind you of the pandemic.
5.	2.4	Physical reactions (eg palpitations, difficulty breathing, sweating) when something reminds you of the pandemic.
9.	2.4	Loss of interest in activities that were previously enjoyable.
10.	2.4	Feeling distant and isolated from others.
2.	2,3	Recurring, disturbing dreams about the pandemic.
3.	2,3	Sudden actions and feelings as if a certain stressful experience is happening again (after you've already experienced it once).
17.	2.2	Restlessness and susceptibility to anxiety.
8.	2.1	Difficulty remembering important details from the pandemic period.
15.	1.8	Difficulty concentrating.
11.	1.6	A feeling of indifference or inability to have warm feelings for loved ones.
13.	1.6	Sleep problems.
12.	1.3	Feeling as if your future will be cut short or meaningless.
14.	1,2	Feeling irritable or angry outbursts.
16.	1.0	A state of excessive anxiety, vigilance, vigilance.
Total	36.6	

Table 6

MISSISSIPPI SCALE-RELATED PTSD - MScombPTSD		
no	Wed. Art.	Content of the question
11.	3.0	I sleep well at night and wake up in the morning at the wake-up call.
19.	3.0	It will be easy for me to adapt to another hospital if I leave this one.
6.	2.9	I am capable of emotional intimacy with other people.
2.	2.8	I don't feel guilty about the things I did during the pandemic.
25.	2.6	Unexpected noises make me startle.
21.	2.4	I sometimes cry for no good reason.
27.	2.4	I am a calm person.
35.	2.4	I find it hard to express my feelings, even to people I feel close to.
26.	2,3	No one understands how I feel, not even those closest to me.
1.	2.2	Before the pandemic, I had more friends.
23.	2.2	I am afraid of some of my desires.
24.	2.2	I fall asleep easily at night.
33.	2.2	I try to escape everything that reminds me of the things that happened to me during the pandemic
34.	2.1	My memory is as good as usual.
30.	2.1	I feel good when I am among many people.
4.	2.0	If something bad happens that reminds me of the pandemic, I get very depressed and upset.
17.	1.9	I still like to do a lot of things that I used to like to do.
13.	1.9	In some situations, I feel like I'm back in the pandemic situation.
22.	1.8	I like being in the company of other people.
16.	1.8	I don't laugh and cry at the things other people laugh and cry at.
29.	1.8	Sometimes I take medicine or drink to sleep or to forget the things that happen to me in the army.
7.	1.7	Sometimes I have nightmares about things that actually happened to me during the pandemic.
9.	1.6	I feel like I have no feelings.
18.	1.6	The images that run through my head are very real and startling.
3.	1.5	If someone bullies me a lot, I tend to get aggressive.
15.	1.5	Sometimes I feel like I can't move.
20.	1.4	I find it difficult to concentrate on my tasks.
28.	1.3	There are things I've done during the pandemic that I wouldn't tell anyone about because they wouldn't understand me.
31.	1.3	I lose control and explode.
14.	1,2	My dreams are so real that I wake up in a cold sweat struggling not to fall back asleep.
32.	1,2	I'm afraid to sleep at night.
10.	1,2	Lately I feel like I'm self-destructing.
5.	1.1	People who know me very well are afraid of me.
8.	1.0	When I think about some of the things I did during the pandemic, I think I would have been better off dead.
12.	1.0	I wonder why I am still alive when so many others have died in the line of duty as doctors.
Total	66.4	

Individual assessments are divided into three groups - "low", "moderate/medium", "high", according to the intensity of stressful experiences. *(Table 8).* It is noteworthy that the relative

shares at the individual levels completely coincide with both methods used - For slightly more than 1/3 (35%) of those surveyed, the danger, risk and threat of Covid has passed and they strive to return to normal. They describe their traumatic experiences as weak and episodic. For 29%, post-traumatic experiences are moderately elevated, and 35% describe them as very frequent and of high intensity. The highest individual score for PCL-C is 63 points and the lowest is 21 points, respectively for MScombPTSD they are 108 points and 39 points respectively *(Charts 5 and 6)*

Chart 5

Chart 6

3.3.2. Clinical manifestations of post-traumatic stress

Against the background of traumatic experiences, it is important to track whether and what the clinical manifestations of stress are. The methodology used in this connection is the

Derogatis SCL-90-R clinical test . It describes various clinical complaints and contains 90 statements divided into 10 scales. They are: 'Somatic', 'Obsessive-Compulsive', 'Interpersonal Sensitivity', 'Depression', 'Anxiety', 'Hostility', 'Phobic Anxiety', 'Paranoid', 'Psychoticism', 'Other Issues'.

Respondents were asked to describe how often and with what intensity they experienced such symptoms during and especially after the Covid-pandemic. The evaluation is carried out on a 5-point scale from "I have no complaints - 0" to ""very strong" /both in terms of frequency and intensity/ - 4"

The mean score on the clinical scales ranged from 0.8 (highest) to 0.3 (lowest). *(Chart 7)*

The leading scores are "somatization" - 0.8, "depression" - 0.7, "anxiety" - 0.7, "obsessive-compulsiveness" - 0.6. The methodology used evaluates the various symptoms both by frequency of occurrence and by their intensity. The obtained average values on the indicated scales show that the symptoms included in them are most often assessed as moderately pronounced. Various somatic complaints, dysthymic emotions - sadness, grief, reduced sense of pleasure, fear, anxiety, feeling of danger, various obsessions - are frequent, but of moderate strength. (*Table 7*). Against the background of the obtained results, a significant coincidence was observed between the ranking of traumatic experiences and their clinical manifestations. Low scores on the psychotic scale are consistent with the definition of PTSD as a non-psychotic delayed response to traumatic stress.

Chart 7

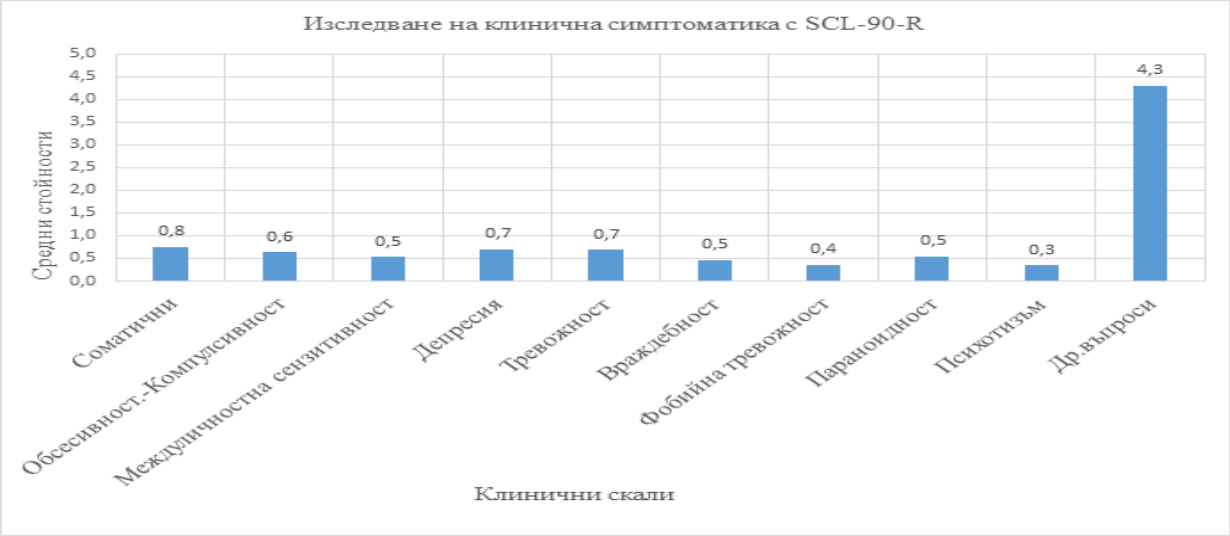
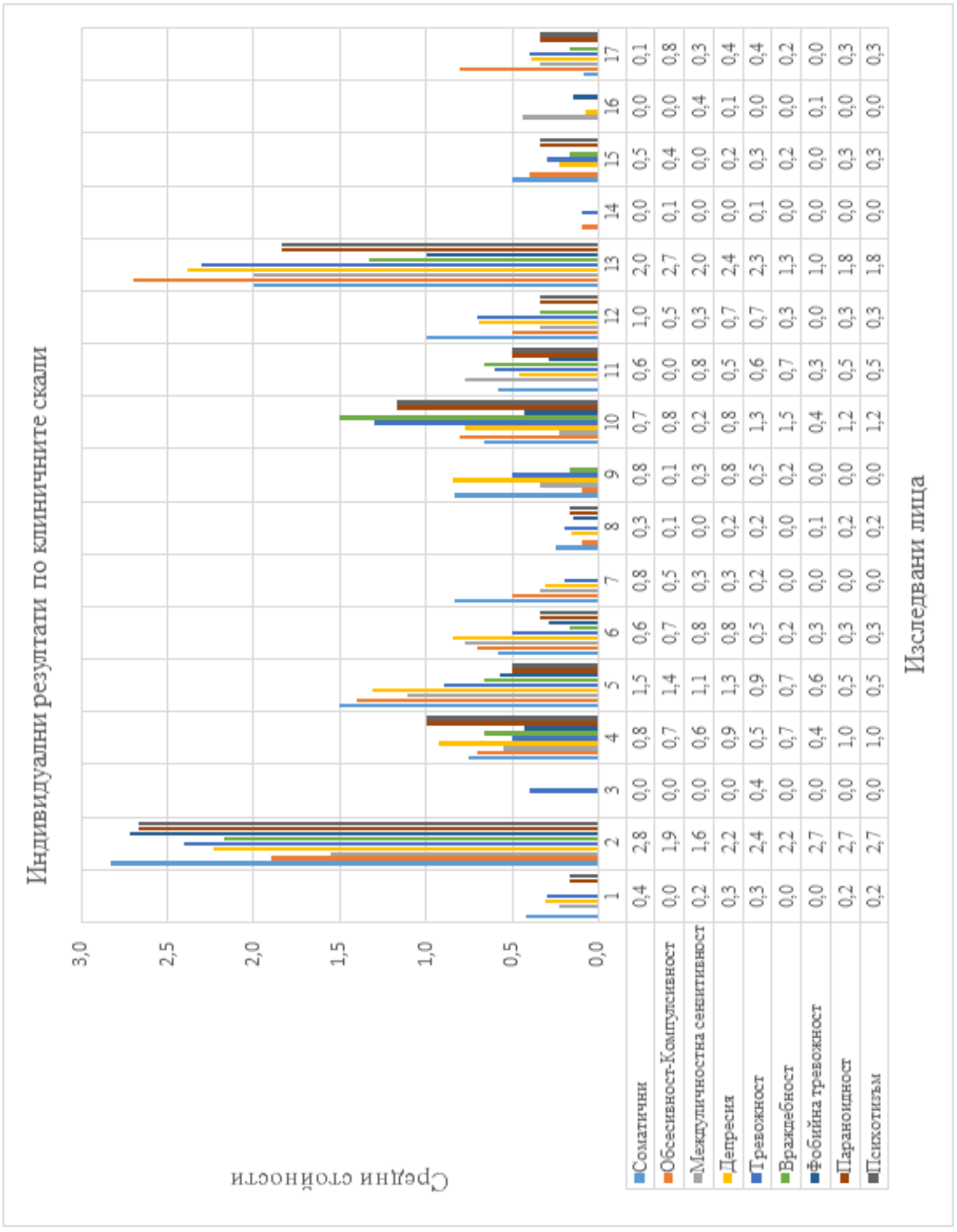


Table 7

DEROGATIS TEST SCL-90-R		
no	Wed. Art.	Content of the question
10	4.3	Other matters
1	0.8	Somatization
4	0.7	Depression
5	0.7	Anxiety
2	0.6	Obsessiveness - Compulsivity
8	0.5	Paranoid
3	0.5	Interpersonal sensitivity
6	0.5	Hostility
7	0.4	Phobic anxiety
9	0.3	Psychoticism
Total	52.4	

Correlation analysis shows that there is high consistency between the individual clinical scales. A high and very high degree of concordance was observed between the SCL-90-R (PTSD) and the PCL-C, MScombPTSD , (traumatic stress), and scales of burnout “emotional exhaustion” and “dehumanization”. With "ability to work" an inverse dependence is outlined, which is insignificantly expressed. *(Table 3).*

Chart 8



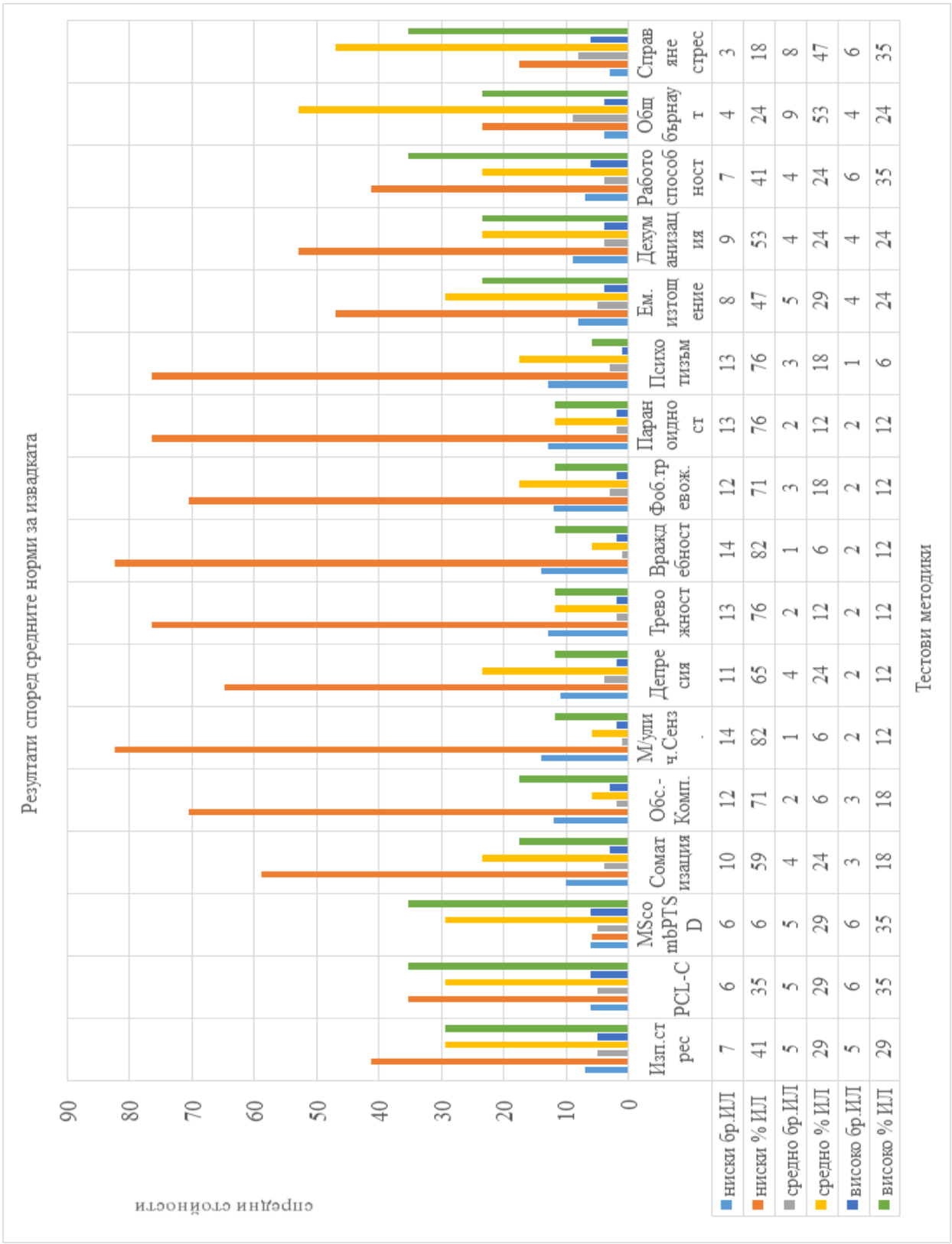
The distribution of individual evaluations is three-level - "low" level, "moderate/medium" and "high". *(Table 8)* . Between 60% and 80% have almost no clinical complaints, or if they do, they are rare and very mild. About 1/3 of those surveyed experienced high levels of traumatic stress. But only half of them reported serious clinical symptoms. Between 10% and 30% have complaints of moderate intensity and varying frequency. From 1/10 to 1/5 share that they very often experience various clinical symptoms with a high degree of intensity. On *Graph 8,* the individual results of the researched on the individual scales can be traced. Notably, people with the most intense complaints reported severe distress in all measured clinical parameters. As already mentioned above, slightly more than 1/3 (35%) still shared high levels of posttraumatic

experiences, but only less than half of them reported high levels of clinical symptomatology. *(Table 8)*

Table 8

Results according to sample mean norms

Results - degree	low		average		high	
Test methods	No. IL	% IL	No. IL	% IL	No. IL	% IL
Ex.stress	7 pcs.	41%	5 pcs.	29%	5 pcs.	29%
PCL-C	6 pcs.	35%	5 pcs.	29%	6 pcs.	35%
MScombPTSD	6 pcs.	35%	5 pcs.	29%	6 pcs.	35%
Somatization	10 pcs.	59%	4 pcs.	24%	3 pcs.	18%
Obs.-Comp.	12 pcs.	71%	2 pcs.	6%	3 pcs.	18%
Street Senz.	14 pcs.	82%	1 piece.	6%	2 pcs.	12%
Depression	11 pcs.	65%	4 pcs.	24%	2 pcs.	12%
Anxiety	13 pcs.	76%	2 pcs.	12%	2 pcs.	12%
Hostility	14 pcs.	82%	1 piece.	6%	2 pcs.	12%
Fob. anxiety.	12 pcs.	71%	3 pcs.	18%	2 pcs.	12%
Paranoid	13 pcs.	76%	2 pcs.	12%	2 pcs.	12%
Psychoticism	13 pcs.	76%	3 pcs.	18%	1 piece.	6%
Em. exhaustion	8 pcs.	47%	5 pcs.	29%	4 pcs.	24%
Dehumanization	9 pcs.	53%	4 pcs.	24%	4 pcs.	24%
Ability to work	7 pcs.	41%	4 pcs.	24%	6 pcs.	35%
General burnout	4 pcs.	24%	9 pcs.	53%	4 pcs.	24%
Coping with stress	3 pcs.	18%	8 pcs.	47%	6 pcs.	35%



As already noted, based on the percentile distribution of the results and the comparison of the local with the standardized norms of the methods used, it shows that the level of experienced traumatic stress (PCL-C, MScombPTSD) by the examined persons significantly exceeds the values of the indicated indicators established for other population groups. The same applies to the clinical indicators of the SCL-90-R . The subjects had more frequent and some of them significantly more intense complaints compared to the normal sample. (*Table 9*).

In this case, however, it cannot be concluded that the high clinical indicators in some of the examined are a direct (immediate) result only of the stress experienced during the Covid-

pandemic. First of all, there is a lack of research, permanently carried out in the time since the Covid-crisis until now, which could serve as a basis for comparison. Second, only ½ of individuals with elevated traumatic stress have frequent and intense clinical complaints. The explanation for this fact can be sought both in the personal characteristics of these people and in the events that happened to them after the Pandemic, for example, the presence of chronic diseases, suffered traumas or operative interventions, lack of family and friend support, separation from loved ones, losses of a different nature - material, financial and other, deterioration of relations with others, etc. The mentioned events could play the role of an aggravating factor for the experienced stress and its clinical manifestations.

Table 9

	Wed. Art.	Art. Off	0.03 pers.	0.10 pers.	0.25 pers.	0.50 pers.	0.75 pers.	0.90 pers.	Local norms	Stand. norms
Ex.stress	4.2	0.8	3.2	3.5	3.6	4.2	4.5	5.4	4 – 4.5	
PCL-C	36.6	12.2	21.5	23.8	27.0	35.0	46.0	51.8	30-40	17 - 19
MScombPTSD	66.4	18.9	40.9	43.6	54.0	63.0	81.0	87.2	60 - 70	41 -53
SCL-90-R	52.4	58.5	3,4	6.2	17.0	35.0	54.0	122.2		
Somatization	0.8	0.8	0.0	0.0	0.3	0.6	0.8	1.7		0.71 - 1.31
Obs.-Comp.	0.6	0.8	0.0	0.0	0.1	0.5	0.8	1.6		0.74 - 1.32
Street Senz.	0.5	0.6	0.0	0.0	0.2	0.3	0.8	1.3		0.79 - 1.4
Depression	0.7	0.7	0.0	0.0	0.2	0.5	0.8	1.7		0.81 - 1.4
Anxiety	0.7	0.7	0.0	0.2	0.3	0.5	0.7	1.7		0.76 - 1.39
Hostility	0.5	0.6	0.0	0.0	0.0	0.2	0.7	1.4		0.74 - 1.39
Fob. anxiety.	0.4	0.7	0.0	0.0	0.0	0.1	0.4	0.7		0.43 - 0.92
Paranoid	0.5	0.7	0.0	0.0	0.0	0.3	0.5	1.4		0.75 - 1.37
Psychoticism	0.3	0.6	0.0	0.0	0.0	0.1	0.3	0.9		0.44 - 1.37
Dr. questions	4.3	5.4	0.0	0.6	1.0	3.0	4.0	7.0		
Em. exhaustion	18.6	10.8	7.0	8.6	11.2	14.0	23.0	34.6	< 1 3 N 14 – 23 above 24 V	<18 N 18 – 29 above 30 V
Dehumanization	6.4	7.3	0.0	0.0	0.0	3.0	10.0	14.8	< 3 N 3 – 9 above 1 0 V	< 6 N 6 – 11 above 12V
Ability to work	34.9	2.6	24.0	25.8	32.0	35.0	38.0	42.0	> 38 N 33 – 37 U <= 32 V	> 4 0 N 34 – 39 U <= 33 C
General burnout	9.7	2.6	6.0	6.6	7.1	8.2	9.3	12.7	8 -10	8 -10
Coping with stress	4.4	0.7	3.3	3.7	4.1	4.3	4.6	5.3	4 – 4.5	

3.3.3. Study of "burnout" syndrome

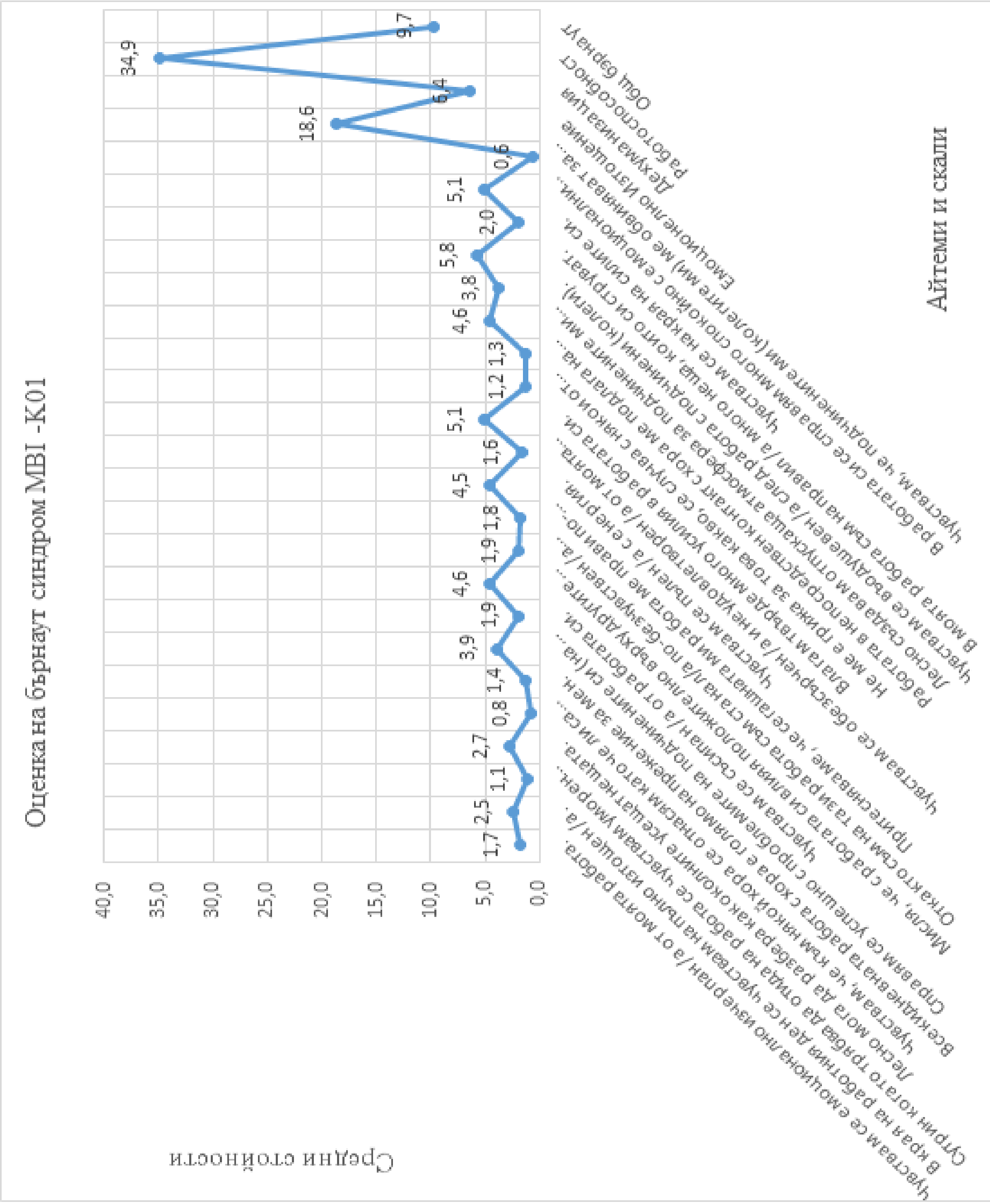
The occurrence of the "burnout" syndrome is determined by the nature of work, it is a professional phenomenon in which the consequences of work-related problems can be transferred to personal life. This syndrome refers mostly to professions requiring close contact and joint activity with other people. It is not stress in itself, but the result of chronic stress caused by the " *helper-dependent* " relationship. While stress, or more precisely unhealthy distress, is understood as a pathophysiological and pathopsychological mechanism (or process), burnout is a phenomenological manifestation of its action.

The stress is primarily associated with the idea of " *excessive* " tension, requiring an investment of physical and emotional resources, and burnout - with *the feeling of dissatisfaction* and the idea of " *insufficiency* ", lack of motivation, insufficient assessment and stimulation at work, lack of initiative for change and self-improvement, etc.

The study of burnout in the context of the Covid-pandemic is primarily related to the study of its connection with traumatic and post-traumatic stress. Postulating the idea that burnout is the result of chronic stress and that stress can exacerbate overheating, it follows that traumatic experiences can create conditions for burnout and exhaustion. The Maslach battery used (MBI – K 01) measures emotional exhaustion, dehumanization and levels of work ability. The scale for evaluating the statements is 7 degrees and ranges from "never - 0" I don't feel this way to "always - 6" I feel this way, which classifies the frequency of burnout by self-determination of the subjects.

The average values for the individual scales are as follows:

- For Emotional Exhaustion scale – mean value 18.6, and standard deviation – 10.8;
- For Depersonalization scale – mean values 6.4, and standard deviation – 7.3;
- For the Workability scale - average values 34.9, and the standard deviation - 2.6;
- For General Burnout - average values - 9.7, and the standard deviation - 2.6. *(Table 9 and Chart 9)*



By item, the highest score is 5.1 pts, and the lowest is 0.6 pts. The most frequently indicated answers that form the high score range from "once a week" to "every day", and the lowest – from “once a month” to “never”.

The mean ranking for the individual statements in each scale can be seen in *Table 10* .

Emotional exhaustion (EI) is a component of the burnout syndrome, which is defined by the reduced energy resources of those working with large numbers of people and responsibilities, such as medical practitioners.

Among the signs of EI with the greatest frequency and duration of manifestation are the feeling that one works too much and puts enormous effort into the work process - 5.1 points.

According to the estimates, the subjects have this feeling almost every day. The feeling of exhaustion, exhaustion, exhaustion at the end of the working day is an experience they have at least once a week - 2.5 points. Disappointment, discouragement and dissatisfaction they experience almost once a month - 1.6. The remaining symptoms of EI have a smaller relative share of manifestation in the low degrees of presence, such as the presence of stress and tension in direct contact with people.

It is noteworthy that the ranking in the present study coincides with the results of previous studies on burnout among medical workers.

Almost half of those surveyed (47%) indicated that they effortlessly carry out their daily work with patients. They almost never feel a sense of disappointment in their work. 29% share that they episodically have similar experiences. 24% of the persons in the sample experience high and quite frequent disappointment with their work. These data indicate to us that a large proportion of health professionals have preserved their emotional strength and cope with mental exhaustion in conditions of systemic stress. The obvious conclusion is that direct medical duties do not burden them and are perceived as a normal part of practicing the consciously chosen profession. *(Table 8)*

(Table 10)

MBI BURNOUT SYNDROME ASSESSMENT QUESTIONNAIRE - K01			
no	Rocks	Wed. Art.	Content of the question
14	EI	5.1	I put too much effort into my work.
2	EI	2.5	At the end of the working day, I feel completely exhausted.
20	EI	2.0	I feel at the end of my strength.
8	EI	1.9	I feel ruined by my job.
1	EI	1.7	I feel emotionally drained from my job.
13	EI	1.6	I feel discouraged and unsatisfied with my work.
6	EI	1.4	Working with people every day is a big stress for me.
16	EI	1.3	Working in direct contact with people puts me under a lot of stress.
3	EI	1.1	I feel tired in the morning when I have to go to work.
10	D	1.9	Since I've been in this job, I've become more insensitive to people.
11	D	1.8	We are concerned that my current job makes me more sensitive.
15	D	1,2	I don't care what happens to some of my subordinates (colleagues).
5	D	0.8	I feel that I treat some people as if they were impersonal objects.
22	D	0.6	I feel that my subordinates (colleagues) blame me for some of their problems.
19	R	5.8	I have done many worthwhile things in my work.
21	R	5.1	In my work, I deal very calmly with emotional problems.
9	R	4.6	I think that with my work I influence other people in a positive way.
17	R	4.6	I easily create a relaxing atmosphere for my subordinates (colleagues).
12	R	4.5	I feel full of energy.
7	R	3.9	I successfully deal with the problems of my subordinates (the people around me).
18	R	3.8	I feel elated after working with subordinates (colleagues).
4	R	2.7	I can easily understand how others feel about things.
EI		18.6	
D		6.4	
R		9.7	
General Burnout		9.7	

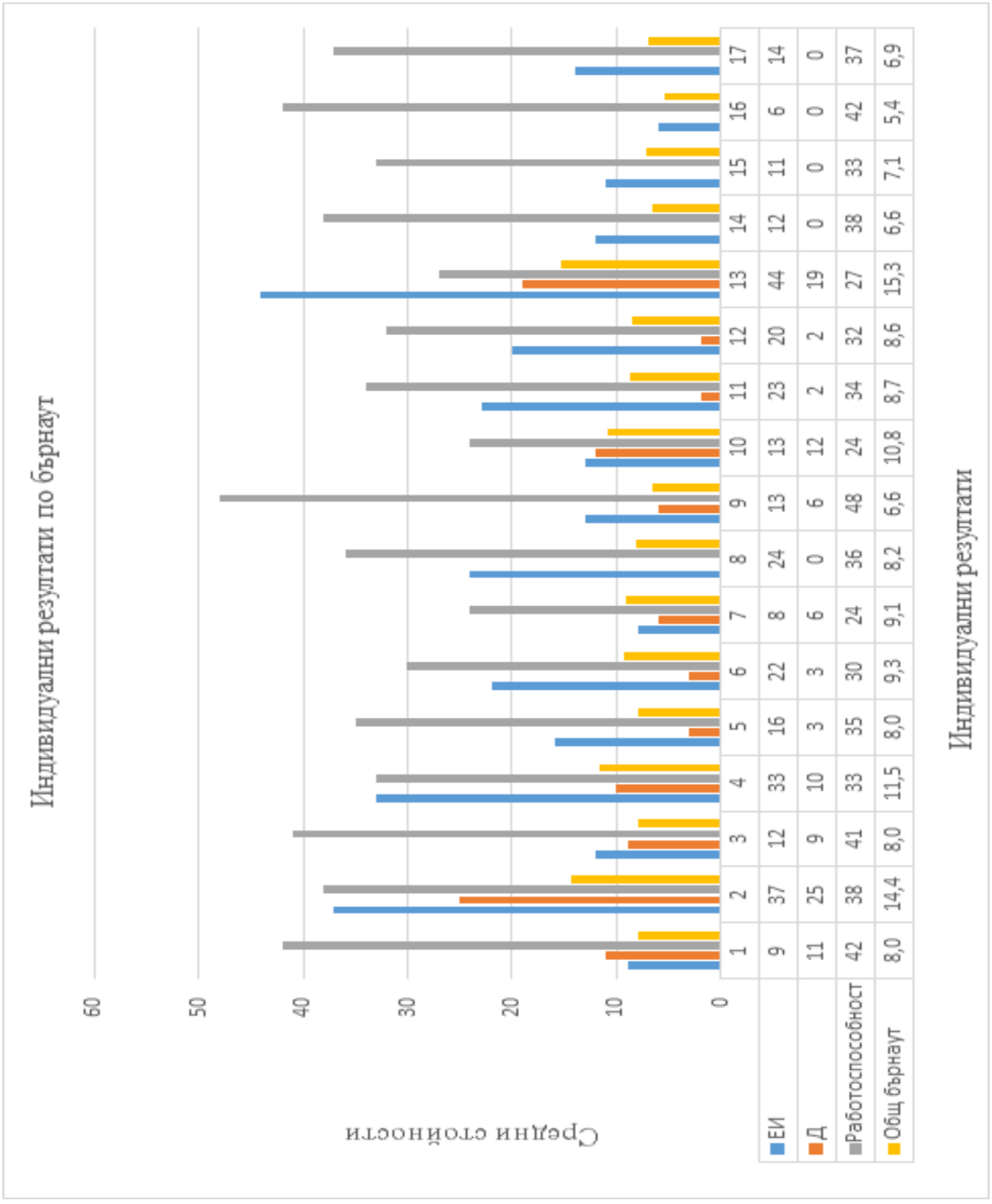
Dehumanization (DH) is understood as the development of a negative attitude towards oneself and others in the process of work and communication, social isolation and hostility primarily towards users of health services. Symptoms of depersonalization highlight the changes in the attitude of the examinees mainly to the patients.

With the highest share in the ranking of the indicators are the concerns of the surveyed that they have become less sensitive (1.9) and sensitive (1.8), and at the same time more hard-hearted (1.2). *(Table 10).* For the rest of the symptoms of depersonalization, they indicated that they have a weak degree of manifestation.

The data show the unchanged attitudes and empathy towards patients' problems, concern, empathy, humanity of the respondents towards them.

The majority of the researched do not perceive the statements indicated in the DH scale as characteristic of them and indicate the negative experiences as sporadic. From the obtained results, the fact that 29% of the respondents never had signs of depersonalization during their professional career stands out. *(Chart 10)*

Chart 10



In (24%), the symptoms of depersonalization occur episodically and occur several times a year or a month. Persistent symptoms of depersonalization were also reported by 24% of respondents, occurring from every day to every week. *(Table 8)*

The established data show that the frequency of manifestation of depersonalization symptoms for about 75% of the respondents is weak to moderate and episodic, over long time intervals.

In other published studies, the frequency and intensity of the manifestation and the level of dehumanization of the medical workers were more pronounced in contrast to those of the

observed sample. This is probably due to the fact that the researched have accumulated many years of professional experience, the predominant work experience was spent in the same hospital, which allows for good mutual acquaintance and the formation of teamwork and cooperation between people, and this, in turn, is a favorable factor in overcoming of different kinds of problems. The fact, already commented above, of the specific relationships in the small town also have an impact on the less pronounced characteristics of depersonalization.

The category of professional performance - work ability (P), as part of the burnout syndrome, is the result of strong emotional exhaustion and depersonalization and is characterized by negative self-esteem and reduced work ability. Unlike the other two components of the burnout syndrome, the data from the "workability" scale are interpreted in the opposite direction.

The items with the highest score are those under the "work ability or personal performance" category. *(Table 10)* Medical professionals rated the importance and efforts they make daily for their patients the highest (5,8). With a high frequency of manifestation are the signs of effective coping at work (5,1), easily overcoming barriers in communicating with patients and their relatives (4,6) and creating a calm and relaxing atmosphere (4,6).

The researched determine that they more often or constantly have the presence of the signs of good personal self-expression, i.e. they have a high assessment of their own performance. They highly value the importance of their work and accept their personal and professional performance as successful, good and positive. 41% are assessed as being in good condition. About 35% declare a high degree of reduced ability to work, and 24% accidentally feel this way.

The correlation of this component with the others in the study is presented with weak or at most average strength and with inverse proportionality. The reason for this is its almost independent existence. It is influenced by a number of external and internal factors. The external ones refer to the rules of work, various professional and organizational conditions and requirements, funding, teamwork and collegiality in the workplace, organizational climate, etc., and to the internal ones - the value system, moral principles, personal self-evaluation, professional competence, etc. *(Table 3)*

As for the other two scales - "emotional exhaustion" and "dehumanization", their correlation with the other studied components is presented in a medium and high degree, especially with the clinical scales for post-traumatic stress. *(Table 3).* In other words, as levels of posttraumatic experiences increase, so can levels of these two components of the burnout syndrome.

3.3.4. Exploring coping strategies for coping with stress

No matter what the nature of the stress is, the body mobilizes its defenses to counter it. In this sense, Selye introduced the term "general adaptation syndrome" to describe the body's reactions to adverse conditions, generally called stressors. The adaptive response depends both on the nature of the stimulus and on the individual characteristics of the individual. The main stages and aspects of the process of coping with stress include two stages: primary and secondary appraisal. The primary assessment includes the process of perceiving and evaluating the threat by the individual, and the secondary - the process of searching for a potential response to this threat. Coping is a process of fulfilling this responsibility.

Coping is an activity that a person engages in on a daily basis when experiencing a stressful situation or event and trying to overcome it. Coping strategies are dynamically changing interactions between the individual and the environment.

The coping process has several elements. First, an assessment of the damage or loss. Second, the assessment of the degree of controllability of the stressor. The third component is

the personal assessment of the likely outcome of the situation based on the efforts made, as well as the expectations of future success. These judgments guide the individual in choosing a coping strategy. They fall into two groups: problem-focused coping and emotion-focused coping.

The first group includes behavior in which a person engages in "confronting the problem and influencing the stressor to eliminate its influence, as well as changing one's own attitude towards the source of stress." This includes such strategies as: *active coping, planning, seeking instrumental support, suppression of competing activities.*

The second group includes strategies aimed at avoiding direct confrontation with the problem: reducing negative emotions; regulation of emotional distress. These strategies aim to change the meaning of the event. Avoiding the meaning of a possible threat leads to the regulation of anxiety about it. These include strategies such as: *denial, acceptance, seeking emotional support, turning to religion, behavioral passivity, and psychological disengagement.*

In 1999, Kleinke, researching stress coping models, singled out 14 conceptually distinct strategies.

1. *Active coping* - a process of taking targeted actions against the stressor or to minimize its effects. Represents direct action and increased efforts towards solving the problem. It is expressed as "I am engaged in solving the problem".

2. *Planning* - thinking about what, how and in what order to act to deal with the stressor. Strategy is inherently a problem-focused way of coping, but it differs conceptually from taking problem-focused action. In a procedural aspect, planning is also a priority of the secondary assessment, while active coping refers entirely to the coping phase. They present themselves as "I am considering how I might best deal with the problem".

3. *Suppression of competing activities* - this strategy involves focusing efforts on the primary stressor while suppressing other distracting problems and activities. The strategy is expressed as "I put aside other tasks to concentrate on the problem".

4. *Restraint* - this includes efforts to contain, restrain, refrain from premature action, and wait until an appropriate opportunity for action is presented. It can also be seen as a passive strategy, if it is only meaningfully taken as holding, without action. It includes approaches such as: "I am careful not to make the situation worse by acting hastily."

5. *Seeking instrumental support* - includes asking for advice, help, information. It presents itself as "I'm talking to people who might be able to help solve the problem".

6. *Seeking emotional support* - reflects a desire for understanding, sympathy, empathy, moral support. Expressed as " I share my feelings with another person"

7. *Positive reframing and development* - here the tendency in human behavior when encountering a stressor to reconstruct the stressful transaction in positive terms is assessed, which can lead to the initiation or continuation of active problem-focused actions. It is expressed as "I am looking for something useful and good in what happened".

8. *Denial or non-acceptance* - describes behavioral responses that are most often found in the primary assessment and express a refusal to accept what happened, with the individual continuing to behave as if nothing had happened. It turns on like "I'm acting like it never happened".

9. *Reconciliation or acceptance of what has happened* - describes the behavior of coming to terms with what has happened. It is expressed as "I accept that this has happened and cannot be changed".

10. *Turning to religion* - this includes strategies such as "I seek comfort in religion".

11. *Focusing on emotions and their expression* - measures the tendency to pay attention to what stresses and bothers the individual and to express the feelings that arise. This response could be functional if one uses it during a period of grieving to adapt to the loss of a loved one and move forward. But on the other hand, focusing on distress could distract people from active coping efforts and overcoming stress. It is presented as "I feel very depressed and I feel that I show it externally."

12. *Behavioral disengagement* - reflects a reduction in efforts to cope with the stressor, even giving up efforts to achieve the goals it blocks. Theoretically, this style is more likely to be used when people expect minimal results from attempts to cope with the stressor. It is expressed as "I admit to myself that I cannot cope and give up trying to solve the problem ".

13. *Mental disengagement* - uses an alternative activity to divert attention to another problem, contrary to the strategy of suppressing competing activities. A wide range of activities are described that serve to divert attention from thinking about stressful events. Items such as "I dream about pleasant things and try not to think about my problems" are included .

14. Use of alcohol or drugs - Expressed as: "I drink alcohol or take drugs to think less about problems."

Derived from these basic strategies are four general strategies for dealing with stress:

Cognitive engagement - includes the strategies "Active coping, "Planning", "Suppression of competing activities", "Abstinence" and "Positive rethinking and development". By their characteristics, these strategies are associated with activity - whether it is motor or cognitive activity, aimed at purposeful actions to overcome stress, at considering and planning the possibilities and ways of coping, at rejecting and abstracting from the tasks that hinder and complicate coping.

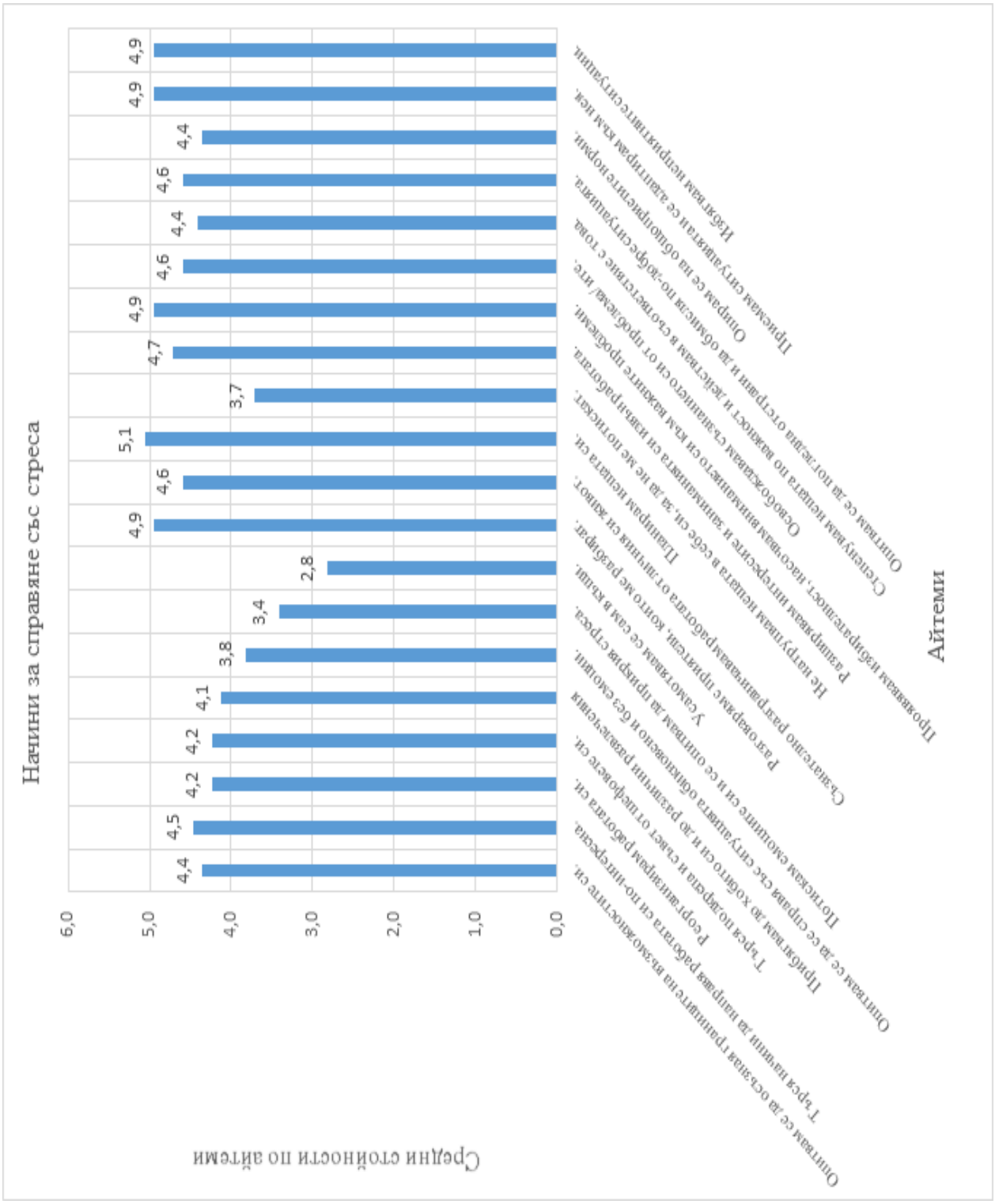
Emotional engagement - integrates the strategies "Seeking instrumental support", "Seeking emotional support", and "Focusing on emotions and their expression". The strategies included in this factor are related to seeking advice and help from others, with a need for emotional response, sympathy and empathy.

Cognitive and emotional disengagement - determined by the strategies "Denial or non-acceptance", "Behavioral disengagement", "Mental disengagement", "Use of alcohol and drugs" and "Turning to religion". The strategies included in the factor are associated with denial, rejection, withdrawal of search activity and coping attempts, engagement with other tasks and problem, through which the impact of stressful events is displaced and alleviated. Seeking solace in religion or using alcohol and drugs plays the same role.

Reconciliation - contains only one of the strategies - "Reconciliation or acceptance of what happened". The factor is associated with reconciliation, acceptance of what happened as a fact, getting used to the new situation, lack of cognitive or emotional activity.

The study of the skills to deal with stress is done by using a questionnaire that includes 20 items evaluated on a 6-point scale - from «1 - never uses» to «6 - very widely used». *(Chart 11)*

Chart 11



The most preferred propositions were rated mostly in the range between "somewhat use", "extensive use" and "very extensive use". The least frequently used strategies were rated as 'rarely use' and 'never use'. *(Table 11)*

(Table 11)

HOW DO YOU DEAL WITH THE STRESS YOU EXPERIENCE?		
no	Wed. Art.	Content of the question
11	5.1	I plan my things.
9	4.9	I talk to friends who understand me.
14	4.9	I am selective, I direct my attention to the important issues.
19	4.9	I accept the situation and adapt to it.
20	4.9	I avoid unpleasant situations.
13	4.7	Expanding my interests and pursuits outside of work.
10	4.6	I consciously separate work from my personal life.
15	4.6	I free my mind from the problem(s).
17	4.6	I try to look from the side and think better about the situation.
2	4.5	I look for ways to make my work more interesting.
16	4.4	I rank things by importance and act accordingly.
1	4.4	I try to realize the limits of my capabilities.
18	4.4	I rely on generally accepted norms.
3	4.2	I'm reorganizing my work.
4	4.2	I seek support and advice from my bosses.
5	4.1	I resort to my hobby and various entertainments
6	3.8	I try to deal with the situation normally and without emotion.
12	3.7	I don't hoard things so they don't oppress me.
7	3,4	I suppress my emotions and try to hide my stress.
8	2.8	I get lonely at home.
Total	4.4	

From the ranking in *Table 11 and Graph 11* , it can be seen that the most frequently chosen stress coping behaviors belong to the *Cognitive and Emotional Engagement factors.* Preferences are aimed at actions related to "Planning", "Suppression of competing activities", "Abstinence" and "Positive rethinking", "Seeking support - emotional and instrumental".

Planning and reorganizing everyday life is of utmost importance for those examined in a critical situation. Deliberation and prioritization of activities. Focusing attention and activity on the most important of them. Mental distancing and rethinking the situation that has arisen. Awareness of one's own limits and adaptation to changes through established standards. Minimizing negative effects and avoiding hasty decisions and actions. To a significant extent, it is important for the researched to be able to ensure good emotional comfort. In this sense, they strive to expand and diversify interests and activities other than professional ones, to set a boundary between professional and personal life, to look for challenges at work, etc.

At the least, the subjects focused on the distress, which could distract them from active efforts to overcome the stress. Suppression, retention, concealment and accumulation of negative emotions, isolation and loneliness are the most unattractive coping strategies according to the respondents.

The distribution of individual scores varies from - 'low', 'moderate/medium' and 'high' level. *(Table 8 and Graph 12)* .

Chart 12

35% of those surveyed are extremely skillful in using a variety of strategies to overcome stress. Approximately ½ or 47% resorted to the various strategies moderately, with their responses ranging between "somewhat use" and "rarely use". About 1/5 (18%) of those surveyed rarely and almost never use the indicated coping strategies. Following the results of *Table 8* , it is found that 12% to 18% have marked clinical manifestations of post-traumatic stress. Just as much – 18% share that they very rarely or almost never resort to using coping strategies.

If we also take into account the results of socio-demographic data, it can be seen that 35% - rarely, and 11% - never practice physical activity (sports, fitness, dancing, etc.), 17% of smokers have increased smoking, and 5 .6% say they have increased their alcohol use during the Pandemic. About 70% state that they rarely find time to rest . *(Table 12)*

Table 12

		Question 09 **Do you maintain your desired weight?**
always	41.2%	
sometimes	52.9%	
never	5.9%	
		Q-c 10 **Do you practice any system of physical activity?**
always	23.5%	
often	29.4%	
rarely	35.3%	
never	11.8%	
		Q-c 11 **Do you smoke?**
Yes	35.3%	
no	64.7%	

		Q-c 12 **If yes, have you noticed a change in how much you smoked during the pandemic period and after:**
more	17.6%	
as always	5.9%	
less	17.6%	
		Q-c 13 **Do you drink:**
Yes	23.5%	
no	76.5%	
		Q-c 14 **If yes, did you notice a change in how much you drank during the pandemic period and after:**
more	5.9%	
as always	35.3%	
less	11.8%	
		Q-c 15 **Do you find time to rest:**
always	23.5%	
often	5.9%	
rarely	70.6%	
never	0.0%	
		Q-c 16 **Would you say that you currently feel healthy:**
Yes	88.2%	
no	11.8%	
		Q-c 17 **Have you been sick in the last months:**
Yes	35.3%	
no	64.7%	

From the presented information, it should be summarized that about 1/5 of the researched tend to resort to disengagement strategies, with rejection and refusal of activity and attempts to cope with stress, with orienting the focus of attention on activities that shift and alleviate the impact of stressful events associated with seeking some comfort, for example, in religion, Eastern philosophers, increasing smoking or alcohol use. A final strategy, although rejected as the norm by society, is nevertheless used to overcome stress.

There is no generally accepted understanding of which of the two sets of coping strategies – problem-focused (active coping) or emotional experiences (passive coping) – is more effective. Each of these two groups of strategies has its own advantages in overcoming stress depending on the specifics of the situation, and it is not always appropriate to give preference to one of them. In cases where the situation is manageable, active coping strategies are likely to be more effective as they remove sources of stressors. When the situation is not under control and the stressors are beyond the influence of the individual, it is assumed that passive coping will be more effective because it reduces emotional tension and saves unnecessary effort.

Emotionally focused strategies not only do not counteract stressful emotions, but on the contrary, maintain and intensify the intensity of their experience, especially when it comes to such strategies as escape from reality, closing in on oneself, suppression.

Coping with stress does not consist of a single action nor is it static, but a conglomerate of many initiatives that extend over time and are constantly undergoing change. The experimental data from the present study show that for successful coping with stress, the individual's ability to be flexible in choosing strategies and to be able to adapt to the changing situation is of particular importance.

Table *3* shows that the correlation between the coping strategies proposed in the survey and the rest of the scales in the study has a negative and not particularly significant relationship.

It is moderately significant for some of the clinical scales of the SCL-90-R - "obsessive-compulsiveness" - (-0.42), "depression" and "anxiety" - also -0.42 and -0.40 with scale EI according to MBI – K 01 (burnout syndrome).

3.3.5. Influence of socio-demographic factors on the studied components

It is important for the present study to track to what extent the indicators of age, marital status, total work experience, experience in the current hospital, held position (managerial or executive) influence the occurrence of PTS and the "burnout" syndrome. The subjects were only women and a gender comparison of the studied components could not be made. *(Chart 13)*

Chart 13

To track the influence of the age indicator on the studied processes, the sample was divided into two subgroups - up to 50 years of age and over 50. This age distinction is determined by the fact that the average age of the people in the sample is 52. People who are over 50 years of age slightly outnumber those under 50. The ratio is 53% to 47%. From *Graph 14* , it is found that despite the accumulated experience and routine in one's professional activity, with increasing age, the levels of post-traumatic stress, its clinical manifestations and the levels of burnout syndrome rise. It is noteworthy that the people of the older age group have significantly more traumatic experiences as a result of the Covid-pandemic. They have more frequent and intense clinical complaints. The average score on the DP scale of burnout syndrome is almost twice as high as that of the lower age group. As a result, an increase in fatigue and limitation of working capacity was observed. With increasing age, stress resistance deteriorates.

Chart 14

	Изт. стрес	PCL-C	MScombPTSD	SCL-90-R	Сомат.сума	Обс.-Комп.	М/улич.Сенз.	Депресия	Тревожност	Враждебност	Фоб.тревож.	Параноидност	Психотизъм	Др.въпроси	Ем. изтощение	Дехуманизация	Работоспособност	Общ.бърнаут	Справяне стрес
Общи резултати	4,2	36,6	66,4	52,4	0,8	0,6	0,5	0,7	0,7	0,0	0,4	0,5	0,3	4,3	18,6	6,4	34,9	9,7	4,4
до 50 г.- 47 %	4,3	33,1	60,0	41,1	0,6	0,5	0,5	0,6	0,6	0,3	0,2	0,4	0,2	3,0	17,6	4,8	36,9	8,3	3,5
над 50 г. - 53%	4,1	39,8	72,1	62,3	0,9	0,8	0,6	0,8	0,7	0,6	0,5	0,7	0,4	5,4	19,6	7,8	33,2	9,6	3,5

The marital status factor can be traced on *Chart 15*. 94% of the surveyed are married, 6% are living alone.

Chart 15

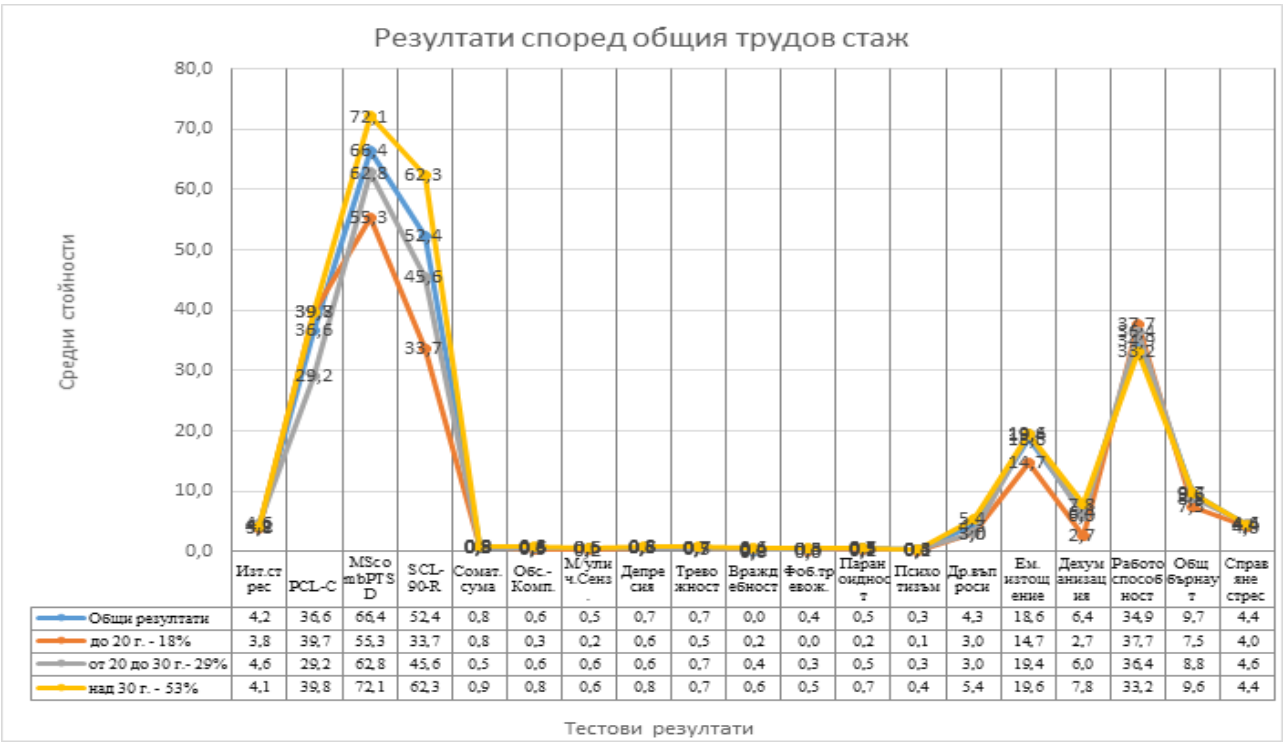
	Изт. стрес	PCL-C	MScombPTSD	SCL-90-R	Сомат.сума	Обс.-Комп.	М/улич.Сенз.	Депресия	Тревожност	Враждебност	Фоб.тревож.	Параноидност	Психотизъм	Др.въпроси	Ем. изтощение	Дехуманизация	Работоспособност	Общ.бърнаут	Справяне стрес
Общи резултати	4,2	36,6	66,4	52,4	0,8	0,6	0,5	0,7	0,7	0,0	0,4	0,5	0,3	4,3	18,6	6,4	34,9	9,7	4,4
семейни 94%	4,2	35,6	66,6	53,8	0,8	0,6	0,5	0,7	0,7	0,5	0,4	0,6	0,4	4,3	19,3	5,7	33,1	8,6	4,3
самотни 6%	3,9	53,0	63,0	29,0	0,8	0,5	0,3	0,3	0,2	0,0	0,0	0,0	0,1	4,0	8,0	6,0	24,0	9,1	4,8

When comparing the results of the two groups, it can be seen that they are less favorable for family members. It was found that both groups reacted in an identical way to the effects of traumatic stress during the Covid-pandemic. Family members, however, have more intense and frequent clinical complaints. On almost all clinical scales, this group's scores were roughly double those of people who were alone.

These data to some extent contradict the concepts established until now, according to which family members are more resistant to stress. The likely reason can be found in the greater number of commitments related to family care.

According to the factor of total work experience *(Chart 16)*, the surveyed are divided into three groups - with experience up to 20 years - 18%, with experience between 20 and 30 years - 29% and the largest share of those with experience over 30 year – 53%.

Chart 16



	Изт.стрес	PCL-C	MScombPTSD	SCL-90-R	Сомат. сума	Обс.-Комп.	М.улич.Сенз.	Депресия	Тревожност	Враждебност	Фоб.тревож.	Параноидност	Психотизъм	Др.въпроси	Ем. изтощение	Дехуманизация	Работоспособност	Общ.бърнаут	Справяне стрес
Общи резултати	4,2	36,6	66,4	52,4	0,8	0,6	0,5	0,7	0,7	0,0	0,4	0,5	0,3	4,3	18,6	6,4	34,9	9,7	4,4
до 20 г. - 18%	3,8	39,7	55,3	33,7	0,8	0,3	0,2	0,6	0,5	0,2	0,0	0,2	0,1	3,0	14,7	2,7	37,7	7,5	4,0
от 20 до 30 г.- 29%	4,6	29,2	62,8	45,6	0,5	0,6	0,6	0,6	0,7	0,4	0,3	0,5	0,3	3,0	19,4	6,0	36,4	8,8	4,6
над 30 г. - 53%	4,1	39,8	72,1	62,3	0,9	0,8	0,6	0,8	0,7	0,6	0,5	0,7	0,4	5,4	19,6	7,8	33,2	9,6	4,4

The results show that as the length of service increases, susceptibility to stress impacts increases. The respondents with the highest levels of experience are those who have worked the longest. Clinical manifestations of stress in them are also the highest. On separate clinical scales, such as "obsessive-compulsiveness," "interpersonal sensitivity," "hostility," "phobic anxiety," "paranoidness," the scores of those with the longest tenure almost doubled those with the least tenure. The EI levels of persons with more than 20 years of experience are higher. The DP levels for the same category are twice as high, and people with up to 20 years of experience have the highest work ability. The high level of stress among respondents with more than 30 years of professional experience is associated with reduced physical and mental resources to cope with accumulated fatigue.

18% of the surveyed have up to 10 years of experience in the hospital. 82% have been working for more than 10 years in the same hospital. For 65%, it is the only workplace. In the factor of seniority in this hospital, the results are identical to those of the previous factor – people

who work more than 10 years in the same place show worse indicators. *(Chart 17).* The reason for this can be found in the fact that this group includes those who are older and have a longer total experience.

With regard to the factor occupied position – 12% are in managerial positions, and 82% are in executive positions. *(Chart 18).* The persons occupying managerial positions have the following profile – they are aged between 45 and 50 years, have a total work experience of between 20 and 30 years, which was entirely spent in the relevant hospital

Data indicate that they experience lower levels of traumatic stress, significantly less often have clinical complaints. Their levels of emotional exhaustion and dehumanization were lower, and their ratings of work ability were higher. Occupants of middle management positions have specific functional commitments related to organizational activity and mostly communicate with medical staff and less often have direct contact with patients and their relatives.

Chart 17

	Изт. стрес	PCL-C	MSc omb PTSD	SCL-90-R	Сомат.сума	Обс.-Комп.	М/у лич. Сенз.	Депресия	Тревожност	Враждебност	Фоб. трев ож.	Параноидност	Психотизъм	Др.въпроси	Ем. изтощение	Дехуманизация	Работоспособност	Общ бърнаут	Справяне стрес
Общи резултати	4,2	36,6	66,4	52,4	0,8	0,6	0,5	0,7	0,7	0,0	0,4	0,5	0,3	4,3	18,6	6,4	34,9	9,7	4,4
до 10 г. - 18%	4,1	37,3	57,3	27,7	0,6	0,3	0,2	0,4	0,4	0,2	0,0	0,3	0,1	2,0	13,3	4,3	35,7	7,9	4,1
над10 г. - 82%	4,2	36,5	68,4	57,6	0,8	0,7	0,6	0,8	0,7	0,5	0,4	0,6	0,4	4,8	19,8	6,8	34,8	9,2	4,4

Chart 18

	Изт.стрес	PCL-C	MScombPTSD	SCL-90-R	Сомат.сума	Обс.-Комп.	М/улич.Сенз.	Депресия	Тревожност	Враждебност	Фоб.тревож.	Параноидност	Психотизъм	Др.въпроси	Ем. изтощение	Дезумманизация	Работоспособност	Общ бърнаут	Справяне стрес
Общи резултати	4,2	36,6	66,4	52,4	0,8	0,6	0,5	0,7	0,7	0,0	0,4	0,5	0,3	4,3	18,6	6,4	34,9	9,7	4,4
ръководители - 12%	3,9	24,0	53,5	23,5	0,3	0,0	0,4	0,2	0,5	0,3	0,1	0,3	0,2	2,0	17,5	5,5	37,5	0,0	4,1
изпълнители - 88%	4,2	38,3	68,1	56,2	0,8	0,7	0,5	0,8	0,7	0,5	0,4	0,6	0,4	4,6	18,8	6,5	34,6	0,0	4,4

The prolonged and intense negative impact of the unusual stressors during the Covid-pandemic combined with the risky occupational factors lead to a state of distress. Leading among the clinical complaints of the examined are those of a somatic nature - headache, dizziness and nausea, heart or chest pain, back pain, nausea, stomach ailments, muscle pain, breathing difficulties, hot and cold waves, sweating, tingling, feeling of a lump in the throat /suffocation/, weakness in the body, heaviness in the limbs, pain in old wounds or fractures, unlocking chronic diseases. These unfavorable signs for a person accompany stress, accumulated tension and overload in conditions of a pandemic crisis.

The survey gave the respondents the opportunity to comprehensively self-assess **their health status** in the period during and after the Covid-pandemic. 88% determine that they currently feel healthy, and 64% have not been sick recently. *(Table 12)*

The health behavior of the participants was also examined for the presence of harmful habits, use and increase in the intake of sedative substances - alcohol, tobacco and drugs. Harmful habits are factors with a negative impact on health and increase the risk of developing socially significant diseases. They are characteristic of passive coping with stress, which implies adapting to the stressful situation and accepting it as inevitable.

Smoking is a behavioral risk factor with extremely adverse health consequences. Data on tobacco use by respondents show that 35% of them smoke. The obtained percentage is approximately equal to the average data for Bulgaria, according to which 37.4% of the population are active smokers. 5.9% observed persistence of this habit, and 17.6% shared that during and after the Pandemic they increased smoking.

Another studied indicator is the use of alcohol - one of the traditional means in our country for reducing tension and overcoming stress. Alcohol consumption was mentioned by 23% of those surveyed, with 5.9% increasing their use during the Covid-crisis.

Alcohol and cigarettes are not an anti-stress factor. They usually suppress stress temporarily. An increase in the number of cigarettes and consolation in alcohol is characteristic of low resistance to stressful situations.

The examination of the habits of exercise, sports or other physical activities among the medical specialists reports a result of "always" in 23%, "often" in 29% of them, "rarely" - 35% and "never" - 11%. Worryingly, approximately half of the respondents do occasional physical activity or do not engage in any physical activity at all.

Physical activity **affects the maintenance of optimal weight. 5.9% never manage to maintain their desired weight** , and 53% can boast of partial success.

An alarming fact is that 70% rarely find time to rest and only 23% always take time to recover.

4. CONCLUSIONS

This empirical study is an attempt to identify the strength and intensity of the impact of the Covid pandemic on health workers and the resulting manifestations of stress in its various variations – stress reaction, perceived traumatic stress, post-traumatic stress disorder, burnout syndrome. Studies on traumatic stress and the manifestations of post-traumatic stress disorder in Bulgaria have been reduced to tracking their manifestations in the environments of military personnel after returning from participation in international missions with peacekeeping tasks. No studies have been established on other categories of participants (victims and rescuers) in various other critical situations such as disasters, accidents, catastrophes, etc. The comparison of the results obtained from the present study with the currently available Bulgarian populations is only conditional, with the aim of orientation regarding the impact of the Covid-pandemic as a traumatic event on the individuals studied. Adding to the above the fact that the results are based on a sample of mostly women, predominantly nurses, with many years of experience living in a small town. This fact has a limiting effect on the conclusions and generalizations of the results. Regardless of the indicated deficits, what is different and significant here is the focus on the mutual relationship between traumatic stress and its clinical manifestation and the burnout syndrome and the search for correlations between the indicated phenomena and the skills of the examinees to flexibly use different coping strategies.

The present study provides perspectives for further research on the issue of post-traumatic stress among diverse groups of the Bulgarian population. It confirms the importance of the used battery for the study of burnout syndrome, as a reliable tool for the most complete and accurate diagnosis of the studied problem. In this regard, it was found that the manifestations of post-traumatic stress and burnout cannot be considered independently of factors such as the functioning and individual predisposition of the person and without evaluating the organizational psycho-climate in the context of working conditions and the position performed.

MAIN CONCLUSIONS

1. Specific and unusual sources of stress during the Covid-pandemic have a different duration and intensity of impact on the researched. The researched group them into three levels - "low", "moderate" and "high".
2. Stressors can lead to PTSD and burnout syndrome in combination with other factors - personal predisposition, accumulated life and professional experience, health status, social support, organizational elements of the work environment, etc.
3. The subjects experienced separate symptoms characteristic of all four types of PTSD - "intrusive memories", "avoidance", "negative changes in mood and thinking" and "changes in physical and emotional reactions", without any type being dominant, and the strength their manifestation is moderate to slightly elevated.
4. Respondents show a strong desire to return to their normal functioning from before the Covid-crisis.

5. Based on perceived traumatic stress, subjects were grouped into three levels – those experiencing low levels of PTSD, those experiencing moderate levels, and those experiencing high levels.
6. A high and very high degree of concordance was observed between the PCL-C, MScombPTSD , (traumatic stress) and its clinical manifestation SCL-90-R (PTSD), and scales of burnout "emotional exhaustion" and "dehumanization".
7. One third of the examined showed symptoms of PTSD, and only half of them had pronounced clinical symptoms of PTSD.
8. The values of traumatic stress and its clinical manifestations significantly exceed those recorded for other studied samples of the Bulgarian population.
9. Different levels of burnout were found in all the examined.
10. A moderately increased degree of general burnout prevails.
11. The degree of expression of the scales "emotional exhaustion" and "dehumanization" are strongly influenced by PTS, without being determined by it.
12. The most frequently selected stress coping behaviors belong to the Cognitive and Emotional Engagement factors.
13. The most significant socio-demographic factors for manifestations of PTS and burnout syndrome are age and length of work experience.

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