

Psychological Perspectives
on Health and Disease

VOLUME 2

Manifestation
and Diagnoses
of Health Conditions

Krzysztof Kiełkiewicz
editor



UEHS Press



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CONDITIONS**

Krzysztof Kielkiewicz

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Consequences of a lack of focus on the aetiology of mental disorders in the psychiatric perspective on mental health

Introduction

Mental disorders are currently defined by two main diagnostic manuals, the Diagnostic and Statistical Manual of Mental Disorders (DSM) and the International Classification of Diseases (ICD). The first of these is issued by the American Psychiatric Association (APA), and the second by the World Health Organization (WHO). In terms of definition of mental disorder and explanation of the concept, the DSM-IV left much to be desired. In general, apart from broad wording, it did not explain the essence of the issue (Thyer, 2015). The DSM-5 is slightly more specific, but the conceptualisation of mental disorder is still criticised by scholars in the field (Thyer, 2015; Stein et al., 2010) not without a reason. The DSM-5 defines the problem in a very general way, using broad meanings and repetitive synonyms. The ICD-10 in turn, states that it is difficult to clearly categorise the phenomenon of mental disorder and that it is dependent on many contexts and perspectives. The ICD-10 approach makes it even more unclear how to understand the term “mental disorder.” The inability to create a clear concept is somewhat paradoxical, considering the fact that the definition appears in the two most important diagnostic manuals in the world. It seems, however, that the problem stems not only from ordinary wording but also, on a deeper level, from the aetiology and understanding the phenomenon of mental disorder. The purpose of this chapter is to critically evaluate the contemporary diagnostic methodology, monopolised by the medical worldview and represented by psychiatric perspectives, and to propose an alternative solution to the problem of understanding and dealing with mental health.

Medical Understanding of Mental Disorder

Inaccuracies and shortcomings in the definition of mental disorder seemingly have no significant meaning and give the impression of being a small part of the large amount of information available in the DSM or the ICD. However, the understanding of the concept of mental disorder determines how health and illness are assessed. A significant part of the definition in the DSM-5, especially its second part, is devoted to social aspects as a reference point, which varies by nature and is dependent on the historical and cultural contexts. Social aspects are also subjective, in that the majority determines, or has a significant impact, on societal norms. This situation creates a controversial possibility of the majority being decisive or influential in matter of conceptualizing mental health. Should the majority be considered infallible when deciding something is or is not a disorder? Another question is whether it is appropriate to include sociological aspects in defining health criteria in the field of psychology in general, and if so, to what extent. An additional issue that seems to be significant is the fact that including sociological aspects in the psychological definition makes the understanding of mental health relative and subjective. This, in turn, shifts the burden of a scientific concept towards opinion and worldview, which does not necessarily align with scientific evidence and facts. The above issues seem to be very important and should be carefully considered when discussing such important matters as mental health and the criteria for its evaluation.

Both diagnostic manuals, that is, the DSM and the ICD, represent the same diagnostic tradition, namely, the psychiatric, which derives from medicine. The methodological framework in the medical approach to health is generally categorical. In this context, the understanding of health is binary, that is, one can be healthy or ill. The diagnosis is not very likely to consider the dimension between these two states. While this type diagnosis has practical applications in medical settings, it does not necessarily do so in psychology and mental health. For example, according to the DSM-5, five of the nine determined symptoms of depression are required to diagnose the disorder. The fulfilment of only four criteria is defined as the absence of depression. Rationally speaking, however, the difference between the presence of four and five symptoms is very small, which is interpreted differently in the DSM. In practice, it causes people who

do not have severe mental disorders to be diagnosed as healthy, which is not necessarily true and can be harmful or even dangerous for patients. Differences between the DSM and the ICD in regards to diagnostic criteria occur at the level of verbal construction and formulation of meanings rather than the fundamental differences in the nature of a given disorder. In general, the DSM and the ICD are complementary rather than representing a different conceptual approach to mental health. There is no alternative currently on the mental health market that would effectively balance the dominance of medical and psychiatric principles formalised by the DSM and the ICD.

Psychological and Psychotherapeutic Approach to Understanding Mental Disorder

The psychological and psychotherapeutic approach is a diagnostic alternative which seems to be rarely known or undermined. One of its factions is the assumption in humanistic therapy, developed by Carl Rogers, stating that the burden of diagnosis and treatment is transferred to the patient (Rogers, 1977; Rowe, 1996;). This assumption is based on the intuitive self-actualising tendency, which can, with therapeutic assistance, carry the patient from a state of mental dysfunction to a state of integrated functioning. Thus, it is not necessary to define and name the problem in the framework of psychiatry. This approach, however, seems to be the extreme opposite to what is preferred by the DSM and the ICD. Seeing as humanistic psychotherapy has scant empirical evidence supporting it, it does not seem that it will be able to dominate clinical practice in the near future.

Cognitive-behavioural therapy (CBT) and the therapeutic tradition propose an alternative that is more appealing from an empirical perspective and seems to have great potential. In CBT, the identification of a mental health issue takes place in the process of case conceptualisation (or formulation). This is a cross-sectional approach going beyond the diagnostic criteria proposed by psychiatry and medicine (Dudley et al., 2011). Although this approach is consistent with diagnostic diagrams, it moves towards the perception of the phenomenon of mental disorder on an individual basis, taking into account the patient's personal context. This approach also abandons

the categorical perception of mental disorder in favour of a linear one in which the difference is visible but fluid instead of categorised.

Case conceptualisation represents a deeper approach to the problem, which respects psychological assessment and is adapted to the needs of psychotherapy. Namely, case formulation assumes an additional element that is omitted or very poorly articulated by the diagnostic manuals—the attention to the causes of the problem and the mechanism driving the diagnostic symptoms. Psychological aetiology fundamentally changes the diagnostic perspective and avoids the very dangerous phenomenon of relativism in psychology. Some unclear aspects of mental health would become clearer after turning our attention to the aetiology of the problem. In this way, the path to the possibility of manipulating psychological phenomena and concepts becomes more limited, and diagnosis would be at lesser risk of deserting the domain of facts and science. As scientists, we could be at risk of falling into a barren discourse based on worldviews that have little to do with scientific argument. History knows that some mental health concepts were changed or removed for social reasons (Drescher, 2015; Spitzer, 1981). Insight into the aetiology of a given disease phenomenon would also provide the opportunity to decide whether the disease belongs to the field of mental or physical health, as many of the diseases have both types of symptoms. For example, Alzheimer's disease and Down's syndrome certainly belong to both fields. The causative element, however, provides a clear explanation that the first is caused by somatic brain atrophy and that the second is a genetic disorder. In this case, it is clear that we are dealing with somatic diseases. In turn, stress is often the cause of circulatory troubles, insomnia, or cancer. Knowing their causes, it is easier to organise and plan a treatment strategy where the treatment of somatic symptoms only is obviously ineffective in the long-term perspective (Janowski et al., 2014).

Perspectives of Treatment

The dominance of the psychiatric perspective in mental health has its influence on the approach to treatment. Since a disorder is identified only through its symptoms, the treatment consists of removing only the effects of the problem, without the need to cure the causes. The consequence is the use of pharmacological means to remove symptoms, which may reappear when medication is

discontinued. Another risk is the possibility of patients becoming addicted to the medications that are treating the symptoms while the disease itself remains uncured. At this point, the question arises whether this approach is fair to the patient, and perhaps even ethical.

The psychotherapeutic approach offers another element to the concept of mental health, namely, solving the problem through addressing the causative component as well, or first of all. By observing the symptoms and knowing the causes in the complex mechanisms of the disorder, it is possible to better determine treatment strategies and reduce the negative effects of the disorder in the long-term perspective (Tarrier & Johnson, 2015).

The fact that the medical tradition is very well represented through the main diagnostic manuals while the psychotherapeutic one is significantly underrepresented or not represented at all in a decently structured way is a cause for concern. The presence of a diagnostic manual that describes mental disorders from the symptomatic and the causal perspectives would be a significant contribution to psychotherapy and would provide a healthy balance for understanding mental disorders. This lack has negative consequences not as much for the diagnosis itself as for the effectiveness and ethics of treatment, which is one-sided and overconsiders removing the symptoms and not their causes. It seems that contemporary psychology has become very susceptible to the creation of symptomatic concepts, abandoning somewhat the causal understanding in the clinical context that formed the essence of the scientific discipline at its beginning. One of the reasons for this direction is the empirical preference in the development of psychology, which creates new diagrams, diagnostic concepts, and criteria, but perhaps neglects the causal understanding of phenomena, which may lead to a dangerous relativism with regards to mental health.

Conclusion

The field of mental health and the issues of diagnosis and treatment revolve around the medical tradition represented by the psychiatric perspective, regularly updated in the DSM and the ICD. Another perspective on mental health exists and could be a very valuable contribution to the field if it were popularised. It would make a significant input for the development of psychotherapy and clinical

psychology and be a strong alternative for the treatment of mental disorders. To this end, a complete manual would need to be developed and the empirical evidence supporting the effectiveness of comprehensive treatment would need to mark its existence in the field of psychology. This lack leads to a situation of a monopoly, stimulating the development of pharmacological treatments and restraining the field of clinical psychology and psychotherapy, which prefer the nonpharmacological management of mental health issues. Promotion of psychotherapeutic concepts of mental disorders could create a healthy competition and stimulate the development of the entire field. It may have a positive impact not only on psychological and psychotherapeutic disciplines, but also on psychiatry and medicine themselves. The nature of psychic phenomena belongs to the domain of latent reality, and it is desirable for it to also be developed in that manner with inclusion of disciplines that have experience and long tradition in studying it.

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Sociodemographic variables and severity of depressive symptoms in primary care patients

Introduction

Major depression is estimated to be among the most burdensome disorders. According to the World Health Organization (WHO, 2017), there were 1.878.988 cases (5.1% of the total population) suffering from depressive disorders in Poland in 2015. In 2015, depressive disorders led to a global total of over 50 million years lived with disability (YLD) worldwide, and 330.423 total YLD in Poland.

It is estimated that depression and depressive symptoms may be even more common in specific populations, for instance, in patients suffering from somatic diseases (Barnett et al., 2012; Pakriev et al., 2009). The relationship between depression and somatic disease is complex, and, in addition, the mechanisms underlying the co-occurrence of depressive disorders and somatic disease are still not fully understood. Depression is a multi-system disease, that is, both its etiology and its course are associated with many biological factors (e.g., endocrine or immune, Cubala et al., 2006). The mere presence of depressive symptoms increases the risk of death for reasons related to the cardiovascular system (Lahtinen et al., 2018; Marwijk et al., 2015) as well as the risk of general mortality regardless of the underlying disease, especially among the elderly and in the course of

treatment in a medical facility (e.g., Chowdhury et al., 2019). Pathophysiological processes associated with somatic disease may also adversely affect depression (Kapfhammer, 2006). In particular, poorer response to antidepressant pharmacotherapy as well as incomplete remission or a persistent chronicity of depressive symptoms was reported in patients with co-occurring somatic disease (Keitner et al., 1991; Koike et al., 2002).

The comorbidity of depression and somatic disease is associated with much higher incidence of suicide attempts compared to the general population. The risk associated with suicide increases with the difficulty (pain or disability) caused by the symptoms of the disease (WHO, 2015). This is also true for diseases that do not pose a direct threat to life, such as psoriasis or acne (Gupta et al., 2017).

Several studies show that adverse health-risk behaviours, such as a sedentary lifestyle, smoking, and over-eating are common in patients with major depression. These kinds of behaviours may lead to a higher risk of diabetes and heart disease (Goodman & Whitaker, 2002; Rosal et al., 2001).

Many people seeking medical help begin with primary care institutions. Studies conducted in Poland, covering the group of elderly primary care patients emphasize the need for screening tests for depression in this group of patients. For example, one study showed an association between the severity of depressive symptoms and the number and severity of somatic complaints (Kujawska-Danecka et al., 2015). Also, in 2017, the Polish Psychiatric Association, the Polish Society of Family Medicine, and the College of Family Physicians in Poland developed guidelines for diagnosis and treatment of depressive disorders in primary health care patients (Piotrowski et al., 2017).

All these data point to the fact that depression and the severity of depressive symptoms in people suffering from somatic diseases can be a very important factor associated with its course or prognosis, especially in primary care.

Purpose of the Study

The aim of the current study was thus to evaluate the severity of depressive symptoms and their relationship with sociodemographic variables in primary care patients in Poland.

Participants

The study involved 179 primary care patients (130 women, 48 men). Their age ranged from 18 to 65 years ($M = 44.75$ $SD = 13.93$). More than half of the participants were married (60.3%), 22.3% were single, 9.5% were divorced, and 7.8% were widowed. Less than 65% of the participants were employed, 14.5% were retired, 9.5% continued their education, 7.3% were unemployed, and 3.9% were on an old age pension. Less than half of the respondents (48.6%) had a secondary education, 33.5% had a higher education, 11.7% had a vocational education, and 6.1% had an elementary education. The majority of respondents lived with their families (85.5%), 14.5% lived alone

Participants were excluded from the study if their somatic disease was too severe to enable them to fill in the questionnaires. The exclusion criteria also included other co-occurring mental or neurodegenerative disorders (evidenced in the patient's medical history) and a refusal to give informed consent. All participants included in the study gave informed consent.

This study was conducted according to the guidelines of the Declaration of Helsinki. The participants were informed about the study protocol and their rights, and written informed consent was obtained from each participant.

Measurements

The participants completed the following self-report measures:

- Questionnaire measuring sociodemographic and clinical variables (gender, age, marital status, education, occupational activity, residence, other co-occurring diseases)

- Beck Depression Inventory (BDI), original version by Beck et al. (1961), Polish version by Parnowski and Jernajczyk (1977). The BDI is a self-report scale assessing the presence of depressive symptoms over the specified period of time. It contains 21 depressive symptoms, marked A to U, the severity of which is described by four statements. Each statement is assigned a score from 0 to 3 points. Apart from the global score, two subscales can be calculated (affective-cognitive and somatic symptoms, Łopuszańska et al., 2013). Severity of depression is based on the total BDI score: < 10 indicates no depression, ≥ 10 and < 20 indicates mild depression, and ≥ 20 and < 30 indicates moderate

depression. The score of 30 and above indicates severe depressive symptoms (Łopuszańska et al., 2013). The reliability coefficient of the BDI global score in our study was high (Cronbach's $\alpha = .82$), the reliability coefficients of the affective-cognitive and somatic symptoms indexes were satisfactory (Cronbach's $\alpha = 0.77$ and $.62$, respectively).

Statistical Methods

Due to the nature of the collected data, statistical analyses were performed using nonparametric tests (Kruskall Wallis' H , Mann-Whitney's U), χ^2 and frequency analysis in the IMAGO PS software package.

The study protocol was accepted by the Bioethical Committee at the University of Economics and Human Sciences in Warsaw.

Results

Severity and distribution of depressive symptoms. The BDI global scores obtained in the sample ranged from 0 to 32. The mean BDI score for the whole sample was 8.51 ($SD = 6.25$). The scores for the cognitive-affective index ranged from 0 to 18, with the mean score of 4.75 ($SD = 4.12$). The scores for the somatic symptoms index were within the range of 0 to 15, with the mean of 3.77 ($SD = 2.88$).

One hundred and twelve (63%) participants obtained global BDI scores below the threshold for clinically significant depressive symptoms (< 10). Fifty-seven (31%) participants had global BDI scores within the diagnostic range for mild depressive symptoms ($10 \leq \leq 19$). Eight (5%) participants scored within the range for moderate depressive symptoms ($20 \leq, < 30$), and 2 participants (1%) reported severe depressive symptoms (≥ 30 , see Figure 1).

Gender and depressive symptoms. No statistically significant differences between male and female participants were observed in the mean BDI global scores, nor in the affective-cognitive and somatic subscales (see Table 1). The number of men ($n = 16$; 33%) and women ($n = 50$; 39%) whose scores fell within the diagnostic range for clinically significant depressive symptoms (≥ 10) were not statistically significantly different ($\chi = 0.395$, $p = .530$).

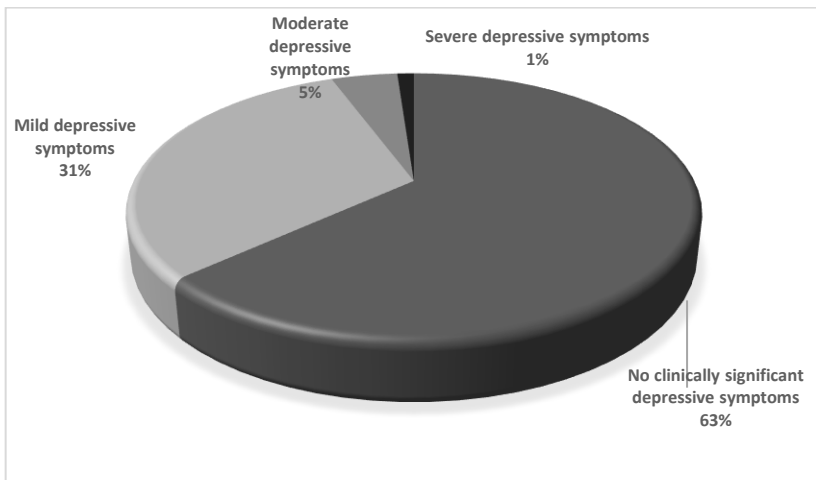


Figure 1. Distribution of depressive symptoms in the sample of primary care patients.

Table 1

BDI	Men (<i>n</i> = 48)		Women (<i>n</i> = 130)		<i>U</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Global score	7.71	6.47	8.78	6.17	2792	.281
Cognitive– affective symptoms	4.42	4.22	4.85	4.11	2878	.426
Somatic symptoms index	3.29	3.07	3.92	2.80	2658.5	.128

Note. BDI = Beck Depression Inventory.

Age and depressive symptoms. In the next step, the sample was divided into five subgroups with regards to age (see Table 2). A main effect was found for the BDI somatic symptoms subscale and the BDI global score. A further analysis using Mann-Whitney’s *U* showed statistically significant differences between the < 30 and the 51–60 age groups, $U = 309.5$, $p = .027$, as well as between the <30 and the > 60 groups, $U = 671$, $p = .015$, in BDI somatic symptoms subscale. The differences in the BDI somatic symptoms subscale were also statistically significant between the 31-40 and the 41-50 age groups,

$U = 357.5, p = .025$, the 31-40 and the 51-60 age groups, $U = 303, p < .000$, as well as the 31-40 and > 60 age groups, $U = 123.5, p = .000$).

Table 2

Age and Depression Severity Means

BDI	>30 (<i>n</i> = 37)		31 – 40 (<i>n</i> = 30)		41 – 50 (<i>n</i> = 35)		51 – 60 (<i>n</i> = 52)		>60 (<i>n</i> = 25)		Kruskal-Wallis ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>H</i>	<i>p</i>
Global score	8.89	7.04	6.30	4.69	7.06	6.02	9.98	6.58	9.60	5.45	10.77	.029
Cognitive– affective symptoms	5.38	4.55	4.33	3.71	3.86	4.02	5.13	4.15	4.76	4.04	3.80	.433
Somatic symptoms	3.51	3.33	1.97	1.71	3.20	2.46	4.85	2.95	4.84	2.41	30.29	< .000

Note. BDI = Beck Depression Inventory.

The 41-50 age group had significantly lower the BDI somatic symptoms scores than did the 51–60 age group, $U = 565.5, p = .003$, and the > 60 age group, $U = 256, p = .006$. The BDI global score differed significantly between the 31–40 and the 51–60 age groups, $U = 517.5, p = .011$, as well as the 31–40 and the > 60 age groups, $U = 245.5, p = .028$). Statistically significant differences were also found between the 41–50 and the 51–60 age groups, $U = 627.5, p = .014$, and the 41–50 and the > 60 age groups, $U = 293.5, p = .030$.

Figure 2 presents the incidence of clinically significant depressive symptoms, including the division into age groups. The differences between the groups were not statistically significant, $\chi^2 = 6.175, p = .186$.

Marital status and severity of depressive symptoms No statistically significant differences were observed in BDI scores between participants with various marital status.

Level of education and severity of depressive symptoms Next, the severity of depressive symptoms was analysed in relation to the level of education (see Table 3). There were statistically significant differences on the BDI somatic symptoms subscale between elementary education and secondary education groups, $U = 279.5, p = .024$, as well as between elementary and higher education groups, $U = 128, p < .000$. There were also differences between vocational education and higher

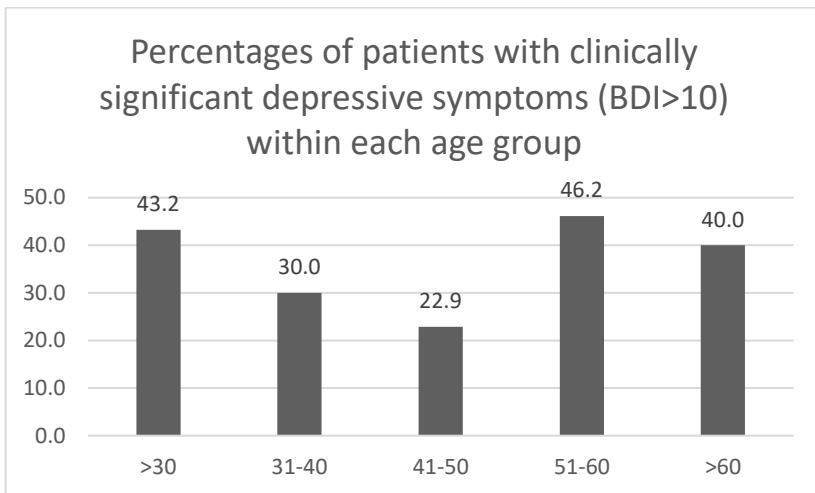


Figure 2. The frequencies of participants with Beck Depression Inventory scores indicative of clinically significant depressive symptoms ($M \geq 10$)

Table 3

Education Level and Depression Severity Means										
BDI	Elementary		Vocational		Secondary		Higher		Kruskal-Wallis ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>H</i>	<i>p</i>
Global score	12.09	9.13	10.48	6.32	8.62	5.70	7.02	6.05	8.84	.031
Cognitive-affective symptoms	5.64	5.43	5.33	4.03	4.84	3.93	4.25	4.20	2.43	.488
Somatic symptoms	6.45	3.93	5.14	2.90	3.78	2.70	2.77	2.42	19.06	< .000

Note. BDI = Beck Depression Inventory.

education groups on the BDI somatic symptoms subscale, $U = 331$, $p < .000$, and the BDI global score, $U = 420$, $p = .023$.

The secondary education subgroup also scored higher than did the higher education group on the BDI somatic symptoms subscale, $U = 1994$, $p = 0.014$, and the BDI global score, $U = 2089$, $p = 0.04$.

The numbers of participants with significant depressive symptoms in subgroups with different educational levels showed no statistically significant differences, $\chi^2 = 6.404$, $p = .94$.

Employment and severity of depressive symptoms Finally, the subgroups differing in employment status were compared (see Table 4).

Statistically significant differences were found on the BDI somatic symptoms subscale and the BDI global score. A further analysis using Mann-Whitney’s *U* test showed statistically significant differences between the group receiving benefits and the employed employed on the BDI somatic symptoms subscale, $U = 818.5, p < .000$, and the BDI global score, $U = 969.5, p = .004$, as well as between the participants receiving benefits and the students on the BDI somatic symptoms subscale, $U = 133.5, p < .000$. In addition, statistically significant differences were found between unemployed and employed participants on the BDI global score, $U = 492, p = .04$.

Table 4

Employment Status and Depression Severity Means

BDI	Employed		Unemployed		Receiving benefits		Pension		Student		Kruskal-Wallis ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>H</i>	<i>p</i>
Global score	7.49	5.79	12.62	9.30	9.86	6.54	10.85	6.08	8.24	4.87	11.69	.020
Cognitive –affective symptoms	4.30	4.07	7.08	5.25	4.71	4.23	5.50	3.89	4.88	3.43	6.59	.159
Somatic symptoms	3.19	2.44	5.54	4.45	5.14	2.67	5.35	2.92	3.35	2.89	17.50	.002

Note. BDI = Beck Depression Inventory.

No statistically significant differences were observed between these subgroups with respect to the percentages of participants with clinically significant depressive symptoms, $\chi^2 = 5.84, p = .21$

Discussion

The data obtained in this study clearly demonstrate that the severity of depressive symptoms among primary care patients is alarming. Clinically relevant symptoms (with the BDI total score of > 10) were observed in 37% of the current study’s participants. Previous analyses showed that depressive symptoms may be associated with, for example, poorer health, functional status, and quality of life, as well as with increased health care use (Herrman et al., 2002). Importantly,

depressive symptoms and major depression may also be associated with increased morbidity and mortality from such chronic illnesses as diabetes and heart disease (Carney et al., 2002). Clinicians and researchers also point to the adverse effects of depression on health-related behaviours, such as smoking (Mathew et al., 2017), diet, over-eating, a sedentary lifestyle (Katon, 2003), lowered adherence to medical regimens, as well as direct adverse physiologic effects (i.e., decreased heart rate variability, increased adhesiveness of platelets, e.g., do Carmo et al., 2015; Gorman & Sloan, 2000). Biological, lifestyle, and psychological correlates may explain the association of depressive symptoms with increased morbidity and mortality (Katon, 2003).

In our study, sociodemographic factors, such as gender and marital status, were not associated with depressive symptoms, in contrast to the findings of other studies (Kessler et al. 1993). Our results have also shown that higher education, continuing education (student), and active employment were protective factors associated with lower severity of depressive symptoms. It may result from, for example, higher social skills, cognitive factors, help-seeking skills, better social functioning, bigger social groups, and better coping skills (Muris et al., 2001).

Further analyses showed that the prevalence of cognitive-affective symptoms was high in the group of young adults. It is hypothesized that this might be related to many significant lifetime changes (wedding, pregnancy) and education/work stressors (finding job, finishing university) in this period of life. Other studies showed associations between stressful life events and depressive symptoms (Assari & Lankarani, 2016; Kessler, 1997). These results need further investigation in prospective surveys.

The frequency of occurrence of clinically significant depressive symptoms was also analysed. The analyses showed no differences between the groups differing in sociodemographic variables. Although the mean severity of symptoms varied significantly between the groups, the number of participants with clinically significant depressed mood was similar in all groups. This may be related to the fact that chronic somatic disease is a risk factor for the development of depression to a greater extent than are sociodemographic factors,

regardless of gender, age, education, employment, and relationship status.

Our study has some limitations. We took into account only a small number of variables that may be relevant to the prevalence of depressive symptoms in primary care patients, and we did not cover other variables, such as diagnosis of the disease and its severity, years of illness, and stressful life events. Another limitation is the subjective character of the presented data. This may be of importance particularly when reporting depressive symptoms. Specialists using a standardized interview could better recognize depressive symptoms and their severity.

The obtained data suggest that depression is a relevant problem in primary care units. Some sociodemographic variables such as gender and marital status do not play an important role in determining symptom severity. However, higher educational level and active employment could be protective factors in depression. Our data also show that cognitive-affective symptoms of depression are frequent in young adults.

The data collected in the current study clearly indicate that the frequency of depressive symptoms in primary care patients demands attention. For this reason, there is increasing need for greater primary care specialist education about this disorder and the use of screening tests, such as the Center for Epidemiologic Studies-Depression Scale (CES-D, Radloff, 1977), the Hospital Anxiety and Depression Scale (HADS, Zigmond & Snaith, 1983), or the BDI (Beck et al., 1961) at every physician-patient contact.

In addition, it was revealed that sociodemographic variables may play an important role in depressive symptom epidemiology. Due to the aging of society and many other factors, both medical, social, and psychological, particular attention should be paid to the population of people over 50 years of age. Depressive symptoms or other abnormalities of a neurobiological nature (e.g., the deterioration of neurocognitive functioning) should be assessed at an early stage of a patient's contact with health services. Furthermore, our data clearly show the high ratio of depressive symptoms in the group of young adults (> 30 years old). It should be clearly indicated that disorders such as depression, along with inadequate lifestyle choices, can be risk factors for many serious diseases later in life.

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Summary

Depression is estimated to be among the most burdensome disorders. It is estimated that depression and depressive symptoms may be even more common in specific populations, for instance, in patients suffering from somatic diseases.

The aim of the current study was to evaluate the severity of depressive symptoms and their relationships with sociodemographic variables in primary care patients in Poland.

The study involved 179 primary care patients (130 women, 48 men) aged from 18 to 65 years old. All participants completed the Beck Depression Inventory (BDI) and a questionnaire measuring sociodemographic and clinical variables.

Clinically relevant symptoms (BDI total score > 10) were observed in 37% of the participants. Gender and marital status were not associated with depressive symptoms; higher education, continuing education (student), and active employment were protective factors associated with a lower severity of depressive symptoms. Further analyses showed that the prevalence of cognitive–affective symptoms is high in the group of young adults. The analyses of occurrence of clinically significant depressive symptoms showed no differences between the groups differing in sociodemographic variables

Data collected in the above study clearly indicate that the frequency of depressive symptoms in primary care patients is significant. For this reason, there is a need for greater primary care specialist education about this type disorder and for the use of screening tests at every physician–patient contact.

In addition, it was noted that some sociodemographic variables may play an important role in depressive symptom epidemiology

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**Prevention of the development of Post-traumatic
Stress Disorder in people who have experienced
an armed conflict in the east of Ukraine**

Introduction

Armed confrontation in the South-East of Ukraine, considerable impoverishment of the population, the lack of a comprehensive national policy in the interests of citizens—these and many other factors led to the development of the management experiences of the individual, that cause the intellectual, spiritual, emotional and physical tension man. Today, almost two million Ukrainians are forced to leave their homes, fundamentally change their life structure and search for new housing, thousands in recent years, died in a result of armed conflict, and hundreds of them officially recognized missing. Psychological assistance is necessary for all civil and military people who went through or were affected by the war. The large-scale traumatic experience is new and atypical of the modern and independent Ukraine. The majority of participants of anti-terroristic operation (ATO) come back suffering from acute stress disorder. Yet, they lack skills and knowledge of how to deal with the psychological state and feelings they are experiencing. It is important to emphasize the fact that this phenomenon has impact not only on the combatants, but also on their close surrounding—family, friends, acquaintances, who often don't know how to behave and react. The most vulnerable category is children who have not yet formed the compensatory mechanisms, for they can adopt the symptoms from their close surrounding – parents or other relatives. Functional complaints, sleep disorder and disadaptation, posttraumatic stress disorder are common reactions of mind to stressful or life-threatening situations. Not all of this, could but affect both at the level of public consciousness, and on an individual system of social attitudes and value orientations of the individual, that is, on the viability of the individual. Any crisis is

individual phenomenon, as the definition of its complexity is determined by the same individual, depending on its perception, assessment and interpretation, subjective significance of this situation. That is why, it is essential to provide efficient and timely help to the families that suffer from such disorder.

Discussion of the Key Issues

Because of theoretical and practical research, it was determined that for mastering stress everyone uses their own strategy based on acquired personal experience and psychological resources—personal coping resources. In the theory of dominant behaviours important to have mechanisms for overcoming stress, which determine the development of various forms of behaviour and affect the degree of adaptation of personality to life crises. Dominant behaviour (coping behaviour, coping reaction)—forms of behaviour aimed at rational conflict or crisis through specific actions: information search, phased solution to the problem, seeking help, and so forth. Dominant can be determined as a coping result of interaction—conduct and meaningful resources.

Dominant Behaviour Features of Personality in Overcoming Crisis Conditions

Antsyferova (1994) has argued that there are three ways of domination of crisis:

1. Coping, aimed on evaluation, it's an attempt to determine a situation meaning and determine the value of the situation and put in place defining the strategies: cognitive, logical analysis, and so forth.
2. Coping, aimed at the problem, capture the critical situation, which has the aim to modify, reduce or eliminate the source of the stress.
3. Coping, aimed on emotions, is overcoming critical situations, the application of cognitive, behavioural efforts to reduce the emotional stress and maintain an effective balance. In this case, the coping acts as a dynamic process, which is subjectivity, experiences and many other factors.

There is some coping notions of identity reaction, coping-strategy and coping-behaviour, they are freely used in literature where

meaningful covers a broad range, from unconscious psychological defenses to informed and focused skill cope with stressful and troubling situations. Coping process includes successive stages of operation; the initial step is the formation of meaningful incentives. Any crisis suggests the existence of objective circumstances and definite attitude to her personality, depending on the degree of significance of the circumstances for her. This is accompanied by emotional and behavioural reactions of various nature and degree of intensity. The leading characteristics of the crisis is the psychic tension, considerable experience as a special internal work on overcoming life events or trauma, which is accompanied by a change in self-image, motivation, demand their correction and psychological support from the outside.

The goal of coping process is to develop coping behaviour, to overcome the stressful situation, eliminate psychological discomfort to find emotional stability. Overcoming is the attempt to face the difficulties of life by regaining the power and control over them. These are the efforts, which activate our inner and outer resources and capabilities and make people feel strong enough to cope with the problems. When stressed, a person mostly resorts to such forms of psychological adaptation as coping strategies and other mechanisms of psychological protection. The same events can be more or less stressful for an individual depending on their subjective assessment or what standard reactions are transmitted from adults to children. Coping strategy is effective when a person defines the situation as such that exceeds the routine energy expenditures and requires additional effort. When an individual as beyond their strength evaluates the requirements of the situation, overcoming will be in the form of psychological protection. In the process of psychological adaptation, coping strategies have compensatory functions, whereas psychological protective mechanisms provide decompensation. However, they give time for the mind to develop more effective methods of overcoming stress. In case of stressful situations, the coping process moves from reaction to intentionally made strategy that creates behaviour. Note that the original concept of coping is being seen in the context of extreme situations, and then it spreads to the everyday stressful situations. In terms of stressful situations, the human psychological adaptation occurs mainly through coping

strategies and mechanisms of psychological protection (Antsyferova, 1994). In modern psychological literature, the coping strategies are studied at different angles according to different activities.

Coping strategy is the strategy of coexistence with the difficulties and the settlement of relations with the environment. There are many options for adaptation to stress, such as:

1. The confrontation, confrontation or situation: the aggressive attitude of human in relation to the difficult life circumstances, when such situations are perceived as a hostile force to conquer or extermination;

2. Distance themselves from problems or postpone its decision, as a result of this variant device man contemplates the situation seem behind the glass from the side;

3. The strategy of self-control, the desire to regulate your feelings and actions, however excessive «settlement» their emotions leads to overexertion that can lead to the development of psychosomatic diseases;

4. Strategy of finding social support, appeals for help to other people;

5. Strategy of taking responsibility. It is chosen, as usual, by strong and mature personality, since it requires a recognition of one's own mistakes and their analysis in order to prevent a repetition;

6. Strategy of planned problem's solution, i.e. The development of the plan of salvation and clear compliance with its;

7. Positive reassessment of what is happening with the person, re-evaluating the stressful situations in a positive for her channel;

8. «Avoid (or moving) responsibility», attempt to escape the situation or avoid the communication.

Coping strategies are an adaptive form of conduct that maintains a psychological balance in distress; these are methods of psychological activities and conduct that are done deliberately and aimed at overcoming the stressful situation. Observation and survey of distressed people found that everyone has their own unique combination of resources to adapt. This combination includes six basic features or parameters that make up the core of the individual style of overcoming:

- Beliefs and Values (B),
- Affect and Emotion (A),

- Social sphere (S),
- Imagination and creativity (I),
- Cognition and Thought (C),
- Physiological and Activities (Ph).

This model is called “BASIC Ph.” The combination of all six parameters makes up an individual coping style.

It is important to note that everyone has his or her own predominant methods of overcoming crisis in different periods of life. Throughout our lifetime, some of these techniques develop and are perfected, and others remain underdeveloped due to different circumstances of our lives. It is important to focus attention on successful cases of the use of internal resources. Many people find help in appealing to the beliefs and moral values to overcome stress and crisis. These are not only religious beliefs, but also political beliefs, a sense of hope and philosophic «sense», a sense of mission and purpose, the need to find their identity and feeling of belonging to their people. Others can adhere to the emotional or affective modality – they express their own emotion (crying, laughing, a story about their experience), or use non-verbal techniques—drawing, reading, sewing, writing. Some choose social resources and find support in their belonging to a certain group, organization or profession, in fulfilling the tasks and performing certain social roles.

Sometimes people use imagination; they try to distract with the help of creative imagination by inventing unreal solution based on improvisation and positive thinking. Some people use cognitive-behavioural method of coping. Cognitive strategies include evaluation of information, problem solving, analysis and realistic forecasting, the internal language of support, favourite activities. «Ph.» type people respond and fight through the physical, bodily movement. Their methods include relaxation, desensitization, meditation, physical exercise, and physical activity. Energy consumption is an important part of many types of internal struggles. It also includes eating, sleeping, sex, and so forth.

Coping-behaviour—its individual meaning of solution a difficult living situation that is of high importance, and is connected with the internal features of the personality and the conditions of social support. That is, meaningful acts of the variable which depends on

three factors—features adoption situations, personal and social resources. They are shared by the authors of the different psychological areas to study the nature of meaningful-behaviour is that the latter acts conscious, non-automatic, active, purposeful form of effective adaptations to the requirements of stressful situations.

Coping is stabilizing factor that helps the individual to maintain a psychosocial adaptation in the period of exposure to stress. Coping strategies are adaptive form of conduct that supports a psychological balance in distress; methods of psychological activities and conduct that are produced deliberately and aimed to overcome the stressful situation. Burlachuk and Korzhova (1998) here establish the coping strategy that uses the identity and can be divided based on the following criteria:

1. Emotional problematic:
 - Emotional focusing coping, aimed at crisis emotional reactions.
 - Problematic focusing coping, aimed at how to deal with the problem or change the situation that caused the stress.
2. Cognitive-behavioural:
 - The hidden inner coping: Cognitive challenge, the goal of which is to change the unpleasant situation that causes stress.
 - “Open” behavioural coping: Oriented on behavioural action; used in coping-strategy, observed in the behaviour.
3. Successful coping:
 - Successful coping: Used to design strategies that lead eventually to overcome the severe situation that caused the stress.
 - Unsuccessful coping: Used unconstructive strategies that prevent the overcoming the severe situation.

Problem-oriented coping associated with human attempts to improve relations “person-environment” by changing the cognitive evaluation of the situation, for example, search for information about what to do and how to enroll, or by keeping yourself from impulsive or hasty action. Emotionally oriented coping includes the thoughts and actions that have the aim to reduce physical or psychological stress. These thoughts or actions give a sense of relief, but does not aim to eliminate the threatening situation, and just give the person the opportunity to feel better, more comfortable. The same events can have different stress loads depending on their subjective assessment or what standards responding adults living children. Meaningful-

reaction is triggered when a person defines the situation as such that exceeds the daily energy expenditures and requires additional effort. Moreover, when the requirements situation is evaluated by the person as back-breaking, then bridging can occur in the form of psychological protection.

The term “protection” first was appeared in the works of Freud to indicate “all the techniques that I use in the conflict and that might lead to neurosis.” Primary concepts, psychological protective mechanisms are congenital and act as a mean of solving the conflict between consciousness and unconsciousness. According to Freud, the goal of protection is the weakening of intrapsychic conflict (tension, anxiety), the stipulated contradiction between instinctual rather than pulses of the unconscious and the interiors environmental requirements arising in because of social interaction. The inability of individual resolve inner conflict causes the growth of internal tension. In such moments there are arisen the special psychological mechanisms of protection, which protect the consciousness of personality from the unpleasant, traumatic experiences. In the modern notion, the protective mechanisms represent the products development and training, which are in the subconscious, they run into a situation of conflict, frustration and stress. The unified classification of psychological protection mechanisms does not exist, although there are numerous attempts of their grouping on different grounds.

There is a typology of the protection mechanisms in terms of their maturity in the meaning of “primitiveness-maturity,” this classification has gained wide popularity and to this time is in demand.

- I stage: Psychotic mechanisms (reality refusing, corruption, illusive projection);

- II stage: Immature mechanisms (fantasy, projection, withdrawal, compulsiveness, etc.);

- III stage: Neurotic mechanisms (intellectualization, reaction formation, offset, disassociations);

- IV stage: Mature defences (sublimation, altruism, suppression, anticipation, humour).

McWilliams (2004) declared that the defence mechanisms, which are seen as primary, immature and primitive, typically include those, which deal with fire-between his actually “I” and the outside world. According to Berezin (1988), the psychological protection

mechanisms provide regulation, orientation behaviour, reduce anxiety and emotional stress. He distinguishes four types of psychological protection mechanisms, they are:

1. Prevent an understanding of the factors that cause the anxiety that those factors that cause anxiety are not perceived or are not realized (displacement and denial).

2. Allow you to fix the alarm to a certain stimulations (fixation of anxiety) that anxiety is associated with some specific object not associated with the reason that caused the alarm (transfer, some form of insulation).

3. Reduce the level of motives (impairment of output needs), that is, a reduction of anxiety can be achieved by reducing the level of motives, and depreciation of the original needs (regression, hyper compensation).

4. Modify anxiety due to the formation of sustainable concepts (conceptualization), that is, ideatoric processing of alarms, the result of which is the ideas that are behaviour personality (projection, rationalization).

Numerous authors suggest a close relationship to coping and mechanisms of psychological protection. Some authors consider the psychological protection with “intrapsychic coping” or “learning mechanism of inner anxiety,” other authors include meaningful to external, behavioural manifestations of psychological protection mechanisms. The proximity of coping concepts and mechanisms of psychological protection necessitate their differentiation, the criteria which had been offered by Haan (1963). According to the author, the meaningful is dynamic option, which uses the individual knowingly and actively aims at changing the situation (Haan, 1963). Unlike coping, the psychological protection mechanisms are static “parameters” that implement the passive mechanisms dependent on intrapsychic activity and aimed at alleviating the mental discomfort.

Thus, there is a substantial difference between the coping and protective psychological mechanisms. Protective mechanisms, with the aim of overcoming the psychological tension and anxiety, in most cases they distort, distort information. Coping strategy produced intentionally pushing the personality to adapt, handle, overcome problem situations or avoid them. The meaning of protective mechanisms is the change of the world image on the principle of

pleasure (unconscious meaningful). Protective mechanisms are more annoying, rigiditive, they distort the reality among domestic researchers term «the psychological protection mechanisms and the mechanisms for implementation» (coping-behaviour) are considered as the most important form of adaptive processes and individual response to stressful situations, which complement each other (Muzdybaev, 1998). The weakening of mental discomfort is carried out in the framework of the unreported activity of mentality through the mechanisms of psychological protection. Coping-behaviour is used as a strategy of actions of the individual that is directed at eliminating situations of psychological threat. Each person with an affective state is its own unique combination of resources, adaptation, as well as its own strategy of behaviour and ways of action in stressful situations. This combination makes up the core of the individual style of fighting distressed identity.

These factors form the mental mechanisms of regulation to overcome stress and characterize the essence of this process. Resources are all the things that identity uses, to meet the requirements of the environment. Two major classes of resources are distinguished:

- personal (psychological) is the skills and abilities of the individual;
- environmental (social) resources that reflect availability for individual
- assistance in the social environment (instrumental, moral, emotional).

A more detailed classification allows you not only identify specific resources (e.g., cultural, political, and institutional resources), but also to identify their source. Briefly describe the composition of personal resources, it should be noted that psychological resources include cognitive, volitional, emotional, psychomotor and other psychological properties of the person. Personal resources include a variety of properties, features, personality, and influence on the regulation of behaviour in tense situations of life and reflected in self-control, self-esteem, sense of self-esteem, motivation, and so forth.

Professional resources are the level of knowledge, experience, individual style, which allow regulating the professional conduct of personality. The level of physical and mental health and functional

reserves of man determine physical resources. It could be said that, sometimes extremely meaningful role of material resources that provide access to information, legal, medical and other forms of professional assistance (Nartova-Bochaver, 1997).

Personality and psychological resources are the basis for the formation of strategies for struggling behaviour. Their functional orientation consists either in preventing or eliminating or reducing stress, or to restore the original state. At different stages of the learning process, the identity of the using different strategies, sometimes even combine them. While there is no such strategies would be effective in all difficult situations. Which methods to use, the personality solves himself, based on their individual psychological characteristics, life experiences, evaluate the significance of the situation, what is going on, and other factors (Rodina, 2011).

Features of Social and Psychological Adaptation and Development Skills to Overcome the Crisis Situation in Individuals that have experienced the Impact of Traumatic Events of Armed Conflict

Stress can lead to a crisis because of the repeated failure to get rid of it. A person can hardly handle this condition, especially when he/she lacks inner strength and resources. Then the stress turns into a crisis, because the person repeatedly follows the same unhelpful strategies to get out of the plight. In other words, a person gets stuck with a single reaction, one method of overcoming the trouble, which is not working. In this case, the crisis develops due to “obsession” and lack of resilience (Kokun et al., 2015). The negative emotions are so overwhelming that a person cannot cope with them alone. Life goals disappear, a person is not able to see the future or set other objectives, to find a new meaning of his/her life. As a result, adapting to the new reality becomes complicated.

The most vulnerable category is the military who have personally taken part in combat actions. To diagnose PTSD the American Association of psychiatrists uses a list of symptoms and list of types of conduct described in Frank Puselik’s Program of Counseling Vietnam Veterans. These symptoms are characteristic of any soldier

in any armed conflict regardless of the name of the conflict, and regardless of the country of the conflict:

1. Recurrent visions of the battle:

- Recurrence of stressful emotions (including images, thoughts and perceptions) concerning certain events (flashbacks).

- Recurrent nightmares about past events.

- Recurrent actions or illusions that the traumatic experience is repeating (flashbacks).

- Intensive psychological stress triggered by external or internal factors (things, events that prompt certain reactions).

- Physiological sensitivity to triggers.

2. Avoidance / Emotional numbness:

- Attempts to avoid thoughts, feelings or conversations associated with the traumatizing experience.

- Attempts to avoid certain activities, places or people that cause traumatizing memories.

- Inability to recall an important aspect of the traumatic experience.

- Significantly reduced interest or lack of participation in important activities.

- A sense of aloofness or estrangement from others.

- Restrained emotional feedback.

- A subjective perception of transience of the future.

- Inability to stand crowds of people.

- Repeated deep depression / Cynicism.

3. Increased agitation / Marked vigilance:

- Inability to fall asleep easily and to have a lengthy dream.

- Grumpiness or outbursts of anger (irritable temper)

- Difficulties with concentration of attention.

- Hyperactivity.

- Excessive shudder as a reaction to what is happening around.

- Constant talks about the war / never speaks about the war.

- Excessive need for safety.

4. Formation of beliefs:

- Has the war changed my thoughts and perceptions of myself? Could anything change how and what others think about me? Could anything change my thoughts about the future?

- Has the war experience changed my thoughts and feelings towards others?

- Has the war experience changed my understanding of what is right and what is wrong?
- Has the war experience changed my understanding of what is good and what is bad?

Anyone who has returned (arrived) from the zone of armed conflict can have unwanted memories of the war; can have problems with adapting to a peaceful life. However, experts outline a number of features of the combat situation, which the soldiers experience, that have a particular impact on the human psyche. These conditions “exhaust” of central nervous system and lead to the so-called “combat trauma” (Melnyk & Volynets, 2015):

- Perceived threat to life, the so-called biological fear of death,
- Injury, pain, disability;
- Powerful and prolonged stress which a combatant experiences; it is accompanied by the psycho-emotional stress due to the death of fellow combatants or because of the necessity to kill other people;
- The impact of specific factors of the combat environment (deficit of time, accelerating the pace of action, abruptness, uncertainty, novelty);
- Such problems as lack of proper sleep, water and food scarcity;
- Unusual for the combatant climate and territory (hypoxia, heat, excessive insolation, etc.).

The psychological consequences of the war has been well documented throughout the history; they are known under such names as nostalgia, the syndrome of “heart of a soldier,” shell shock, battle fatigue, and most recently – combat stress (Syropiatov et al, 2015).

People who have been affected by traumatic events of the armed conflict may suffer from maladaptation. This condition typically hampers social functioning and productivity, it occurs during the period of adaptation to the significant changes in life or due to stressful life events. Manifestations of diverse and include low mood, anxiety, agitation (or their combination); perceived inability to cope with the situation, to plan one’s actions or continue to stay in the present situation; tearfulness; excessive vulnerability and sensitivity to factors which did not previously cause similar reactions; decreased ability to take care of the children. One can also observe decreased productivity of everyday routine; the person may have a penchant for drama and flashes of aggressiveness. The traumatic experiences result in post-

traumatic stress disorder. This condition can be characterized by repeated nightmares or intrusive memories of the experienced psychotraumatic events. This is combined with a desire to avoid anything that might evoke memories of the trauma. Such cases are typically characterized by the symptoms of increased agitation, general anxiety, uncontrolled anger, depression, emotional disorders characterized by desire for isolation and limited contact with the out world, irritability, insomnia, difficulty in concentrating attention. These symptoms are often combined with sexual disorders, suicidal thoughts, alcohol or drug abuse. The common symptoms also include sleeping disorders such as superficial night sleep, nightmares that repeat the psychotraumatic experience. A particular symptom of repeated experiences of stress is instant, unprovoked reconstruction of the traumatic situation which seems pathologically authentic and full of sensual details, combined with acute flashes of fear, panic or aggression that are provoked by this unexpected experience of trauma. One can clearly detect such symptom as avoidance – the desire to get rid of any thoughts, emotions and memories of the trauma. It results in the feeling of remoteness, estrangement from others, which is expressed in the desire to lead a reclusive, isolated life. The person loses interest in the former life values. The intensity of emotions is subdued, even love for the nearest and dearest people. These symptoms become the source of additional trauma for the person. The symptom of psychogenic amnesia is also a widespread disorder, which involves memory problems because of severe psychological conflict or acute emotional stress. There are uncontrolled outbursts of anger for no apparent reason that sometimes turns into fits of auto-and hetero aggression. Many people with post-traumatic stress disorder have symptoms of the hypertrophied, inadequate vigilance. Depression is well spread. A particular symptom is the inconsolable guilt concerning the deceased, which is experienced by the people who managed to survive but lost a loved one, have witnessed the death of other people (“If only we have left on time,” “Why haven’t I forced him to go with us?”). One can also have social directed experiences, such as frustration with the authorities who failed to prevent the psychotraumatic event (Yena et al., 2014).

Formation of Resilience in the Children who have been got Traumatic Experience as a Result of the Armed Confrontation in Ukraine

The research of the modern psychologists is focused on the studying of the consequences of the traumatic experience's effects on the individual personality traits in the following groups of people: the children of preschool and junior school age, teenagers, pregnant women, military, women—victims of raping.

Traumatic stress is a normal reaction to abnormal events that go beyond the normal life experience of a person. Burmystrova (2006) has argued that the range of people who can experience the traumatic stress is quite wide.

According to German scientists, the traumatic experience in the past has far-reaching consequences. The study of the Theodore Fieldner Foundation, the results of which are presented in Trauma and Gewalt journal, showed that depression or anxiety neurosis often develop, chronic pain and asthma occur.

In general, there are five main types of traumatic events, which are often associated with mental and physical suffering in the future. They are emotional disregard, emotional and physical abuse, sexual aggression and sexual abuse. According to Olena Schifferdeker, a member of the science department, research and development in the Theodore Fieldner Foundation: "As the study showed, about 90% of the examined patients of psychiatric or psychosomatic institutions experienced the traumatic experiences in their lives."

It includes not only the direct participants of the events, but also the members of their families, as well as those who were near the event, or watched it through the media, or has even heard the stories about events. Especially it concerns the children, given their limited life experience, the vulnerability and immaturity of the child's psyche.

There is not any traumatic childhood; the question is only in the intensity of this trauma, its duration and repeatability. These are those factors that largely determine the further formation of the child's personality (it is still necessary to add the biological, genetic constituent, social environment that either helps the child to cope with a psychological trauma and minimize its consequences, or, on the contrary, increases it).

There are its own laws in the early psychological traumatization:

1. The psychological trauma is always unexpected. It is impossible to prepare for it, it immerses a child in a feeling of helplessness, inability to defend himself: very often at the time of trauma the child falls into emotional stupor, without feeling strong feelings, not having the ability to anger or fight back. The child does not know how she relates to what is happening with her, the emotionality is included only later and she can survive the pain, horror, shame, fear, and so forth. Strong, that does not digest by the psyche, the trauma can be ousted and will not be mentioned for years, but its influence continues to work and determine the human behaviour in adult life.

2. A psychological trauma occurs in a situation where the child is not able to manage it. She appears defenseless in the face of the changes, which the trauma brings into her life. A child, who has experienced a psychological trauma, practically does not tolerate possible vagueness. She tries to organize her world by carefully considering the possible steps, consequences and painfully reacts to any changes. The anxiety becomes the eternal companion of the child, the desire to control the around world becomes an urgent need.

3. Child trauma changes the world. The child, before the trauma, believes that the world is arranged definitely: she is loved, she will be always protected, she is good and nice, and people are kindly adjusted to her and so on. Trauma can make its hard adjustments: the world becomes hostile, a close person can betray or humiliate; "I must be ashamed of my body, it is ugly, it is not worthy of love."

4. In the further life, there is a constant retraction. A child, even growing up, unconsciously «organizes» and recreates the events that repeat the emotional component of the trauma. If in its childhood it was rejected by coevals, then in its further life, she will be so interact with the outside world, which will inevitably cause rejection, rejection of others, constantly suffer from it.

5. The traumatized children, growing up, cannot afford to be happy because happiness, stability, joy, success is what happened to them before the trauma has happened. They were happy, joyful and satisfied, when their world suddenly changed catastrophically for their childish minds. From that time, happiness and calmness for them is a feeling of the inevitable catastrophe that will surely arise and cause pain.

6. Trauma is not always one key event. It could be a constant psychological pressure on the child, an attempt to redo it, a critique in which she constantly lives, her feelings of neediness for parents, a constant feeling of guilt for the fact that she lives and for everything she does. A child often grows up with a feeling of inferiority, somehow (sometimes badly realises) the message: “I have to please,” “everything around is more valuable than me,” “nobody has no deal to me,” “I interfere with everybody, I live in vain.” All these thoughts cripple the human psyche and create retraumatizing reality. These links in adult life are firmly adhered to the psychical framework; a person cannot even remember how to live without them.

7. The earlier trauma, the harder the process of treatment. Early traumas are badly remembered, early built into the child’s psychological constructs, changing them and asking for the new conditions on which the psyche functions and leads to the fact that the world seems to be exactly what it was from a child’s early childhood perceived by a child. Moreover, it is impossible to simply find and remove a damaged or traumatized construct from the human psyche, due to the integrity of the design (Romanovska & Ilashchuk, 2014).

Because of the gap in relationships with close adult, there may be negative changes in the child’s behaviour. When the attachment object (family as a sphere of attachment formation) is lost, there is a violation of a child’s attachment. Brish (2012) has determined the following types of it:

- Negative (neurotic) attachment: The child constantly looks for attention from adults, even negative, provoking punishment, annoying adults.

- Ambivalent attachment: The child constantly demonstrates a double attitude to a close adult: then caresses to him, then roughens, avoids. There are no compromises in the relationships, and the child cannot explain himself his behaviour and suffers from it.

- Avoiding attachment: The child is locked, downcast, does not allow trusting relationships with adults and children. The main motive for such behaviour is “nobody can be trusted.”

- Disorganized attachment: The child has learned to survive, breaking all the rules and boundaries of human relationships. She does not need to be loved—she wants that everyone was afraid of her. This

type of attachment is characteristic for children who have been subjected to ill-treatment in relation to themselves.

Traumatic events can cause different behavioural features in children, feelings that are important to track and adequately help the child to survive, manifest and work on them. These can be a sense of insecurity, fear of the future, anger, aggression, shame and guilt, alienation and isolation from the environment, sadness. Children may have problems with learning, attention, the ability to memorize information, psychosomatic disorders (such as logoneurosis (stuttering), enuresis (urinary incontinence), bronchial asthma, neurodermatitis, etc.). Paramjit and O'Donnell (2003) have argued that there are certain features of children's behavioural manifestations who have received the traumatic experience, taking into account age.

The preschool children (under 6 years) are in close contact with their parents and cannot independently resolve certain questions, they largely depend on the parents' decision or support. Parents for a preschool child are basis of the security and the basic figure for satisfaction of needs, including the need for communication with friends, the need for physical contact, and so forth. Children of preschool age often have diffuse and somatic reactions to traumatic events. They can think by mistake that this event is their fault. It can lead to so-called "magic thinking" (for example, a child may think, "If I am beautiful, it will not happen") and the formation of a feeling of own guilt. The children of this age often show their emotional reactions to injury in the form of sleep problems, they can have nightmares. They may have anxiety and disturbances that are manifested in "adhering to the adults" (the child is afraid of staying alone in the room, constantly in need of attention, afraid of falling asleep, etc., Paramjit & O'Donnell, 2003).

Children (7–11 years) begin to be more afraid after an injury, to be ashamed and to show increased anxiety. There can be a regressive behaviour (a return to the previous stages of development), which includes enuresis, sucking a finger, baby babbling, the desire to keep a toy along with them. The loss of appetite, complaints of abdominal

pain, headaches, and dizziness can develop in the children of this age. There are also common educational problems, such as inability to concentrate, refusal to attend school, aggressive behaviour at school.

The teenagers (from 12 years old) usually hold a sense in himself, which can lead to depression. At the same time, they may pretend that “everything is fine”. The children can try to spend less time with their family, and more time with other people, trying to be active and thus manage their fears. For such children, there is a risk of being included in different groups. In high stress, the important place belongs to the understanding of the adolescent as a person, awareness of his place in society, the formation of reflection skills, the ability to take into account the needs and feelings of the environment, possessing methods of constructive conflict resolution and self-regulation skills. In dealing with a child, it is important to understand the essence of his problems. Plan the work together with parents. However, the parents and the nearest surrounding of the child can become for her the resource surrounding – such that, it will help to survive the trauma and adapt to the new conditions (Bohdanov et al., 2017).

The children, who have survived the trauma, as a rule, are characterized four peculiarities:

1. Visual obsessive, oppressive memories of traumatic events that are constantly being repeatedly experienced in nightly horrors.

2. Behaviour that is again repeated (repeated play of a tragic episode during a game, reproduction of essential parts in the game or behavioural idiosyncrasy).

3. The specific fears that are associated with trauma, avoidance of incentives or situations associated with an event or reminiscent of the trauma.

4. Change in attitude towards people, to different aspects of life and to the future.

As a result, we consider it is important to indicate the main types of immediate or delayed reactions that are shown by children, because of the experience of a traumatic situation:

1. Expressive reactions, when the child shows the strong emotions, can cry, shout, swear, laugh, swing, but the main thing—he cannot control his emotions.

2. Controlled reactions, when the child tries to restrain himself, he may look superficially calm outside.

3. Shock reactions, when a child, who has survived an acute traumatic situation, as if he shocked, depressed, it is difficult for her to understand what had happened to her. Such types of reactions can change each other, appearing in a certain type of behaviour. The trauma does not happen by itself. She immerses everything deeper and deeper—the child tries to manage with the situation through the psychological mechanisms of defenders.

Paramjit and O'Donnell (2003) are determined the most typical mechanisms of psychological protection in children and adolescents. They are as follows:

1. Regress to early child behaviour. In a crisis, this protective mechanism manifests itself in the return of a child (or teenager) to more primitive means of reaction—the child becomes whining, capricious, irritating, not self-contained, and so forth. Some children and adolescents might be observed enuresis, biting nails, sucking fingers and so on. Some traumatized children receive the reassurance from abundant food and drink, smoking. The predominance of regression as a psychological defense is often observed in the infantile adolescents, as well as in adolescents with mental retardation. At the age of 5–11 years, the regression is manifested in increased dependence on the immediate surroundings and weaker control over impulses and aspirations. Regress also shows itself in obsession, the development of sadomasochistic features in relation to others (the child can act both in the role of being offended and in the role of the offender), aggressiveness, etc. In a situation of violence, regression is a sign of mental exhaustion due to the duration of stress.

From the age of 12–13 years, the tendency to regress manifests itself as a norm of the age-old teenage crisis. There are normally differences between high vigorousness and activity at one time, and fatigue and passivity in the next, when the internal conflicts exhaust the energy resources of the organism. The regressive types of the adolescents' protection in a crisis condition are the dreams and fantasies, that is, the replacement of the action with the expectations of the reality magical permission, when they would solve all difficulties.

2. Identification with the aggressor. In behaviour, the child demonstrates those feelings and qualities that are inherent in a person who has shown the aggression or abuse about a child. This kind of

psychological protection is often observed in infantile adolescents with unstable self-esteem.

3. Suppression I: It is another commonly used mechanism of protection for children aged 5–11, often combined with passivity. A child avoids new life experiences that can carry a risk and challenge, chooses a narrow, but safe area of activity with a minimum number of interests, she is pre-pessimistic about the outcome of her actions. Because of this, often, the ability to study is suffered in such children. At this age, the sense of self-esteem is still very fragile, and although the child's ambitions are high, her ability to defend itself with humour and irony has not formed yet. In this connection, the irony of adults and the actual or predictable critique of coevals, friends often become unbearable.

4. The denial is protection from unpleasant reality due to the child's refusal from her realistic and adequate perception, from awareness of her own problems. Denial is a cardinal psychological defense for all external injuries. The teenagers with this type of psychological protection do not take the source of anxiety as a real event. In the structure of the personality, as a rule, they are tended the inadequately overestimated self-esteem, they do not tolerate criticism, selfish; actively deny the existence of difficulties, difficulties in their lives.

5. Designing is the attribution to others their own, desires and intentions that are denied in themselves. The projections can be seen in their drawings, games, fairy tales, and stories in the children, who have survived violence. Often under the influence of this type of protection, the children accuse others of that, they feel themselves, but they do not want to admit themselves.

Also it must indicate that in different children's age groups symptoms of stress will be different. So, for children of nursery and preschool age will be characteristic (Sapiha & Liach, 2017):

- Anger,
- Anxiety,
- Problems with eating and sleeping, including nightmares;
- Fear of loneliness,
- Irritability,
- Return to child behaviour,
- Shaking from fear,
- Uncontrolled crying.

Children of junior school age will have the following features:

- Distrustfulness,
- Complaints of headaches and pain in the abdominal cavity,
- Feelings that he is not loved,
- Lack of appetite,
- Sleep problems,
- Need to go to the bathroom frequently,
- Indifferent attitude towards school and friendship,
- Emotional experience about the future.

The emotional experience of stress by adolescents will have the following symptoms:

- Anger,
- Loss of illusions,
- Distrust to the whole world,
- Low self-appraisal,
- Headaches and stomach ache,
- Rebellious behaviour.

The Centre of Psychical Health and Psychosocial Support of NUKMA in cooperation with the psychological service and with the support of the UNICEF Representative Office in Ukraine, in summer 2016 conducted a qualitative research among schoolchildren who live in the front-line zone. The idea was to find out what psychological qualities help the child to grow and to keep psychical health in an active military conflict. From the point of children's view these are (Sapiha & Liach, 2017):

- Ability to communicate,
- Feeling of happiness,
- Helping others,
- Family support.

Conclusion

In this article, it was investigated, that for mastering stress everyone uses their own strategy based on acquired personal experience and psychological resources. It is also considered such concepts as identity reaction, coping-strategy and coping-behaviour. It is researched that the goal of coping process is to develop coping behaviour, to overcome the stressful situation, eliminate psychological discomfort to find emotional stability. Observation and survey of distressed people found that everyone has their own unique combination of resources to adapt. In this article, it is given the classification of the resources which identity uses, to meet the requirements of the environment. There was defined that the most vulnerable category is the military who have personally taken part in combat actions. It was characterized five main types of traumatic events, which are often associated with mental and physical suffering in the future. They are emotional disregard, emotional and physical abuse, sexual aggression and sexual abuse. In the course of this problem studying, it was identified those factors that largely determine the formation of the child's personality. It was also discovered that traumatic events could cause different behavioural features in children, feelings that are important to track and adequately help the child to survive, manifest and work on them. In the article, it was also given, the most typical mechanisms of psychological protection in children and adolescents.

The obtained results shout to the another results of a series of viability's studies, that conducted in other countries where armed conflicts occur. Vitality or resilience is a modern concept in foreign schools of psychology and sociology and means the broadest understanding of the person's ability to resist the influence of adverse external factors. Using the systematic approach in maintaining the life of the individual, provides for the inclusion of mental and actual impacts the environment properties of the personality, mechanisms of regulation of stress mechanisms that determine their specificity. The psychological support, assistance will be only effective when they are multilevel and take into account both the influence of the social environment and the individual factors that affect the personality.

According to experts, absence of the concept, national programme and the system of rehabilitation measures persistently aggravate the

problem of mental disorders, exponentially increasing its negative social, economic, and political consequences.

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**Can emotional abilities protect from stress?
The relationship between emotional abilities and stress
perceived by women and men**

Introduction

Stress is the experience of every human being. In the life of every person, there are difficult situations which are perceived as stressful and violate one's internal balance. In accordance with the transactional approach, stress is defined as the relationship between an individual and the environment, which is viewed as a threat to wellbeing if its demands overload and exceed personal resources (Lazarus & Folkman, 1984). People differ both in the number of experienced stressful situations, the intensity of the stressors to which they are exposed, and their response to them. Individual differences in response to stressors and in appraisals in term of threat, loss, or challenge are associated with many factors, including temperamental and personality characteristics such as emotional reactivity and neuroticism.

Resilience belongs to those personal resources which play an important role in coping with stressful situations (Ogińska-Bulik & Kobylarczyk, 2016). It is understood as the process of adaptation to traumatic and stressful events and faced adversities (American Psychological Association, 2011).

According to the multi-system model of resilience, it can be described in three spherical levels that refer to different sources of resilience (Liu et al., 2017). Core resilience is the central layer, consisting of intraindividual factors like physiology and health behaviours, and it is the foundation of the overall personal resilience in life. The next layer is internal resilience, which is created by factors acquired and developed in interpersonal relationships. These include, among others, the impact of education, family, or friends, as well as learning from one's own experiences. Internal resilience also consists

of abilities, competences, and knowledge. The last layer is external resilience, which refers to all socio-ecological factors that facilitate adaptation and coping in difficult situations. For instance, socioeconomic status or access to healthcare can be considered as belonging to external resilience. The resources in each layer determine the human resilience to stressful events. Referring to this conceptualization of resilience, emotional abilities can be considered to be crucial factors in internal resilience. They develop in a social context, by social training and as a result of one's own experience (Matczak, 2004) or through parental attitudes and reactions (Marcysiak & Wasilewska, 2009; Martowska, 2009; Piekarska, 2004) and the family system (Martowska, 2007).

Emotional abilities were proposed by Mayer and Salovey (1997) to be components of emotional intelligence. These authors list four main groups of emotional abilities: (a) the ability to recognize emotions, (b) the ability to use emotions to support thinking, (c) the ability to understand emotions and to possess emotional knowledge, and (d) the ability to manage emotions reflectively.

A high level of emotional intelligence does not mean that an individual will not experience negative emotions, for example, that he or she will not experience sadness or regret when the close relationship will end or that he or she will not feel angry being deceived, or that he or she will not be terrified hearing a diagnosis of a life-threatening illness. Difficult, stressful situations and negative emotions arise in the life of every human being, regardless of his or her emotional intelligence level. However, the level of emotional intelligence can influence how an individual perceives difficult situations and how he or she copes with negative emotions occurring at that time. It can also determine whether a person will feel overwhelmed by negative emotions and a difficult event or whether he or she will view them as a challenge and will be able to take effective action leading to regain the balance. According to Salovey et al. (1999), people with a high level of emotional intelligence cope better when they are faced with difficulties. This is possible because they „accurately perceive and appraise their emotional states, know how and when to express their feelings, and can effectively regulate their mood states” (p. 160). Individuals with high emotional intelligence more frequently perceive stressful situations as a challenge than as a threat (Matthews et al.,

2002). They have a greater sense of self-efficacy (Salovey et al., 2001). They can also choose and change coping strategies more flexibly in accordance with situational demands (Davis & Humphrey, 2012). Emotional intelligence can be viewed as a resource playing an important role in difficult, stressful situations. Its high level may have positive health implications (e.g., Schutte et al., 2007). It can also be helpful in reducing stress associated with coping with illness, especially of a chronic or life-threatening nature.

The current study concerns two emotional abilities that are components of emotional intelligence according to Mayer and Salovey's (1997) theory, that is, the ability to recognize emotions in others from facial expressions and the ability to understand emotions. It can be assumed that the level of these abilities can affect the intensity of experienced stress both directly and indirectly. Emotions are an information source, an alarm system available to everyone from birth (Salovey & Mayer, 1990). They provide important information on one's own and other people needs, and on significant changes in the environment. Emotions also help identify priorities. The ability to recognize emotions in others allows for obtaining information about another person's emotional state or the quality of relationship with this person. This enables the evaluation, for example, whether the relationship is satisfying for both or whether it requires a "repair." For instance, an individual perceives the content of the face of the interlocutor, so this is an information that the interaction is correct and there are no interfering factors. On the other hand, if he or she sees annoyance or anger on the face of another person, this can be a signal that something bad happens in this relationship. For example, important needs of the other person could have been infringed, therefore, appropriate action should be taken to avoid conflict escalation. An individual with a low ability to recognize emotions in other people may not notice the difficulties that arise in interpersonal relationships, thus not responding in time. As a consequence, a serious interpersonal conflict may arise, causing the experience of high stress. A low level of ability to identify emotional states can also lead to a mistaken perception of others' emotions and an attribution to them of feeling that they do not experience. The mere misidentification of emotions in others can be a source of numerous conflicts in interpersonal relationships (Fitness, 2001) and lead to stress

experienced for this reason. High emotion recognition ability can contribute to reducing stress also because it facilitates choosing a person who can provide social support, which is important and helpful in difficult and stressful situations (cf. Salovey et al., 1999).

Individuals with a high level of emotion recognition and emotion understanding can identify and understand the causes of difficulties in their emotional life. They can also recognize and understand emotions experienced by others and are able to predict their emotional reaction to their own behaviour. Thus, such individuals have the opportunity to choose more effective coping strategies. Moreover, knowing the nature of emotion, they know that difficult, stressful situations are a natural, part of life and are temporary (Gohm et al., 2005). The abilities to recognize and understand emotions can lead to the perception of oneself as competent in shaping interpersonal relationships (Gohm et al., 2005), which can translate into a sense of control over one's own life. Such a person will not feel helpless or overwhelmed with negative emotions and problems. This can also reduce the stress perceived in difficult situations.

The main aim of the current study was to examine the relationship between emotional abilities (emotion recognition and emotion understanding) and perceived stress. As gender differences in the association between ability emotional intelligence and various aspects of functioning were observed in earlier studies, it can be expected that similar differences will occur in the relationship between emotional abilities and perceived stress. The results of the earlier studies indicated that only in men, the high level of ability emotional intelligence translates into better adaptation (e.g., Brackett et al., 2004), including lower depression (Salguero et al., 2012) and stronger resistance to stressors (Schneider et al., 2013).

The following hypotheses have been formulated:

1. There is a relationship between emotional abilities (emotion recognition and emotion understanding) and perceived stress. High level of emotional abilities is associated with lower perceived stress.
2. There are gender differences in the relationship between emotional abilities and perceived stress. The association is stronger in men than in women.

Method

Participants and Procedure. The sample included 268 adults (128 women and 140 men) aged 20–58 years ($M = 29.82$, $SD = 8.48$). Women were 20–52 years old ($M = 27.29$, $SD = 7.38$), and men were 21–58 years old ($M = 32.15$, $SD = 8.88$). Both students and nonstudying participants were recruited. The participants had a higher or secondary education. The study was conducted individually and anonymously. All of the participants were informed that the study was conducted for scientific purposes and the results obtained by them will not be available to third parties. They were also informed of their right to withdraw from the study at any time without any negative consequences. Verbal informed consent was obtained. The participants were asked to read the instructions in the test booklets and to provide honest answers to all questions.

Measures. Emotional abilities were measured by The Emotional Intelligence Scale – Faces (SIE-T; Matczak et al., 2005) and The Emotion Understanding Test (TRE; Matczak & Piekarska, 2011).

The SIE-T measures the ability to recognize emotions based on facial expressions. This ability is a component of emotional intelligence in Mayer and Salovey's (1997) model. The test consists of 18 photos of female and male faces. Six emotion names are provided for each photo. The participant's task is to determine which of the given emotions is expressed on the face of the person in the photo. The participants respond by marking one of the following answers: *expressed* – *not expressed* – *difficult to say*. The scores in the SIE-T range from 0 to 108.

The TRE is used to assess the emotion understanding ability, which is a component of emotional intelligence in Mayer and Salovey's (1997) model. The TRE consists of 5 parts. In Part 1, participants order the given emotions in terms of their intensity. In Part 2, they indicate the emotion opposite to the given ones. In Part 3, they choose an emotion that is an element of the given emotion. In Part 4, they determine the emotion which will appear in the given situation. In Part 5, they indicate what conditions must be fulfilled in order for the given emotion to appear in the described situation. In Parts 2–5, participants choose one correct answer from the four given choices. The maximum score in the TRE is 30 points, and the minimum is 0 points.

Subjectively perceived stress was measured by the Perceived Stress Scale-10 (PSS-10) developed by Cohen et al. (1983) in the Polish adaptation by Juczyński and Ogińska-Bulik (2009). The PSS-10 measures the stress perceived over the last month. The PSS-10 consists of 10 items. The participants determine on a 5-point scale (0 – *never*; 4 – *very often*) how often they thought and felt in a given way. The scores in the PSS-10 range from 0 to 40.

Results
Preliminary Analyses. Student’s *t* test was used to compare the scores of women and men (see Table 1). To assess the effect size, Cohen’s *d* was calculated.

Table 1

Gender Differences in the Measured Variables					
Variable	Women		Men		Student's <i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Perceived stress	18.72	6.45	17.19	6.81	1.889 ^t
Emotion recognition	75.77	8.61	72.61	11.53	2.514 [*]
Emotion understanding	19.05	3.44	17.81	3.67	2.845 ^{**}

^{*} *p* < .05; ^{**} *p* < .01; ^t *p* < .06

The results showed that women, as compared to men, had a significantly higher level of emotion recognition (*d* = 0.31) and emotion understanding (*d* = 0.35). They also reported higher perceived stress than did men, though at a level of statistical tendency (*d* = 0.23). The effect sizes were small and indicate that gender explains 2% of variance in emotion recognition, 3% of variance in emotion understanding, and only 1% of variance in perceived stress.

The association between emotion recognition and emotion understanding was also examined. The Spearman’s ρ correlation coefficient was 0.22, *p* < .05 in women and 0.43 *p* < .001 in men. The relationship between emotional abilities was stronger in men than in women, *z* = 1.89, *p* < .03, one-tailed test.

Emotional Abilities and Perceived Stress. To verify the hypothesis about the relationship between emotional abilities and perceived stress, Spearman’s ρ correlation coefficients and one-way

analyses of variance (ANOVA) were calculated. According to the hypothesis, gender differences in the association between perceived stress and emotional abilities were expected. Therefore, the correlation coefficients were calculated separately in women and men (see Table 2).

Table 2

Spearman's ρ Correlation Coefficients Between Emotional Abilities and Perceived Stress

	Emotion recognition		Emotion understanding	
	Women	Men	Women	Men
Perceived stress	-0.17 [†]	-0.09	-0.01	-0.18*

* $p < .05$; [†] $p < .06$

A statistically significant correlation between emotion understanding and perceived stress was found in men, though not in women. This indicates that in men, a high level of emotion understanding ability is related to a small degree to lower perceived stress. The association between emotion recognition and perceived stress did not reach statistical significance. In women, there was only a weak, negative correlation at a level of statistical tendency. This suggests that in women, emotion recognition ability is linked to subjectively perceived stress to a small degree at a level of statistical tendency.

Fisher's test was used to test the differences in the correlation coefficients obtained in men and women. At a level of statistical tendency, the correlation between emotion understanding ability and perceived stress was stronger in men than in women, $z = 1.37$, $p < .085$, one-tailed test.

In order to carry out the one-way ANOVA, the sample was divided into three groups based on the level of perceived stress. The division criterion was 0.5 *SDs* across the sample. Participants reporting low perceived stress (< -0.5 *SD*) were included into Group 1, participants with moderate perceived stress were included into Group 2, and participants reporting high perceived stress (> 0.5 *SD*) – into Group 3. Then, it was tested whether these groups differed in the level of emotional abilities. As different correlations between emotional abilities and stress were obtained in women and men, the analyses

were conducted separately for each gender. The obtained results are presented in Table 3.

Table 3
**Emotional Abilities in Women and Men Differing
in Perceived Stress**

	Perceived stress	Women				Men			
		<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Emotion recognition	Low	77.84	7.54			73.08	9.44		
	Moderate	75.75	9.11	2.041	.134	73.83	12.14	1.006	.347
	High	74.04	8.73			70.61	13.02		
Emotion understanding	Low	19.39	3.12			18.39	3.09		
	Moderate	18.75	3.16	.354	.702	18.52	3.61	6.083	.003
	High	19.04	3.97			16.13	3.97		

The results of the NIR post hoc test indicated that women with low and high perceived stress differed in the level of emotion recognition ability. Women reporting low perceived stress scored higher on emotion recognition than did women with high perceived stress (mean difference: 3.80, $p < .05$). The results of the one-way ANOVA indicated that men with low, moderate, and high perceived stress differed in the level of emotion understanding ability. The NIR post hoc test showed that men reporting low or moderate perceived stress scored higher on emotion understanding compared to men with high perceived stress (mean difference: 2.26, 2.39; $p < .01$, respectively). The observed differences are shown in Figures 1 and 2. However, there were no significant differences in the level of emotion recognition ability between men differing in perceived stress and in the level of emotion understanding ability between women differing in perceived stress.

Discussion

The main aim of the present study was to examine whether the abilities to recognize and understand emotions are related to perceived stress. Besides the verification of the main hypothesis, preliminary

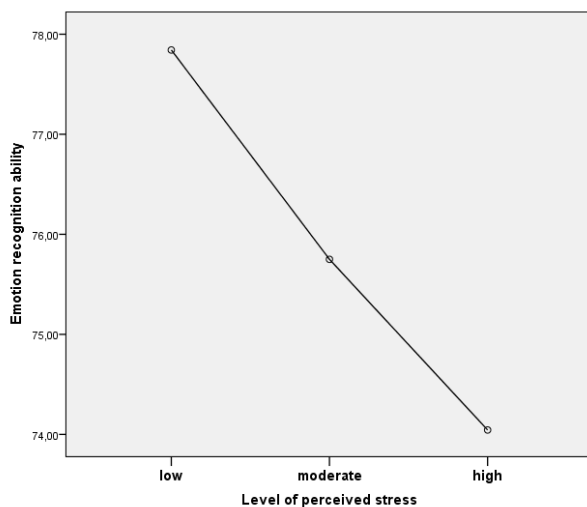


Figure 1. Emotion recognition ability and perceived stress in women.

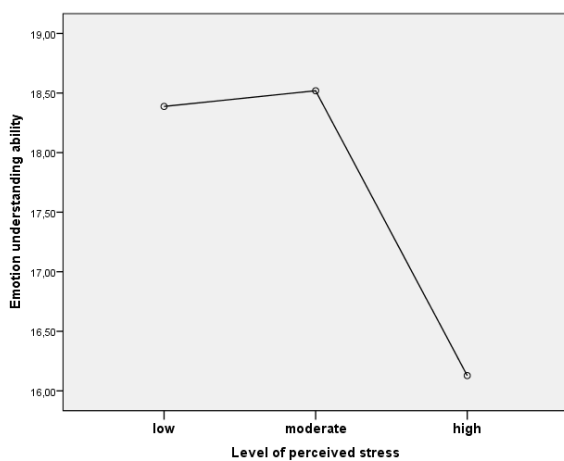


Figure 2. Emotion understanding ability and perceived stress in men.

analyses were also carried out. They indicated that women, as compared to men, have higher level of emotional abilities (emotion recognition and emotion understanding). These differences were also frequently observed in previous studies (e.g., Day & Carroll, 2004; Knopp, 2012; Matczak & Piekarska, 2011; Matczak et al., 2005; Siegling et al., 2012).

There are numerous reports of studies showing that women experience more stress compared to men (e.g., Leventhal et al., 2017; Matud, 2004; Plopa & Makarowski, 2010). These differences are explained by multiple social roles fulfilled by women (e.g., mother, wife, employee) and higher exposure to violence and discrimination as compared to men. It is often pointed out that women, as compared to men, can perceive different life difficulties as more stressful. They also tend to have a stronger emotional engagement in the affairs of their significant others. However, in the sample from the current study, the gender differences in perceived stress were only observed at a level of statistical tendency - women showed only slightly higher scores than men. The lack of significant differences observed in the current study may be caused by the specificity of the sample. It is worth noting that, in comparison with the Polish standardization sample of the PSS-10 (Juczyński & Ogińska-Bulik, 2009; the mean score in the normalization sample of healthy subjects: $M = 16.62$), men and women in the current study reported higher levels of stress (17.19 and 18.72, respectively).

The preliminary analyses also tested for a link between emotional abilities: emotion recognition and emotion understanding. The observed low and moderate correlations are in accordance with the results of earlier studies (Matczak & Piekarska, 2011; Matczak et al., 2005).

According to the main hypothesis, high level of emotional abilities was expected to be associated with lower perceived stress. The obtained results confirmed this hypothesis in part. They simultaneously suggest the existence of gender differences. In men, perceived stress was associated only with emotion understanding ability. Men reporting high perceived stress achieved lower emotion understanding scores compared to men reporting low or moderate perceived stress. This finding suggests that a high level of emotion understanding ability can be one of the factors contributing to

perceiving lower stress by men. Thanks to the ability to recognize and understand sources of emotion in oneself and in others, and thanks to the knowledge of emotions, the stressful situation and emotional states can be more understandable for men. Thus, the difficult, emotogenic situations may be perceived as less stressful and less overwhelming. A high ability to understand emotions and emotogenic situations can also foster a sense of competence (Gohm et al., 2005) and a sense of control over one's own life. Knowledge of emotions can also be useful in attributing meaning to stressful situations. The perception of stressful life events as controllable, comprehensible, and meaningful are parts of the sense of coherence (Antonovsky, 2005; Plopa & Makarowski, 2010; Terelak, 2001, 2008). A strong sense of coherence has a mobilizing effect in a stressful situation and makes the situation a challenge rather than a stressor (Terelak, 2001, 2008). Perhaps a high level of emotion understanding ability is associated with a strong sense of coherence, and in this way translates into lower perceived stress in men.

Resources in the form of emotion understanding ability can be associated with lower perceived stress also through using adaptive coping strategies. It is believed that people with a high level of emotion understanding ability prefer to choose task- and emotion-focused coping strategies that foster adaptation, for example, planning and seeking social support, and will avoid emotion-focused strategies that are not adaptive, for example, rumination (Lyons & Schneider, 2005). Indeed, in men, emotion understanding ability is associated with using of the coping strategies that facilitate adjustment, that is, active coping, planning, and positive reinterpretation, and avoiding the use of strategies considered as less adaptive, that is, denial, behavioural disengagement, or alcohol-drug disengagement (Piekarska, 2015). Referring to Frijda's (1988) law of the situational significance, it can be assumed that cognitive reinterpretation of an emotogenic situation is the most effective coping strategy (Maruszewski, 2008). The current literature draws attention to the important role of meaning-focused coping (Heszen, 2013; Ogińska-Bulik, 2013; Ogińska-Bulik & Juczyński, 2008). Its role is to attribute meaning to stressful events and to notice positive consequences of these situations, thus arousing positive emotions (Folkman & Moskowitz, 2006). Positive reinterpretation undoubtedly belongs to

such strategies (Ogińska-Bulik, 2013; Ogińska-Bulik & Juczyński, 2008) and it is related to high level of emotion understanding ability in men (Piekarska, 2015).

In women, emotion recognition ability was negatively and weakly related to perceived stress at a level of statistical tendency. An intergroup comparison indicated that women perceiving low stress had significantly higher emotion recognition ability compared to women perceiving high stress. The experience of low stress can be a consequence of an accurate recognition of other people's emotional states, which can contribute to fewer interpersonal conflicts. As Lyons and Schneider (2005) noticed, emotion recognition plays an adaptive role in stressful situations. The accurate perception of others' emotions can lead to focusing one's attention on the problem source and a possible attempt to change it. A high level of emotion recognition ability can also lead to a sense of self-efficacy and control in a stressful situation, and thus, reduce perceived stress. The ability to accurately perceive emotions in others can also facilitate the choice of a person who will be ready to listen with openness and empathy, and will be able to provide support in a difficult situation. Women are more likely than men to seek social support (e.g., Rzeszutek et al., 2017). In women, social support plays an important role in coping with difficult situations and is associated with fewer symptoms of trauma (Oniszczenko et al., 2016). In women, the ability to recognize emotions in others is related to such coping strategies as seeking instrumental and emotional social support (Piekarska, 2015), as well as less frequent coping through denial (Piekarska, 2015). It can be assumed that the link between emotion recognition ability and perceived stress is not only direct, but is also mediated through the use of appropriate coping strategies.

It is worth considering why the correlation in women was observed only at a tendency level. Many studies indicate that women recognize emotions in others better than do men and perceive very subtle signs of emotional expressions (e.g., Fitness, 2001). However, a very high level of emotion recognition ability may not always have positive implications. On the contrary, in certain situations, very accurate perception of others' emotions can lead to high stress in interpersonal relationships. This can happen when a woman sees even the most subtle and hidden expression of negative emotions, such as anger,

rejection, or contempt. The more important and closer is the relationship with a person showing negative emotions, the higher is the experienced stress. It is assumed that women, in comparison to men, pay more attention to emotions expressed by others (e.g., Hall & Halberstadt, 1994; Mayer et al., 1999). This might explain why the relationship between emotion recognition ability and perceived stress, although weak and only at a tendency level, was found only in women.

However, in men, perceived stress was associated only with emotion understanding ability. This result suggests that men can use emotion understanding ability to reduce perceived stress. This may be due to men's preferred rational thinking, which requires engaging cognitive abilities (Sladek et al., 2010). As indicated by previous studies, emotion understanding ability compared to other emotional abilities, is most closely related to general intelligence and reasoning (e.g., Mayer et al., 2001).

The results of the current study suggest that there are gender differences in the relationships between the level of emotional abilities (emotion recognition and emotion understanding) and perceived stress. This suggests that emotional abilities may play a different role in stressful situations in women and men. Similar gender differences may also occur in other aspects of functioning. Therefore, it is reasonable to take into account gender in future studies on emotional intelligence. This will make it possible to better understand the role of emotional abilities in human life.

The results of the current study indicate that emotional abilities are associated with lower perceived stress. High level of emotional abilities may cause difficult situations to be perceived as less stressful. It can be also helpful by reducing experienced stress indirectly, for example, by influencing the choice of appropriate coping strategies. Although the observed associations were weak, emotional abilities can be viewed as personal resources which are worth developing and which can have positive implications for health, health behaviours, and coping with severe illness.

Summary

Chronic stress may have negative health implications. On the other hand, coping with illness, especially chronic illness, often leads to the experience of intense stress. Therefore, it seems important to identify

factors which can contribute to better coping skills and experiencing less severe stress. Emotional abilities can be viewed as resources playing an important role in stressful situations. The present study examined the relationship between two emotional abilities (emotion recognition and emotion understanding) and perceived stress. The analyses were conducted on a sample of 268 adults (128 women and 140 men). Stress perceived in the last month was assessed by the PSS-10. The SIE-T and the TRE tests were used to measure emotion recognition ability and emotion understanding ability. The results showed gender differences in the relationship between emotional abilities and perceived stress. This suggests that particular emotional abilities may play different roles for functioning in women and men. In order to better understand the significance of emotional abilities in human functioning, gender should be taken into account in future research in this area.

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Influence of psychological characteristics on the possibilities of personality adaptations of depressed patients in the process of their rehabilitation

Introduction

It has been proved that psychological and medical-social consequences of depression are varied and difficult. They include: high suicide risk, violation of adaptive capacity of patients, decrease in professional status, family disintegration, disability, loss of social ties and decrease in the quality of life in general (Bohan et al., 2016; Borsukov & Osipova, 2014; Kasper, 2013; Osipova & Sinitsin, 2015; Podsevatkina & Podsevatkina, 2014; Pschuk et al., 2013; Rihmer, 2012; Saduakasova, 2017; Yevseyev, 2012;).

Therefore, at the present stage of psychological science development, the study of such phenomenon as psychological rehabilitation potential, which is the carrier of the main source of rehabilitation and re-socialization of the patient, becomes of great importance.

In this regard, during studying patients with depressive disorders of various genesis, it is necessary to pay attention to psychological and pathopsychological characteristics that have influence on the specifics of psychological component of rehabilitation potential and adaptive mechanisms of this category of patients.

We consider that research of psychological rehabilitation potential of patients with depressive disorders will enable to identify the resources of the personality for the implementation of both psychological and integrated medical and social rehabilitation.

It is important to stress that the problem of psychological rehabilitation and socio-psychological adaptation was highlighted in

scientific developments and fundamental positions of many domestic and foreign scientists – Zotkina (2012), Nalchajyan (2013), Porokhina (2004), Rihmer (2009), Kasper (2004), Maksimenko (2007), Ayvazyan (2018), Berezin (2011), Khalak (2012), Abramov (2013), A. Gavrilov (2018), Maksimova (2014), Mozgova (2009), and Ostrovska (2013).

Despite the wide range of research remains an open question of individual specificity, which defines the limits of potential internal changes in the personality associated with the nature of disease, within which the adaptation of specific personality is possible. The unidentified psychological and pathopsychological features of the personality, in particular emotional and cognitive, which can promote prolongation of remission periods and reduce the risk of relapse of the disease, remain. All the above-mentioned gives theoretical and practical significance to the problem of psychological rehabilitation potential and the necessity of its activation in the situation of disease.

In this way, the main purpose of the article is to highlight the results of empirical research of specifics of emotional and cognitive deficit of people with depressive disorders of various genesis.

In our opinion, theoretical and methodological basis of the study of individual characteristics of depressed patients should be the idea of their functional and content specificity, which affects the formation of psychological rehabilitation potential.

In the definition of Shakhrai (2006), rehabilitation is a complex of measures aimed to restore person's rights, social status; to improve his health, capacity; to change social environment, living conditions, which were disturbed or restricted for certain reasons.

According to Porokhina & Bayrachna (2004), the processes of adaptation and rehabilitation have much in common, therefore Berezin (2011) defines rehabilitation as an aspect of mental adaptation, which ensures the organization of micro-social interaction, the formation of adequate interpersonal relationships, taking into account the expects of the environment and achievement socially meaningful goals. Social and psychological aspects of adaptation are inextricably linked, although sometimes they may not coincide. It has been proved that social adaptation of the person is aimed at the restoration of norms, socially useful relations with social subjects, change in positive sense of communication, behaviour and activity. Psychological adaptation

is assimilation of socially useful standards of behaviour and value orientations, convergence of settings and orientation of the personality with the expectations of the social environment.

Kondryukova (2010) points out that the process of adaptation has forecasting function, which evaluates the following actions and carries information about the goal, object, environment and is the basis of all adaptation processes of the personality and efficiency of any activity. The process of adaptation is considered to be positive in the conditions of certain social norms (clearly formulated by society) and is predictable in some sense.

It is important to emphasize if adaptation of the personality to the social environment in the course of his activity does not occur, then it is appropriate to talk about mental disadaptation, the reasons of which are: high rates of modern civilization; high level of nervous, physical and emotional stress; partial or complete mental and personality immaturity, inconsistency of person's behaviour with the requirements of society, social norms; conflicts with surrounding environment; emotional experiences; unfavorable working conditions; illness, etc.

We agree with Maximenko (2014), who pointed out rightly that the adaptive process affects all levels of body: from molecular to mental regulation of activity.

So, during studying psychological rehabilitation potential (PRP) it is necessary to pay attention to one of the most important of its aspects – the multilevel process of adaptation (Nalchajyan, 2010), which is the universal mechanism of ensuring the full functioning of the individual in the environment and is also considered as a «dynamic process of adaption of the organism to new conditions of existence» in modern psychology.

According to Nyzhnik and Sagirova (2011), psychological rehabilitation of persons with mental disorders should be based on the dynamic functional link between the stored elements of the personality and medical – psychological influence, including the operation of compensatory mechanisms and differentiated disorders of mental functions from the stored core of the personality. Forms and means of influence are determined by nature of mental changes and the level of manifestation of pathological actions, taking into account the main

individual characteristics, personality structure and pathological changes in the structure of personality.

Other scientists, Starobina & Svistunova (2008) include the following components in the structure of psychological rehabilitation potential:

- intellectual component due to which rehabilitants understand problems connected with their illness, disability and the possibility to solve them through rehabilitation measures. Intellectual rehabilitation potential depends upon the state of cognitive processes and the level of intelligence;

- emotional-volitional component which determines the energy of a rehabilitant in achieving goals and objectives of the process of rehabilitation, sensual attitude to these goals and tasks, as well as to individual rehabilitation measures and depends upon the individual psychological characteristics of the personality, his emotional states and volitional processes;

- motivational component that focuses on achieving goals and objectives of rehabilitation process and represents a complex of goals, settings, motives and needs actual for a rehabilitant in the aspect of different outcomes, the results of rehabilitation and depends upon value-motivational characteristics of the personality, system of individual relationships in general

In our opinion, one of the urgent tasks of psychological rehabilitation, the principles of which consist in the unity of biological and psychological, implementation of rehab programs and partnerships, is the development and implementation of effective methods for the restoration of personal settings aimed to overcome the consequences of illness and compensation for lost both professional and social adaptive qualities among persons with neuropsychiatric diseases. According to this approach, the return to health involves eliminating the effects of experiences, undesirable settings, uncertainty in own abilities, anxiety about the possibility of deterioration and relapse of disease.

In this way, we have presented the relevance of theoretical substantiation of definition of psychological rehabilitation potential of people with disabilities by analysing literary sources and have proved that there is no clear view for definition of psychological rehabilitation potential for depressive disorders. There remains an open question

about individual specificity, defining the limits of potential internal changes in personality and associating with the nature of depressive disorder, in the frame of which adaptation of the patient is possible. Psychological factors associating with peculiarities of the course of the disease, which promotes prolongation of remission periods and reduces the risk of relapse remain unidentified.

It is important to note that a variety of theories and therapeutic approaches set this problem in a number of the most complex and dictates the need for a comprehensive analysis of resources destroyed by the disease, as well as the definition of psychological rehabilitation potential in order to improve rehabilitation programs that contribute to the restoration of psychological health and the integration of patients with depressive disorders into society.

Thus, for modern psychiatry and clinical psychology, it is important to study the specifics of psychological rehabilitation potential and adaptive mechanisms of personality for developing the system of psychotherapeutic measures aimed to improve the social functioning of depressed patients.

Analysis of scientific sources shows that early detection of depression and timely initiation of treatment greatly improves the outcome of therapeutic intervention. On the contrary, prolonged stay in morbid condition contributes to chronicity of pathological process, increases the risk of developing repeated depressive episodes in the future and significantly impairs the prognosis of the disease in the whole (Goodwin, 2013; Osipova & Zaitseva, 2015; Petrova et al., 2013). Depression is a heterogeneous disease that requires treatment not only of emotional symptoms, but also restoring social functioning and quality of patient's life (APA, 2013; Fava et al., 2006; McClintock et al., 2011). It is known that despite the marked improvement of patient's condition in the result of therapy, more than 50% of treated patients still report significantly a decrease in the quality of life (Gasse et al., 2013; Ishak et al, 2014; McIntyre et al., 2013; Rosenzweig-Lipson et al., 2007). Therefore, attention to full functional recovering of the patients gives a chance to improve their daily lives (Greer et al., 2010; Ishak et al., 2011).

As one of the important components of rehabilitation potential is its psychological component (psychological rehabilitation potential – PRP), it can be represented as a complex of individual and

psychological features of the personality (cognitive, motivational, emotional, etc.) and socio-psychological factors which are the main source of rehabilitation and re-socialization of the patient as a result of beginning and development of chronic disease (Khalak, 2012). That's why for establishing the characteristics of PRP, it is important to understand the specificity of emotional and cognitive deficits of patients with depressive disorders.

Methodology

The study was held on the basis of the psychoneurological dispensary of Specialized multi-profile hospital № 1 in Dnipro. The sample of the current research consisted of 354 persons, among which 270 were patients with depressive disorders (91 with neurotic depressive disorders, 86 with organic depressive disorders and 93 with endogenous depressive disorders) and 84 persons from general population (healthy).

To answer the research questions the following data tools were used: Hamilton Depression Rating Scale (HDRS), Hamilton Anxiety Rating Scale (HARS), Montreal Cognitive Assessment Scale (MoCA); mathematical-statistical methods of data processing on the basis of the package of statistical software IBM SPSS-20 (F – criterion, Student's t-test) were used as well.

Findings and Discussion

Thus, it's possible to analyse results of the study of emotional dysfunctions among patients with depressive disorders depending upon genesis of their disease. First of all, the levels of depression among patients of the studied groups were established.

According to M. Hamilton's inventory, the majority of patients with *neurotic* depression have been diagnosed with mild level of depression (72.53%), 23.08% with moderate, and 4.40% with severe. Among patients with *organic* pathology, 56.98% of testees had mild level of depression, 37.21%—moderate and 5.81%—severe. Most patients with *endogenous* genesis of disease have been diagnosed with moderate level of depression (52.69%), 27.96%—with severe and only 19.35% of testees had mild level of depression.

Obtained results were verified statistically. Thus, probable dominance of mild level of depression among subjects with *neurotic*

genesis of disease was detected in comparison with other groups ($p < .01$, $DK = -1.05$, $MI = 0.08$, $p < .0001$, $DK = 5.74$, $MI = 1.53$, respectively).

It is important to stress that among patients with *organic depression*, moderate ($p < .01$, $DK = 2.07$, $MI = 0.15$) and mild ($p < .0001$, $DK = 4.69$, $MI = 0.88$) levels of depression dominated. The group of patients with *endogenous genesis* of disease was likely to have prevalence of moderate ($p < .01$, $DK = -1.51$, $MI = 0.12$ and $p < .0001$, $DK = -3.59$, $MI = 0.53$, respectively) and severe ($p < .0001$, $DK = -6.82$, $MI = 0.76$, $p < .0001$, $DK = -8.03$, $MI = 0.95$, respectively) levels of depression in comparison with other groups.

In order to provide full picture of pathopsychological characteristics of patients with different genesis of disease, clinical and psychopathological analysis of the structure of depression was conducted.

Data analysis allowed to establish that in the group of patients with *neurotic* depression predominant types of violations were «phobic depression» ($59.23 \pm 14.62\%$), which characterized by various fears, as well as «agitated depression» ($52.67 \pm 15.28\%$), which characterized by feeling of anxiety, tension and trouble.

In *organic* genesis of depression «somatic depression» ($71.40 \pm 16.45\%$) predominated, which manifested in the certain symptoms of a body (disorders of the gastrointestinal tract, muscle pain, bronchial asthma, vascular dystonia, etc.).

Among patients with *endogenous* depression, «non – dynamic type of depression» ($52.47 \pm 14.98\%$) predominated, which manifested in slowing down, difficulties in mental functioning and motor reactions. Also, «agitated» ($53.85 \pm 15.95\%$) and «somatic» ($52.50 \pm 14.17\%$) forms of depressive disorders were observed.

Following obtained results were also verified statistically. Thus, predominance of phobic type of depressive disorder was identified among patients with *neurotic* depression ($t = 2.713$, $p < .01$); somatic type of depression—among patients with *organic* depression ($t = 1.952$, $p < .05$) and non-dynamic type of depressive disorder—among patients with *endogenous* depression ($t = 2.241$, $p < .05$).

To understand influence of depressive symptoms on psychological rehabilitation potential, more detailed analysis of manifestation of

depression among patients with different genesis of disease was conducted.

Analysis of research results allowed to establish that among patients with neurotic depression such characteristics as obsessive-compulsive symptoms (88.00%; 1.76 ± 0.64 points); psychiatric anxiety (76.00%; 3.04 ± 0.82 points), early awakening (76.00%; 1.30 ± 0.77 points) and difficulty in falling asleep (67.00%; 3.4 ± 0.64 points), May somatic disturbances (71.50%; 1.43 ± 0.67 points), excitement (58.50%, 2.34 ± 0.98 points) and tendency to be fixed on disease symptoms (58.25%; 2.33 ± 1.34 points) had the highest indexes. Symptoms characterized daily fluctuations in well-being (6.50%, 0.13 ± 0.34 points), weight loss (6.00%, 0.80 ± 0.86 bolus) and paranoid symptoms (14.00 %; 0.56 ± 0.45 points) had lower indexes.

Among patients with *organic* genesis of disease, such depressive symptoms as general somatic characteristics (93.50%, 1.88 ± 0.45 points), early awakening (82.50%, 1.65 ± 0.66 points) and difficulty with falling asleep (59.50%, 1.19 ± 0.69 points), decreasing in productivity in work and activity (76.00%, 3.05 ± 0.94 points) and somatic anxiety (64.25%, 2.57 ± 1.02 points) dominated. Paranoid symptoms (11.25%, 0.45 ± 0.68 points), daily oscillations of well-being (14.50%, 0.29 ± 0.57 points) and symptoms of derealisation / depersonalization (18.00%; 0.72 ± 0.92 points) had the lowest indexes.

In the group of patients with *endogenous* depression such symptoms as decreasing productivity in work and activity (80.25%, 3.20 ± 0.83 points), symptoms of inhibition (77.00%, 3.08 ± 1.31 points), sleep disturbance or difficulty in falling asleep (74.50%, 1.49 ± 0.77 points), early awakening (62.00%, 1.24 ± 0.80 points) and frequent waking at night (54.50%; 1.09 ± 0.79 points), actual weight loss (62.50%, 1.25 ± 0.92 points), decreasing libido (61.50%, 1.23 ± 0.97 points), depressed mood (59.25%, 2.37 ± 1.01 points), excitement (52.75%, 2.11 ± 0.97 points), mental anxiety (50.75%, 2.03 ± 0.98 points), and daily oscillations of well-being (50.50%; 1.01 ± 0.97 points) prevailed. However paranoid symptoms (11.25%, 0.45 ± 0.58 points) and symptoms of derealisation / depersonalization (30.75%, 1.23 ± 0.90 points) manifested less than all others.

Comparison of research results of testees with different genesis of depressive disorder allowed to establish: patients with *neurotic* depression had bright manifestation of hypochondria symptoms ($t = 3.773, p < .0001$, and $t = 3.6776, p < .0001$ appropriately), mental anxiety ($t = 9.578, p < .0001$, and $t = 7.590, p < .0001$ appropriately), May somatic disorders ($t = 2.821, p < .005$, and $t = 3.836, p < .0001$, appropriately), obsessive-compulsive symptoms ($t = 7.536, p < .0001$, and $t = 5.960, p < .0001$, appropriately), but they had lower indexes of such symptoms as apathy ($t = 6.478, p < .0001$, and $t = 8.248, p < .0001$ appropriately), waking at night ($t = 2.666, p < .008$, and $t = 2.913, p < .004$, appropriately) and criticality violation ($t = 3.405, p < .001$, and $t = 3.470, p < .001$, appropriately) in comparison with patients suffering from organic and endogenous genesis of depression, respectively.

It is important to note that patients with *organic* depression suffered from late insomnia ($t = 3.277, p < .001$, and $t = 3.757, p < .0001$, respectively), somatic anxiety ($t = 5.362, p < .0001$, and $t = 4.428, p < .0001$, respectively), general somatic symptoms ($t = 11.806, p < .0001$, and $t = 11.872, p < .0001$, respectively), but they had lower level of excitability ($t = 4.130, p < .001$, and $t = 2.711, p < .007$, respectively) in comparison with patients who have neurotic and endogenous kinds of depression, respectively.

Patients with *endogenous* genesis of depressive disorders differed from patients with organic depression with higher indexes of such symptoms as derialization / depersonalization ($t = 3.721, p < .0001$), early insomnia ($t = 2.797, p < .006$), weight loss ($t = 2.187, p < .05$), significant daily oscillations of well-being ($t = 2.362, p < .004$) and mental anxiety ($t = 2.924, p < 0.004$). It was determined that index of actual weight loss was prevalent among patients with endogenous depression in comparison with patients suffering from neurotic and organic depression ($t = 2.762, p < .006$, and $t = 5.332, p < .0001$, respectively) and was higher among patients with neurotic depression – in comparison with the indicators of patients who have organic depression ($t = 2.393, p < .01$).

Generalization of research results of studied groups of patients allowed to present features and manifestation of depressive symptoms, depending upon genesis of disorder in the following way: “endogenous depressions > organic depression > neurotic

depression.” These symptoms included: feeling of guilt ($t = 1.992$, $p < .05$, and $t = 3.004$, $p < .005$, respectively), suicidal intentions ($t = 3.094$, $p < .002$, and $t = 2.321$, $p < .021$, respectively), inhibition ($t = 6.409$, $p < .0001$, and $t = 4.995$, $p < .0001$, respectively), the presence of daily oscillations of well-being ($t = 2.362$, $p < .01$ and $t = 5.708$, $p < .0001$, respectively). It is important to stress that total score was higher among testees with endogenous depression than with organic and neurotic depression ($t = 4.879$, $p < .0001$ and $t = 5.481$, $p < .0001$, respectively).

Thus, the obtained data show that patients with endogenous depression characterized by higher emotional deficit than patients with organic and neurotic genesis of disease, it is also necessary to pay attention to this fact while determining psychological rehabilitation potential of patients with depressive disorders of various genesis.

Analysis of anxiety and its components is possible due to using M. Hamilton’s method (HARS). So the following results were obtained. Patients with *neurotic* depression characterized by significant sense of fear (3.71 ± 0.45 points), anxiety (3.67 ± 0.66 points), high indexes of vegetative and cardiovascular symptoms (2.63 ± 0.93 and 2.03 ± 1.03 points respectively), tension (2.54 ± 1.18 points), depressive mood (2.34 ± 1.55 points) and also anxiety behaviour during conversation (2.11 ± 0.54 points).

Testees with *organic* depression had specific intellectual disorders (3.10 ± 0.82 points), somatic muscle and sensory symptoms (3.09 ± 1.03 and 2.75 ± 1.30 points respectively), cardiac vascular symptoms (2.08 ± 1.05 points), sleep disturbances (2.45 ± 1.25 points), depressive mood and tension (2.11 ± 1.88 and 2.11 ± 1.64 points respectively).

Among patients with *endogenous* genesis of disease the following anxiety symptoms dominated: tension (3.05 ± 0.88 points), feeling of fears (2.88 ± 0.95 points), vegetative symptoms (2.63 ± 0.93 points), depressive/anxiety mood (2.45 ± 1.44 and 2.37 ± 1.16 points respectively) and also insomnia (2.31 ± 1.37 points).

Statistical analysis of results allowed to establish that symptoms of anxiety and feeling of fears were more significant among patients with *neurotic* depression in comparison with patients suffering from endogenous ($t = 9.331$, $p < .0001$, and $t = 7.532$, $p < .0001$, respectively) and organic depression ($t = 12.623$, $p < .0001$, and

$t = 13.165, p < .0001$, respectively), and also prevailed among patients with endogenous depression in comparison with patients who have organic depression ($t = 3.354, p < .001$, and $t = 5.968, p < .0001$, respectively).

It is important to note that such index as sleep disturbance was more significant among patients with *endogenous* and *organic* depression than in the group of testees with neurotic ($t = 2.883, p < .004$, and $t = 3.722, p < .0001$, respectively) depression.

Symptoms of tension were more significant among patients with endogenous depression (in comparison with results of other groups) ($t = 3.285, p < .001$, and $t = 4.801, p < .0001$, respectively) and among patients with neurotic depression in comparison with testees who suffer from organic depression ($t = 2.016, p < .05$).

Intellectual disorders and somatic (muscle) symptoms were more pronounced among patients with *organic* depression in comparison with patients who have neurotic ($t = 18.332, p < .0001$, and $t = 14.702, p < .0001$, respectively) and endogenous ($t = 6.352, p < .0001$, and $t = 11.445, p < .0001$, respectively) depression as well as among patients with endogenous depression in comparison with testees who have neurotic genesis of disease ($t = 7.977, p < .0001$, and $t = 2.929, p < .004$, respectively).

It was found out that somatic (sensory) symptoms ($t = 4.518, p < .0001$, and $t = 4.679, p < .0001$, respectively) were prevalent among patients with *organic* genesis of disease, whereas vegetative symptoms – among patients with *neurotic* and *endogenous* depression ($t = 6.514, p < .0001$, and $t = 6.546, p < .0001$, respectively).

It is also important to emphasize that respiratory ($t = 3.596, p < .0001$, and $t = 3.686, p < .0001$, respectively), gastrointestinal ($t = 2.817, p < .005$, and $t = 2.466, p < .01$, respectively), urogenital ($t = 4.899, p < .0001$ and $t = 4.593, p < .0001$, respectively) symptoms of anxiety manifested more among testees with endogenous depression (comparing with other genesis of disease), while indicative cardiovascular symptoms – among patients with *neurotic* and *organic* depression ($t = 4.072, p < .0001$ and $t = 4.263, p < .0001$, respectively).

Summing up the results of the study of emotional state, it can be argued that vegetative symptoms (such as hyperhidrosis, hypothermia, myalgia, tachycardia, etc.) predominate among patients with neurotic and endogenous depression and somatic symptoms are characteristics

for patients with organic depression. It is important to emphasize that the obtained data on the emotional state should be taken into account in determining psychological rehabilitation potential of patients with depressive disorders of various genesis.

Data analysis (according to Montreal Cognitive Assessment Scale (MoCA)) allowed to establish that 90,11% of patients with *neurotic* depression had the total score in the range of 26–30 points, which corresponds to normative results and indicates a lack of cognitive impairment. But 9.89% of patients had the total score in the range of 18 – 25 points, which indicates moderate cognitive impairment. Individuals with the total score less than 18 points were not identified.

Normative indicators of cognitive processes (total score = 26–30 points) were established among 65.12% of patients with depressive of *organic* genesis, 33.72% of testees had moderate cognitive deficiency (18–25 points) and 1.16 % had a significant level of cognitive dysfunction.

The majority of patients with depressive disorders of *endogenous* genesis (75.27%) were characterized by a lack of cognitive deficits; among 24.73% of testees moderate cognitive dysfunction was observed; it is important to note that there were no patients with significant cognitive impairment.

Comparing the total indicators of the level of cognitive deficits among patients with depressive disorders of various origins, it was found that conservation of cognitive functions (according to normative indices $N \geq 26$) was observed among patients with *neurotic* depression more than among testees with endogenous ($p < .005$, $DK = 0.78$, $MI = 0.06$) and organic ($p < .0001$, $DC = 1.41$, $MI = 0.18$) depression, and the number of patients with cognitive conservation who have *endogenous* depression was significantly higher than among patients with organic depression ($p < .05$, $DK = 0.63$, $MI = 0.03$). It was also discovered that the number of patients with moderate cognitive dysfunction was prevalent among testees with *organic* and *endogenous* depression in comparison with patients suffering from neurotic depression ($p < .0001$, $DK = -5.33$, $MI = 0.63$) and ($p < .005$, $DK = -3.98$, $MI = 0.30$, respectively).

Thus, it was found that patients with *neurotic* depression are characterized by more favorable psychological rehabilitation potential

in the aspect of cognitive symptoms than patients with *organic* and *endogenous* depression.

For more detailed information about specific features of cognitive dysfunction, an analysis was performed on certain scales of MoCA inventory. All patients with depressive disorders of *neurotic* genesis were characterized by preservation of function of recognition and naming objects, as well as orientation to place, time and space. Also the majority of patients with neurotic depression coped successfully with the following tasks: “alternation skills” ($90.11 \pm 3.15\%$), «visuospatial abilities» ($95.60 \pm 2.23\%$), “visual-constructive skills” ($86.81 \pm 3.50\%$), “reverse digital series” ($98.90 \pm 1.15\%$), «generalization» ($86.81 \pm 3.50\%$), and “postponed repetition” ($83.52 \pm 3.77\%$). Tasks aimed to test attention ($78.02 \pm 4.06\%$), serial subtraction ($75.82 \pm 4.14\%$), repetition of the phrase ($79.12 \pm 4.02\%$) and verbal fluency ($67.03 \pm 4.28\%$) were more difficult for this group of testees.

Among patients with *organic* depression, 91.25% of people named animals successfully; 93.02% had correct orientation to place, time and space, 80.23% completed visuospatial tasks (three dimensional cube copy); 70.93% fulfilled visual-constructive tasks (clock-drawing task) and 81.40% of people named digits forward and backward. The difficulties were identified in the following tasks: «attention» ($59.30 \pm 4.45\%$), “serial subtraction from 100 to 7” ($55.81 \pm 4.36\%$), “verbal fluency” ($58.14 \pm 4.43\%$), “repetition of the phrase” ($62.79 \pm 4.51\%$), “abstraction” ($68.60 \pm 4.52\%$), “alternation task” ($68.60 \pm 4.52\%$), and “short-term memory recall” ($65.12 \pm 4.52\%$).

Among patients with *endogenous* depression, the smallest difficulties observed while completing the following tasks: “orientation” ($97.85 \pm 1.56\%$), “naming animals” ($96.77 \pm 1.89\%$), “naming digits forward and backward” ($92.47 \pm 2.76\%$), as well as “short-term memory recall” ($89.25 \pm 3.18\%$), “alternation skills” ($86.02 \pm 2.76\%$) and «repetition of the phrase» ($84.95 \pm 3.58\%$). The task on verbal fluency was the most difficult – only 47.31% of patients successfully coped with it. There also were difficulties in fulfilling tasks for “attention” ($79.57 \pm 3.91\%$), “serial subtraction” ($75.27 \pm 4.07\%$), “abstraction” ($74.17 \pm 4.10\%$), “visuospatial” and “visual-constructive” tasks, ($80.65 \pm 3.86\%$) and ($78.49 \pm 3.96\%$, respectively).

According to F-criterion statistical analysis, it was found that patients with *neurotic* depression differed from patients of other groups with higher conservation of visual-constructive ($p < .001$, $DK = -0.76$, $MI = 0.06$; and $p < .001$, $DK = -0.74$, $MI = 0.06$, respectively) and visuospatial ($p < .005$, $DK = -0.88$, $MI = 0.07$; and $p < .05$, $DK = -0.44$, $MI = 0.02$, respectively) skills and abstraction ($p < .002$, $DK = 1.02$, $MI = 0.09$; and $p < .01$, $DK = 0.68$, $MI = 0.04$, respectively).

It was also revealed that patients with *organic* depression had more difficulties (in comparison with patients suffering from neurotic and endogenous depression) in performing the following tasks: “alternation skills” ($p < .00025$, $DK = -1.18$, $MI = 0.13$; and $p < .002$, $DK = 0.98$, $MI = 0.09$, respectively), “attention” ($p < .0035$, $DK = 1.19$, $MI = 0.11$; and $p < .001$, $DK = 1.25$, $MI = 0.13$, respectively), “serial subtraction” ($p < .0025$, $DK = -1.33$, $MI = 0.13$; and $p < .003$, $DK = 1.30$, $MI = 0.13$, respectively), “repetition of the phrase” ($p < .007$, $DK = -1.00$, $MI = 0.08$; and ($p < .0004$, $DK = 1.31$, $MI = 0.15$) respectively), short-term memory recall ($p < .0026$, $DK = 1.08$, $MI = 0.10$; and $p < .0001$, $DK = 1.37$, $MI = 0.17$, respectively), and “naming digits forward and backward” ($p < .0001$, $DC = -0.85$, $MI = 0.07$; and $p < .015$, $CC = 0.55$, $MI = 0.03$, respectively).

It is important to stress that patients with *endogenous* depression differed from patients with neurotic depression with more violations in intellectual sphere, in particular in violation of abstracting process ($t = 2.117$, $p < .035$); probable differences were found for all indicators showing more significant cognitive dysfunctions among patients with endogenous depressions in comparison with the control healthy group ($p < .01$). Consequently all above mentioned material allow to say that the data about cognitive deficits should be taken into account in the determination of psychological rehabilitation potential with depressive disorders of various genesis.

Conclusion

The article presented psychological and pathopsychological characteristics of patients with depressive disorders of various genesis: neurotic, organic and endogenous. The prevalence of mild depression among testees with neurotic genesis of disease, moderate level – among patients with organic genesis of disease, moderate and severe depression among patients with endogenous genesis of disease was

established. Clinical and psychopathological analysis of the structure of depression allowed to state the predominance of phobic type of depressive disorder among patients with neurotic depression, somatic – among patients with organic depression and non – dynamic – among testees who have endogenous depression. The obtained data allowed to assert that patients with endogenous genesis of disease were characterized by greater emotional deficit in comparison with testees suffering from organic and neurotic depression. Cognitive dysfunction of patients with depressive disorders were investigated. Thus, it has been established that patients with neurotic depression were characterized by more favorable psychological rehabilitation potential in the aspect of cognitive sphere than patients with organic and endogenous depression.

The prospects of further research in this direction we foresee in studying gender and age specifics of psychological rehabilitation potential of patients with depressive disorders; definition of triggers for reduction of rehabilitation potential, mechanisms of adaptation and compensation among patients with depressive disorders.

Summary

Psychological and pathopsychological features of patients with depressive disorders of different genesis: neurotic, organic and endogenous are described. Clinico-psychopathological analysis of depression structure allowed to state the advantage of phobic type of depressive disorder among patients with neurotic depression, somatic—among patients with organic depression and non-dynamic—with endogenous depression. The obtained data allowed to establish greater emotional deficit among patients with endogenous genesis of depression than among patients with organic and neurotic depression. Cognitive dysfunctions of depressed patients were studied. It has been established that according to cognitive signs, patients with neurotic depression are characterized by more favorable psychological rehabilitation potential than patients with organic and endogenous genesis of depression.

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The peculiarities of maladaptation of women after the mastectomy and its psychocorrection

Introduction

Generally, the incidence of the breast cancer is characterized by a steady increase in all member countries of the World Health Organization (WHO). Annually, about a million women in the world (600 thousand in developed countries and 300–350 thousand in developing countries) suffer from the breast cancer (www.who.int).

The highest rates of breast cancer are recorded in the USA, Canada, France, Israel, Switzerland, and the Baltic states, the lowest rates—in Japan, Central Asia, and African countries.

According to the register of the American National Cancer Society, every 28 women in USA die because of the breast cancer, and each eight woman falls into the risk group. Ukraine is no exception, and the number of cases has increased 2.8 times over the past 20 years (www.who.int). For two decades, this number has tripled.

According to the statistics one woman dies because of the breast cancer every hour in Ukraine. About 16.5 thousand cases of insidious diseases are registered and almost half of them end up deadly in Ukraine every year (data for October 25, 2017; www.who.int). The main reason for such mortality is the untimely treatment of a doctor.

The breast cancer is mainly caused by a large number of factors: genetic (hereditary), constitutional, socio-economic, associated with the peculiarities of everyday life nutrition, the influence of ecology, pathological processes and others. All of them form the disruption of the hormonal balance in the woman's body. The state loses a large number of able-bodied people because of the high mortality and inability to work due to the occurrence of the breast cancer.

Relevance of Research

The issue of the oncological diseases in the world is recognized by WHO as a main priority in medicine. The forecast for 2020 predicts

an increase of the number of cancer patients to 20 million annual cases (www.who.int.). Nowadays the most frequent “organ” cancer among women is the breast cancer. It takes the first place among the cancer cases: the number of the breast cancer patients has doubled during the past 10 years.

Due to the development of oncology the life expectancy of the patients with the breast cancer is greatly prolonged, but the main method of the treatment even in the early stages of the breast cancer includes the removal of the tumor cell (mastectomy) which has the disabling effects for the operated women. Thus, in Ukraine almost one third of 16.000 breast cancer patients had the mastectomy. Its results consist of not only in functional disorders that involve the loss of an organ or part of it, but it also cause deep emotional disorders that slow down the process of the adaptation and resocialization (Lutsenko, 2006; Khobzey et al., 2012; Kozhina, 2012; Mikhailov, 2012; Revenok et al., 2009;). The surgical removal of the mammary gland destroys the self-confidence and supports the memory of the disease (Markova & Kuzhel, 2010; Revenok et al., 2010). The numerous researches show that the iatrogenic cosmetic defect of the appearance leads to the development of the psychological disadaptation (Adilkhanov et al., 2010; Kim & Vysotskaya, 2008; Kristall et al., 2012; Revenok et al., 2012; Vasiliev et al., 2011).

The post-mastectomy syndrome as a result of the radical mastectomy (PM), includes not only somatic (post-operative cosmetic defect, limfostasis of the upper limb, limitation of the amplitude of movements in the shoulder joint, damage of the peripheral nervous system), but also some psychological disorders (Kim & B. Shaw, 2010; Markova et al., 2012; Mikhailov, 2007; Shestopalova & Kalenskaya, 2009; Shevchenko, 2010; Tabachnikov & Vasilieva, 2009) and due to the loss of the breast as an organ which defines the concept of femininity, attractiveness and sexuality, leads to the development of psychosocial disadaptation in the vast majority (96.1%) of the patients (Berezantsev et al., 2011; Tkachenko et al., 2008).

According to the foreign researchers the women with a reconstructive operation (with the removal and simultaneous restoration of the breast through prosthetics), have the lower level of depression (Zhong et al., 2007).

Methodology

The state of the psycho-emotional sphere of the examined patients in the pre- and post-operative stages of staying in the inpatient department was assessed using the clinical psychological and psychodiagnostic research. The patients found complaints about the psychological state through both free interviews and targeted inquiries.

The psychodiagnostic method was used in order to determine the person's self-esteem characteristics by means of the diagnostic method of the operative assessment of the health state, activity, mood (according to D.Y. Reygorodsky, 2002). The methods of the diagnosis of self-esteem Spielberger-Hanin to assess the level of the personal and reactive anxiety (according to Reygorodsky, 2002), the scale of M. Hamilton HARS and HDRS to determine the level of the anxiety and depression (Podkorytov & Chaika, 2003; Zigmond & Snaith, 1983), a questionnaire on the severity of the psychopathological symptomatology of SCL-90R (by Reygorodsky, 2002) were also used.

In order to study the compensatory-adaptive mechanisms of the patients the method of the determining the accentuations of the character of Leonhard-Shmyshek (according to Reygorodsky, 2002), Lazarus method "Coping Methods" (Wasserman et al., 2009); methodology for the diagnosing of the index of the life style to determine the frequency of use and severity of mechanisms of the psychological protection (Wasserman et al., 2005); questionnaire for the determining of the types of the attitudes to the disease (Wasserman et al., 2008); self-actualization test (Gozman et al., 1995) were used. The psychological resource of the women was determined by using of a scale of social support MSPSS of Zimet (1988) in the adaptation of Yalta & Siroty (1991).

The data obtained in the research were processed by using of the mathematical statistics by the MS Excel program v.8.0.3. and SPSS 10.0.5 for Windows. Primary and secondary statistics were used for statistical processing of data (Gubler, 1973; Lapach, 2000).

In compliance with the principles of bioethics and deontology 104 patients with breast cancer after the mastectomy were examined on the basis of Kyiv City Cancer Hospital № 1 in the period from 2007 to 2012. The research was conducted in two stages: psychodiagnosis and psycho-correction. Besides we did a patient survey three times:

before surgery, after surgery and before discharge from the in-patient department of the oncology hospital.

At the psycho-diagnostic stage the women were divided into two groups depending on the volume of the surgical intervention: the main group (MG) consisted of 72 patients who had migrated to the RM; the comparison group (GP) consisted of 32 women after the sectoral mastectomy (SM). At the psycho-correction stage the women were divided into three subgroups, depending on the participation in the developed activities: 1 subgroup (1G) consisted of 38 women (part of MG) after the RM. The group was provided with the specially developed comprehensive medical and psychological assistance. The second subgroup (2G) consisted of 30 women (part of the GP) after the SM. The group was provided with the medical and psychological assistance; and a control subgroup (CG) included 36 patients. 34 women after RM and 2 women after SM received the standard therapy without taking measures of the developed comprehensive system of the medical and psychological assistance. At the beginning of the research the socio-demographic characteristics of the patients were analysed: the distribution by age, education, marital status and labor activity. The main indicators of both groups were homogeneous and that became the basis for the conclusion about the representativeness of the results.

Results

The psychoemotional state of the patients at the pre-operative stage was characterized by the presence of psychoemotional stress, dyssomnia associated with life-style antivital experiences regarding oncological diagnosis, the need for surgical intervention, the operation itself, anesthesia, fears about the expected post-operative consequences, further treatment (chemotherapy, radiation therapy, hormonal therapy) and overall insecurity in future.

All patients were characterized by the decrease in the assessment of their functional state (state of health, activity, mood) compared with the norm ($p < .05$). The mood loss (average score = 1.41) was a result of the women finding out about the diagnosis, the need for surgery, the fear of the operation and anesthesia, pessimistic attitude to the treatment and lost hope for the future. The decrease of mood

influenced on the deterioration of health (1.87) and activity (1.89) of patients (see Table 1).

Table 1

Patient Scores	
Level	Score
Mood loss	average score = 1.41
Deterioration of health	1.87
Activity	1.89

On the base of the OT (47.1) we can characterize the patients as persons which have peculiar premorbid features of the personality-raised anxiety. Besides, the high RT (58.2) was explained by the psychogenic reaction of the patients to the disease, stay in the inpatient department of the oncology hospital, the need for surgery, possible consequences, the unknown future and others. High OT also potentiated the increase of RT (Martynova, 2013, p. 66).

The majority of the women were characterized by the increase in the level of the pathological anxiety (17.25 averages): only 8.7% of the patients had no symptoms of anxiety (the total score on the HARS scale was less than 8), 68.3% of the patients had symptoms of anxiety (8–19 points) and in 23.1% of women – anxiety disorder (more than 20 points).

The depressive manifestations (average score 13.45 for HDRS) were specific for the surveyed subjects (13.35 for the HDRS), the absence of which was established for 18.3% of the patients (Hamilton's total score on the Hamilton scale was less than 7), 35.6% of the women were diagnosed with small (7–16 points), 33.7% of the subjects were moderate (17–27) and 12.5% of the subjects had severe depressive disorder (more than 27 points).

The leading psychopathological reactions of the patients were anxiety-depressive (53.8% of women), asthenoid-depressive (25.0% of patients) and anxious-phobic (13.5% of subjects). The most significant psychopathological symptoms were somatization (average score 1.31), anxiety (1.05), depression (1.02) and phobic anxiety (0.86). The structure of the psychopathological symptoms was as follows: most often anxiety (46.2%), depression (22.1%), somatization (16.3%), phobic anxiety (15.4%) were most often revealed (Martynova, 2013, p. 69).

At the postoperative stage an increase in the assessment of their functional status in both groups was observed. It was associated with overcoming of the difficult and important stage of the operation, which was significantly ($p < .01$) higher for the women after the SM, compared to patients after the RM (average score of women's health was 0.24, activity = 2.31, mood = 1.73, among GP = 2.63, 2.54, and 2.24, respectively).

The general tendency of the reduction of anxiety (more pronounced for the women of the GP) and an increase of the depressive symptoms (more pronounced in COs) was established: the average score of RT for the women of the CO was 53.6, for the persons of GP = 50.7; anxiety level = 15.7 for the patients with CO and 13.6 in GP; the severity of depression, respectively, 17.9 versus 14.8 points. The overall severity of the psychopathological symptoms in the early postoperative period remained almost unchanged, but there was an increase of the level of the somatization (the average score was 1.64, GP = 1.43) and depression (1.22 points in CO and 1.08 in GP), as well as anxiety reduction (0.92 points in CO and 0.71 in GP), more pronounced for the women with SM ($p < 0.05$). So at the post-operative stage of the treatment of patients in the oncology hospital in the psychoemotional state of the patients after the mastectomy, there were changes that had significant differences in the various groups (Martynova, 2013, p. 70).

On the base of the analysis of the individual psychological characteristics we used a system of the medical and psychological technology which integrates the various parameters of the psyche of the patients. It points to the psychological mechanisms associated with the violations of psychological (psychological) adaptation. As a result we got an idea of the personal resources of each individual patient and to assess the individual adaptive and compensatory potential of the women which allowed for a more reasonable choice of goals, strategies and tactics of the psychotherapeutic correction and enhancement of the adaptive capacity of patients. We found that most of the women (81.9% of COs and 78.1% of GPs) had the character accentuation. It was caused by the aggravation of personality traits in a situation of massive stress, due to the illness and surgery. The accentuated features of character as distichity (33.3% of the women of CO and 34.4% of GP), anxiety (16.7% of COs and 18.8% of GP),

emotionality (15.3% of patients COs and 15.6% of GPs), demonstration (9.7% of surveyed COs and 9.4% of GP) were often diagnosed. They were common for both groups of the women. However, among the patients from the MG, unlike GP patients, there were isolated cyclothymic, exalted and excitatory accentuations (Martynova, 2010, p. 163).

Almost all characteristics of the strategies of the women of both groups were lower than normal which were found only in 6.9% of MG patients and 9.4% of examined GPs. The majority of the patients had a disharmony in mechanisms to overcome illness-related problems. The leading coping strategies for the patients were non-constructive “distancing” (in 83.3% of the women in MG and 71.9% of GPs) and “escape-avoidance” (13.9% of COs and 25% of GPs) and relatively constructive “adoption responsibility” (62.5% of CO patients and 65% of GP).

The constructive strategies for self-control “problem-solving planning” and “social support search” were higher for the women with GPs, compared with MG patients ($p < .05$). In addition, all patients who suffered from the mastectomy showed a tendency to use an IPA rather than a coping strategy, an increase in the general level of TPA and prevalence of “objection” in their structure (in 62.5% of OG patients and 59.4 % GP), “projection” (in 40.3% of the women in MG and 34.4% of GP) and “reactive education” (in 30.6% of MG and 20.5% of GP).

We also found the inherent disharmonious combinations of the coping strategies “distancing”-“search for social support” (16.7% in MG and 9.4% in GP); as well as disharmonious combinations of the coping strategies and psychological protections: “search for social support”-“denial” (15.3% in MG and 9.4% in GP); “Planning a solution to a problem” is a “denial” (13.9% in MG and 6.3% in GP), “escape-avoidance”-“intellectualization” (8.3% in MG and 6.3% in GP).

Mostly, the examined women of both groups had ergotypic type of response to the disease (TNR; 25.0% of the MG patients and 28.1% of the GP), sensitively (23.6% of MG and 15.6% of GP) and anxious TNR (13, 9% of surveyed MG and 15.6% of GPs). At the same time for the women of OG, sensitized TNR occurs more often than in the GP as a result of the increase of insecurity and inappropriate perception of oneself because of the post-mastectomy cosmetic defect (Martynova, 2010, p. 81).

The patients with the hypertension were characterized by the average indicators of the TOBOL methodology block (which symbolized the tendency towards the displacement of the disease) were higher (43.2 ± 3.41 points) than for the women with MG (38.9 ± 3.12). Levels II (39.1 ± 2.37 points) and III (33.4 ± 2.21) blocks for the patients with MG 2 significantly exceeded those in GP patients (respectively 34.6 ± 2.92 and 30.13 ± 2.89), which was a testimony to a more adverse reaction to the disease in CO patients. In both groups the distribution of the peaks of the VKH profile was observed in different blocks, namely, the combination of intra-II (II block) and interphysical (III block) directional responses, which reduced the adaptive capacity of the patients.

The analysis of the self-actualization of the examined women revealed that only 9.72% of the MG patients and 15.63% of the GP were in the self-actualization zone ($\geq 55T$ -points). In general there was a tendency towards a decrease in self-esteem, self-perception, flexibility of the behaviour and spontaneity, as well as high sensitivity and support needs, which was more pronounced for the women with MG, compared with patients with GP ($p < .05$).

The analysis of the psychosocial resources was an important component of the research of the adaptive-compensatory potential of the patients. The analysis of the sources of the psychosocial support revealed the sufficient support for the immediate environment, which 70.8% of the MG patients and 75% of the GP observed from the family, from the “significant others”—65.3% of the women of the MG and 62.5% of the GP, 52 of the friends—52.8% of the patients with MG and 62.5% of GP. The deficit (< 2 points) of the psychosocial support from the family was detected in 29.2% for the women of the MG and 25.0% of the surveyed GP; the lack of the friends’ support was 47.2% and 37.5%; the support of significant others was 34.7% and 28.1% of the population (Martynova, 2013, p. 80).

The women of the GP in comparison with MG patients perceived support from others more positively and assessed their psychosocial resource as more adequate. They were characterized by the search for out-of-pocket help, the need for the communication with other people and the establishment of new or maintaining existing psycho-emotional contacts. The surveyed MG perceived the environment more critically, people with a low level of psychosocial assistance observed self-immolation, isolation from others, problems in the communicative sphere.

In conducting a correlation analysis of the level of social support and the severity of psychopathological symptoms in the surveyed the feedback was also found ($r = -0.64, p < .05$). The patients with a high level of support from the immediate environment showed fewer psychopathological symptoms and their psycho-emotional state was more stable. The women with inadequate social support were at high risk of the psychological disadaptation.

Thus, the leading indicators of the psychological well-being of the women after the mastectomy depended on the existence of social support, as well as the ability, ability and desire to receive it. Besides, the lack of the assistance from the immediate environment or the inability to identify the patients and their psycho-emotional state was characterized by the presence of pathological manifestations, which tended to deteriorate, depending on the volume of surgical intervention.

Discussion

The analysis of the compensatory-adaptive potential of the examined patients after the mastectomy allowed to distinguish the intrapersonal and psychosocial components. As a result the systematized situational and pathogenetic factors contributed to the formation of the psychological adaptation or impair the adaptive potential and prognosis and led to the development of maladaptation of the patients (see Table 2).

We developed a comprehensive system of the medical and psychological assistance for the women which had the mastectomy. The mentioned above system contained a psychodiagnostic study, psycho-education (informational support), psycho-correctional measures, volunteer help. The data forced to turn to a holistic approach aimed at activating adaptive resources of the patients. The aim of the medical and psychological influence was to level the maladaptive and potentiation of the favorable components of the patients' compensatory and adaptive potential.

At the pre-operative stage of staying in the oncology hospital the medical and psychological care was aimed at reducing of the level of pre-operative anxiety and was aimed at experiencing the associated surgical intervention (fear of pain, unpleasant sensations, physical pain, fear of anesthesia, its side effects, sensation helplessness, loss of control, etc.), as well as with the future "post-operative status": the

result of the operation, its consequences (cosmetic defect); side effects of anesthesia; redistribution of duties in the family for the time of the treatment, difficulties associated with work, and so forth

Table 2

**The Components of the Compensatory and Adaptive Potential
of Women After Mastectomy**

Unfavorable components	Favorable components
<i>Intrapersonal component</i>	
Situational factors	
high level of OT and RT	Average and low levels of OT and RT
increase of the level of pathological anxiety and depression	lack or non-intense symptoms of anxiety and depression
high level of somatization	absence of psychopathological signs
Pathogenetic factors	
dysthymic, anxiously fearful and demonstrative types of accented character traits	emotional type of accentuated character
Increase of the general level of tension over coping, “negation”, “projection”, “reactive formation” and “substitution”, non-constructive coping strategies (“distancing” and “escape-avoidance”) disharmonious combinations of copings with each other and “distancing” – “search of social support”, “search of social support” – “negation”; “planning a solution to a problem” – “denial”, “escape-avoidance” – “intellectualization”	“intellectualization”, constructive (“self-control”, “problem solving planning”, “search of social support”) and relatively constructive coping strategy (“taking responsibility”) harmonic combinations of copings among themselves and “self-control” – “acceptance of responsibility”, “planning of solution of the problem” – “search of social support”, “planning a solution to a problem” – “intellectualization”
sensory, anxious, ergotaic type	harmonious type
low self-actualization	high level of self-actualization
<i>Psychosocial component</i>	
lack of social support	sufficiency of social support

At the post-operative stage the medical and psychological measures were aimed at reducing the severity of the psychopathological (depressive and anxiety) symptoms of the patients after the mastectomy and the primary life adaptation of the women after the surgery. After discharge from the hospital the patient had the opportunity to attend monthly “School of Health”. Its work was aimed at further adaptation of the patients to new living conditions, the formation of the additional sources of psychosocial support.

We also researched the peculiarities of the psychoemotional sphere and the complex assessment of the internal and psychosocial resources they concluded that the type of lesions of the compensatory-adaptive potential (partial or total reduction) of the patients. The partial reduction of the adaptive potential is mainly an isolated distortion of the intra- or interphysical mechanisms of the psychological adaptation. Total reduction was a combination of the deformation of the intranasal and interphysical mechanisms of the psychological adaptation of the patient. The specified differentiation of violations of the mechanisms of the psychological adaptation laid the basis for defining the targets of psycho-corrective influence.

The advantage of intrapsychiatric mechanisms has led to patients' misdiagnosis mainly in the situation of "being for themselves", interphysical mechanisms – in the situation of "being-for-others". In both cases the targeted effects were classified as perceived by the patient and identified as a psychological discomfort which had not been identified as "problem areas" for the patient (see Table 3).

The differentiation of the psycho-correction tools was carried out depending on the awareness of the pathogenetic interphysical and intrapsychic targets. Thus, in identifying well-understood targets, psycho-corrective measures included humanistic, rational-emotional, cognitive techniques.

The psychocorrectional measures consisted of the integration of individual, group and family psychotherapy. The family therapy helped for the understanding, supporting and formation of an adequate microclimate in the family. The relaxation methods were used to reduce the intensity of the negative bodily sensations.

The psychocorrectional measures consisted of the integration of individual, group and family psychotherapy. The family therapy helped for the understanding, supporting and formation of an adequate adequate microclimate in the family. The relaxation methods were used to reduce the intensity of the negative bodily sensations. The informational support included providing the women with special knowledge about the disease, its types of the treatment, statistical prognostic data, leveling of side effects of chemical and hormonal therapy, training in rehabilitation measures for the prevention of lymphadenitis and lymphostasis, restoration of the function of the hand on the operated side (the self-massage of the hands) and proper nutrition. Handouts in the form of sights and informational sheets were

also used. Besides, the classes on aesthetic restoration of appearance with demonstration of wigs, breast prostheses and specialized linen were held.

Table 3

**The Leading Pathogenetic Targets of Psychocorrection
of Disadaptation of Women After Mastectomy**

Parameter	Intrapsychic targets		Interphysical targets	
	perceived	unconscious	perceived	unconscious
Coping strategies	distance, escape – avoidance	low expressiveness of coping mechanisms	confrontation, escape – avoidance	low expressiveness of coping mechanisms
Classification	intellectualization, rationalization	displacement, negation	non-expressed character	projection, substitution, reactive formation, regression
Types	anxiety, hypochondria, neurasthenic, melancholia, apathy, ergotaptic, anosomalous		sensational, egocentric, dysphoric, paranoid	

The meetings with sick volunteers who had such operations, overcame their path to “recovery” and were in a state of the compensation had a positive effect. After discharge from the hospital the patients visited the “School of Health” which was organized in the form of the informal communication with various specialists: surgeons-oncologists, chemotherapists, nutritionists, psychologists, psychotherapists, physiotherapists, and so forth. The women talked with each other, celebrated and spent time together at these meetings. These measures were aimed to provide the social support for the women after the mastectomy.

The self-assessment of the availability of the social support was a general and important feature. The effectiveness of psycho-corrective work with the women after the mastectomy depended on the mentioned above feature. The assessment of the effectiveness of the measures taken for the women after the mastectomy took place before discharge from the inpatient office (see Table 3). In general the patients with 1G and 2G up to 10 –14 days of course of the treatment showed a significant decrease of anxiety and depressive symptoms and a person 2G ($p < .05$) had the best results of the treatment. The majority of the women had dyssonic disorders, anti-vital experiences disappeared (Martynova, 2013, p. 66).

Table 4

**The Dynamics of the Psychoemotional Status of Women After
Mastectomy During Inpatient Care ($M \pm m$)**

Evaluation parameter	Groups of surveyed								
	First group (n = 38)			Second group (n = 30)			Control group (n = 36)		
	1	2	3	1	2	3	1	2	3
Well-being	1,89±	2,24±	3,67±	1,85±	2,63±	4,23±	1,87±	1,93±	2,21±
	0,13*	0,11*	0,12*	0,11*	0,13*	0,11*	0,12*	0,09*	0,10*
Activity	1,88±	2,31±	3,56±	1,90±	2,54±	4,97±	1,89±	1,95±	2,29±
	0,11*	0,13*	0,14*	0,15*	0,12*	0,11*	0,09*	0,15*	0,10*
Mood	1,41±	1,73±	3,27±	1,42±	2,24±	4,18±	1,4±	1,57±	1,78±
	0,09*	0,10*	0,11*	0,12*	0,12*	0,13*	0,15*	0,14*	0,11*
OT	47,1±	46,9±	46,1±	47,2±	46,9±	45,8±	47,1±	47,0±	46,5±
	1,11*	1,13	0,11	1,20*	1,10	0,12	0,12*	0,09	0,13
RT	58,1±	53,6±	44,2±	57,8±	50,7±	39,8±	58,0±	55,2±	47,4±
	1,02*	1,15*	1,01	1,21*	1,22*	1,02	1,01	1,12	1,11
Anxiety	17,4±	15,7±	12,2±	17,1±	13,6±	10,4±	17,4±	16,6±	15,9±
	1,01*	1,14*	0,11*	1,11*	1,14*	0,12*	0,12*	0,09*	0,13*
Depression	13,6±	17,9±	10,7±	13,3±	14,8±	9,1±	13,6±	16,8±	13,8±
	1,13*	1,13*	1,01	1,11*	1,14*	1,02	1,01	1,12	1,11

Note. 1 = before surgery, 2 = after surgery, 3 = before discharge.

* $p < .05$.

So the developed system of the measures of the medical and psychological assistance allowed the women after the mastectomy to reduce anxiety and depression symptomatology ($p < 0.05$), to alleviate manifestations of psychological disadaptation by stimulating their compensatory and adaptive potential, to improve the quality of life, faster and better way to recover.

We were given a theoretical substantiation and practical solution to the urgent problem of the medical and psychological assistance to the women after the mastectomy. From the standpoint of the systematic approach to the study of clinical manifestations and patterns of the psychological disadaptation of the patients after mastectomy, taking into account the possibilities of their compensatory and adaptive potential, a system of medical and psychological assistance to the women after the mastectomy has been developed.

The women after the mastectomy as a result of the breast cancer, distortion of the psychoemotional state of affective (anxiety, depression, phobic anxiety) and neurotic content (due to a significant increase in somatization, the severity of which does not correspond to the objective consequences of surgical intervention) is established.

At the pre-operative stage 100% of the women have a low estimate of their own functional state (state of health, activity, mood), high (61%) and average (39%) reactive anxiety, presence of symptoms of

anxiety (68.3%) and anxiety disorder (23.1 %), depressive symptoms with a tendency to somatization of different degrees of severity (81.8%), which are implemented as anxiety-depressive (53.8%), asthenia-depressive (25.0%) and anxious-phobic (13.5%) of psychopathological reactions. In the post-operative period a decrease in anxiety is registered, however, an increase in the severity of depression and somatization (Martynova, 2013, p. 80).

It is proved that the state of the psychoemotional sphere of the women after mastectomy is related both to the volume of surgery and to the psychosocial support of others. The patients after the radical mastectomy were characterized by a significantly greater severity of the psychopathological symptoms than for the women after the sectoral mastectomy (the average severity of the psychopathological anxiety for the patients after the radical mastectomy = 15.7, after the sectoral mastectomy = 13.6, depression = 17.9).

The patients with a high level of the social support manifestations of the psychopathological symptoms were less pronounced, and the psycho-emotional state was more stable. In case if there was a shortage of assistance from the immediate environment or the patient's inability to identify it, their psycho-emotional state was characterized by the pathological manifestations, which tend to deteriorate, depending on the volume of surgical intervention.

The leading individual psychological peculiarities of the women after the mastectomy in terms of their influence on the development of their maladaptation ($p < .05$) determined the exacerbation of characterological features in the situation of massive stress because of the illness and surgery (expressed dysthymic = 33.3% of the women in the MG and 34.4% of the GP, alarming = 16.7% of the MG and 18.8% of the GP, emotional = 15.3% of the MG and 15.6% of the GP and demonstrative = 9.7% of the surveyed COs and 9.4% of GP = accentuation), deformation of mechanisms for overcoming problems (domination of non-constructive coping strategies and their disharmonious combination ment of psychological defense mechanisms in 93.1% of the women and 90.6% of MG patients), (almost 90% of patients with MG and 84.4% of GP patients), as well as high sensitivity and need for support, which is more pronounced for the women with radical mastectomy (Martynova, 2013, p. 67).

Conclusion

On the basis of the analysis of the adaptive-compensatory potential of the women after the mastectomy, its internal personality and psychosocial components and their components are isolated, among which systematized situational and pathogenetic factors that can contribute to the formation of the psychological adaptation or impair the adaptive potential and prognosis and lead to the development of the disadaptation of the patients.

The unfavorable situational factors included a high level of reactive anxiety, pathological anxiety, depression and somatization, to pathogenetic—dysthymic, disturbing and demonstrative types of accentuated character traits, prevalence of IOP over coping strategies and various maladaptive variants of their combination, sensitive, disturbing types of response to the disease, low level of self-actualization, low level of the social support.

Besides, the necessity of applying a holistic approach aimed at stimulating own resources of an organism, activating adaptive, rather than reducing the maladaptive factors, was based on which a comprehensive system of the medical and psychological care for the women after the mastectomy has been developed. This care was based on the study of psychoemotional, intrapersonal and psychosocial patterns of the psychological disadaptation.

The psychodiagnostics and psychocorrection were used at the stationary stage of the treatment the components of the medical and psychological assistance to the women after the mastectomy. They included the psychotherapeutic interventions, psycho-educational measures and volunteer help. The system of measures of the medical and psychological help enabled the women after the mastectomy to reduce anxiety, depressive symptoms, and psychological maladaptation by stimulating the compensatory-adaptive potential ($p < .05$).

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Stress levels, sense of coherence, and self-efficacy in parents of children with autism

Introduction

This chapter concerns the parents of children with autism and contains a description of the emotional state that accompanies them daily for many years, often exceeding their ability to cope with stress. Psychological well-being, the ability to cope with stress, and the belief that the effort they make gives positive results, as well as their deep parental love, can contribute to the fact that a child with autism will trust their parents and let them into their world. We hope that the results of this research will enrich the knowledge about the complexity of autism and the conclusions put forward will serve as practical tips for parents and specialists working with children with autism. They can do a lot to reduce their undesirable behaviour and help them in their functioning.

This chapter describes both theoretical foundations and original research. The theoretical foundations present autism and related issues such as stress, sense of coherence, self-efficacy, and their specificity in parents of children with autism. The research part outlines the methodology, analysis, and interpretation of the results, as well as their comparison with the results of other studies. The aim of the study was to clarify the difference in stress levels, sense of coherence, and self-efficacy in mothers and fathers of children with autism, as well as to determine whether there is a relationship between stress levels, sense of coherence, and self-efficacy in parents of children with autism.

The participants of the study, which took place at the EEG Institute in Warsaw, Poland as part of the "Let's Help Autists" social campaign, in December 2015 and January-February 2016, were mothers and

fathers of children with autism. Having become acquainted with the purpose of the study and their rights as participants, 62 participants provided their basic data and completed the Perceived Stress Scale-10 (PSS-10), the Sense of Coherence Scale-29 (SOC-29) and the General Self-Efficacy Scale (GSES).

The research results showed a difference in stress levels and sense of coherence in mothers and fathers of children with autism. The mothers reported higher stress levels and a lower sense of coherence than fathers. At the same time, no differences in self-efficacy were observed between the mothers and the fathers. The results also indicated a strong negative correlation between stress levels, self-efficacy, and sense of coherence, particularly in the mothers and in the parents of children with severe autistic disorders.

In conclusion, mothers of children with autism perceive their parental role as more stressful, show less understanding of the situation, and feel greater helplessness than fathers. It can also be stated that the parents' stress levels are affected by their understanding of the situation related to their child's condition, their sense of agency, evaluation of their own capabilities and resources to cope with difficulties, and belief in the efficacy of actions taken to improve the functioning of their child.

Research on Autism and Parents of Children with Autism

Autism has been the object of scientific interest for several decades. However, its causes have still not been found and the mechanisms of its pathogenesis have not been identified. Many issues continue to be questioned because different developmental courses and dynamics cause disorders of different levels of complexity. Autism spectrum disorders are a problem not only for patients, but also for their parents, who carry the main burden of the everyday efforts to cope with and mitigate this disorder. When a child is diagnosed with a disability, the parents experience shock, followed by a sense of guilt, regret, and fear of the future. They are in a state of severe stress that can lead to burnout (Gałkowski, 1995, p. 83; Pisula, 2015b, p. 51). They often develop depression. The constant struggle for the child's health takes a lot of their time and effort, makes them give up their life and professional plans, and reduces their social relationships. Parents may blame one another and the

tensions that arise between them can lead to conflicts and the breakup of their marriage.

Without any doubt, having a child with autism and being aware of the long-term perspective of child care causes a lot of stress for parents. Currently, there is little research on parental problems related to raising and caring for a child with autism. Differences in the level and character of stress experienced by mothers and by fathers are still not sufficiently clearly defined, and results are inconsistent. Figure 1 demonstrates a model of functioning of parents of children with autism in the context of the stress they experience, modified by the sense of coherence and self-efficacy.

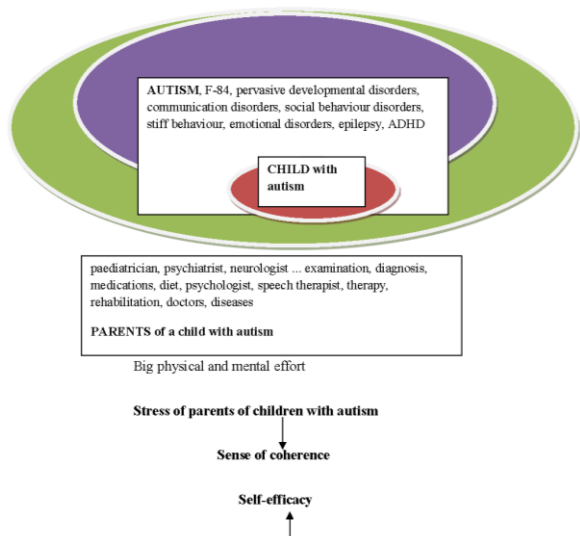


Figure 1. Model of functioning of parents of children with autism.

Carers of children with autism function in a variety of ways. Researchers believe that the diverse cognitive, motivational, and emotional functioning of parents of children with autism can be explained by the fact that they differ in their sense of coherence and self-efficacy. Being the most important resources, these affect their motivation to act and make an effort as well as their persistence in pursuing a goal (Kościelak, 2010, p. 62) and the ability to cope with

difficult, health-affecting life situations. A study conducted by Ewa Pisula (2015b, p. 79) showed that mothers experienced the birth of a child with autism more emotionally and felt more stress compared to fathers. Emy Liwag (Randall & Parker, 2010, p. 45–46) claims that mothers and fathers experience the stress of raising a child with autism differently. While mothers are more worried about their child's mood changes, hyperactivity, and speech disorders, fathers are more stressed by the fact that autism is an incurable condition and that the child will need help throughout their life.

Currently, few studies concern the sense of coherence in mothers and fathers of children with autism. Their results show that parents of children with autism have a lower sense of coherence than do parents of healthy children or children with other developmental disorders. The reasons for this are very important. Undoubtedly, caring for children with autism requires the parents to experience changes in their life course, value systems, and perceptions of the environment. It also prevents them from fulfilling their own plans and needs. Due to a lack of competence and the skills for caring for a child with autism, as well as the negligible results of therapy and rehabilitation, parents experience high levels of stress, which negatively affects their sense of coherence and the process of adaptation.

Research results show that self-efficacy affects one's physical and mental state. This variable affects blood pressure and catecholamine levels, such as adrenaline, noradrenaline, and dopamine, which are important neurotransmitters secreted in stressful situations (Bandura et al., 1985; Schwarzer, 1997). Self-efficacy is believed to arise from one's own experiences. It affects emotions and is a motivational factor. A high sense of self-efficacy affects the creation of positive emotions that are helpful in coping with stress and assessing cognitive resources: a sense of agency, finding the right solution, and inner locus of control.

Stress is considered an important factor, affecting many aspects of human behaviour, strategy selection, and self-efficacy that influence the assessment of an individual's resources in difficult situations. Research results have shown that a low sense of self-efficacy in parents of children with disabilities is associated with higher levels of stress (Cuhn & Carter, 2006; Hastings & Brown, 2002). A strong sense of self-efficacy reduces the stress felt by parents of children with

disabilities, which is the group most at risk for disorders of functioning, helps caregivers cope with difficulties related to childcare, makes it easier to find the right solution, and can protect against burnout. The results of research conducted by Małgorzata Sekułowicz (2013, p. 162–164) on the relationship between self-efficacy and burnout indicated a medium level of self-efficacy in all groups of participants.

Stress, Sense of Coherence, and Self-Efficacy in Parents of Children with Autism

Research conducted thus far has explored the causes of stress and difficulties in the functioning of parents related to proper childcare. The results of these studies are of great importance for analysing the functioning of a family of a child with a disability in light of the specificity of the stress experienced by parents of children with autism. It involves the discrepancies between the tasks set before the parents and their ability to cope with them. However, there is scant research aimed at assessing stress levels modified by the sense of coherence and self-efficacy as important individual resources. Sense of coherence and self-efficacy can be important factors that affect differences in the functioning of mothers and fathers of a child with autism, as well as their perception of competence. On the other hand, more studies are devoted to parents of chronically ill children than to parents of children with serious developmental disabilities. Research results can help specialists in their interventions aimed at helping and supporting families of children with disabilities.

The above-mentioned assumptions were the starting point for formulating the following research questions:

1. What are the stress levels of mothers and fathers of children with autism?
2. What is the sense of coherence in mothers and fathers of children with autism?
3. What is the level of self-efficacy in mothers and fathers of children with autism?
4. Is there a relationship between stress levels and sense of coherence in mothers and fathers of children with autism?

5. Is there a relationship between the level of stress and self-efficacy in the studied groups?

The current study involved 62 people, 32 mothers (51.6%) and 30 fathers (48.4%) aged between 25 and 55 years (Parents aged 34–35 predominated. The average age of parents of children with autism was 37.37 years). The analysis included age, education, family type, place of residence, number of children in the family, gender and age of children, type of autism, and age of diagnosis. Forty-four (71%) participants had a higher education. The remaining 18 (29%) had a vocational or secondary education. Among the participants were nonworking parents who cared for their children full-time, as well as working parents: farmers and professionals specialising in areas such as IT, economics, medicine, physics, and chemistry.

Mothers and fathers of children with autism residing in Warsaw, Katowice, Lublin, and the Świętokrzyskie Province anonymously and voluntarily participated in the study. The largest group of respondents were city residents ($n = 52$, 83.9%), and the remainder ($n = 10$, 16.1%) lived in rural areas. Most respondents were married or in informal relationships ($n = 50$) and the smallest group constituted divorced parents and single persons ($n = 12$). All participants were parents of one or two children. The children were 58 boys and four girls. Thus, the results have confirmed the generally known tendency that autism most often occurs in males. The average age of the children was 7.77 years and the SD was 3.15. The average age of diagnosis was four years old and the SD was 2.16. Experts consider childhood autism to be severe. It is often referred to as early childhood autism, classic autism, pervasive developmental disorder, atypical autism, or hyperkinetic disorder. These differ in the scope, severity, and age of onset compared to the light form of autism, Asperger's syndrome. In the current study, 18 children were diagnosed with Asperger's syndrome. The largest group included 44 children with severe autistic disorders (77%). Among them, most children were diagnosed with childhood autism ($n = 17$, 27.4%). The next largest group included children diagnosed with a pervasive developmental disorder ($n = 16$, 25.8%). Nine children were diagnosed with early childhood autism (14.5%) and two were diagnosed with atypical autism (3.2%).

The study was conducted at the neurological disease clinic of the EEG Institute in Warsaw as part of the free-of-charge action “Let’s Help Autists.” No child participating in the study had undergone a prior electroencephalogram (EEG) test. This is associated with the great difficulties in procedure, long waiting times, and considerable costs of testing. It should be emphasised that many children with autism underwent successful EEG testing for the first time in their lives during the current study. The difficulty of performing an EEG test is that during a standard examination, the recording begins when the patient is awake and then falls asleep, without sleeping pills. This is a significant problem for a child with autism. Participation in the current study included a free EEG test, explanation of the EEG, and a free neurological consultation based on the analysis of the EEG results. Autism is currently the domain of three specialties: psychiatry, neurology, and psychology. Each specialist is expected to make a diagnosis and issue an opinion about the child’s functioning. A neurologist must assess brain activity based on an EEG and magnetic resonance imaging (MRI) results. Most often, the neurologist is asked to make an epilepsy diagnosis and prescribe medications. People with autism often suffer from this disorder. They may have epilepsy with generalised or partial seizures and loss of awareness.

Parents were informed about the purpose of the study and their right to refuse participation, and were asked to turn off their mobile phones before completing the questionnaires. The average time taken to complete the questionnaires, which were administered in the same order for all participants, was 40 minutes. Parents provided their demographic information and filled out the PSS-10, SOC-29, and GSES questionnaires in the same office, after their children’s EEG test. These were usually carried out when the children were asleep, due to their lack of cooperation with doctors caused by the severity of their disorder or their age. The children came to the EEG Institute having received special individual instruction by phone to prepare them for the examination and after a date was arranged with their parents. All children were diagnosed with autism by psychologists or psychiatrists.

Results

The results were calculated for the following variables: stress levels, sense of coherence, and self-efficacy. The first step of the

statistical analyses was to determine the levels of the above-mentioned variables in the studied groups and to answer Questions 1, 2, and 3. The next step was to analyse the examined variables to select the appropriate statistical tests that would further the analysis. Deeper analysis included personality variables for the entire sample. The skewness and kurtosis values of all variables indicated that the distribution did not deviate from normal (skewness and kurtosis < |1|). Table 1 contains the descriptive statistics for the PSS-10, SOC-29, and GSES results of the sample ($N = 62$).

Table 1

Descriptive Statistics ($N = 62$)				
	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Perceived stress level	17.81	6.50	−0.39	−0.06
Self-efficacy	28.77	5.14	−0.51	0.37
Sense of coherence	127.60	29.45	0.02	−0.07
Comprehensibility	43.35	11.67	0.20	−0.20
Manageability	44.81	11.44	−0.18	−0.27
Meaningfulness	39.44	8.49	−0.18	−0.66

The results show that mothers and fathers reported medium stress levels and medium self-efficacy.

In the next step of the analysis, it was examined whether there were differences in stress levels, sense of coherence, and self-efficacy between the mothers ($n = 32$) and the fathers ($n = 30$) of children with autism.

Table 2

Results of Mothers ($N = 32$) and Fathers ($N = 30$)						
	Mothers		Fathers		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Perceived stress level	20.31	6.16	15.13	5.82	3.40	.001*
Self-efficacy	27.81	5.37	29.80	4.75	1.54	.13
Sense of coherence	119.97	30.27	135.73	26.69	2.17	.03**
Comprehensibility	40.09	12.11	46.83	10.27	2.36	.02**
Manageability	41.88	11.92	47.93	10.17	2.15	.03**
Meaningfulness	38	8.89	40.97	7.90	1.39	.17

* $p \leq .001$; ** $p \leq .05$

Data from the Student's *t*-tests for independent groups by gender are summarised in Table 2. Women showed higher stress levels, a lower sense of coherence, comprehensibility, and manageability than did men. The differences were statistically significant ($p \leq .001$; $p \leq .05$). However, the mothers and fathers did not differ in their level of self-efficacy.

In order to deepen the statistical analysis, intermediary variables such as education and type of autism were taken into account. It is worth noting that the way autism is classified remains ambiguous because of difficulties in the differential diagnosis of pervasive developmental disorders. The criterion for classification is the severity of the disorder or the age of diagnosis. Since the 1990s, autism types have been most often divided into autism with severe disorders and a mild form of autism called Asperger syndrome (Pisula, 2015a, p. 14–30). This division was used in the current study. Autism with severe disorders thus includes childhood autism, atypical autism, pervasive developmental disorder, and early childhood autism.

After dividing the respondents into groups by education level (higher education, those without higher education) as well as by their children's diagnosis (parents of children with Asperger syndrome, parents of children with severe autistic disorders), the analysis showed no differences in perceived stress levels, sense of coherence, and self-efficacy between parents with a university degree and parents with primary or secondary education. However, taking into account the type of autism showed differences in self-efficacy ($p \leq .001$) and sense of coherence ($p \leq .01$) between parents of children with Asperger's syndrome and parents of children with severe autistic disorders. However, there were no differences between these groups in perceived stress levels.

The next step was to analyse the correlations between stress levels, self-efficacy, and sense of coherence. To this end, the Pearson's *r* correlation coefficient was calculated. The relationship between stress levels, self-efficacy, and sense of coherence was also tested the entire sample, as well as separately for the mothers ($n = 32$) and the fathers ($n = 30$). Table 3 contains the data of these analyses.

Table 3

Correlations Between Stress Levels and Personality Variables

Stress levels	Self-efficacy	Sense of coherence
Total sample (<i>n</i> = 62)	-0.68	-0.74
Mothers (<i>n</i> = 32)	-0.69	-0.74
Fathers (<i>n</i> = 30)	-0.66	-0.68

The results show that there was a negative correlation between stress levels, sense of coherence, and self-efficacy for the entire sample and for the respective groups of mothers and fathers. The results prove that the higher the sense of coherence and self-efficacy, the lower the stress levels in parents of children with autism.

In order to deepen the analysis, correlation coefficients between the examined personality variables of the entire sample modified by the mediating variable of autism type were calculated. Autism was divided into the less severe type—Asperger syndrome (*n* = 18)—and the category of severe autistic disorders, which included childhood autism, atypical autism, pervasive developmental disorder, and early childhood autism (*n* = 44). The results are shown in Table 4.

Table 4

Correlations For Parents by Severity of Autistic Disorder

Stress levels	Self-efficacy	Sense of coherence
Parents of children with Asperger’s syndrome	-0.66	-0.61
Parents of children with severe autism	-0.73	-0.79

The results indicate a significant negative correlation between stress levels, self-efficacy, and sense of coherence, particularly in the group of parents of children with severe autistic disorders. This may mean that parents of these children are more likely to experience lower stress and have a higher sense of coherence and self-efficacy than do parents of children with Asperger’s syndrome.

Stress arises in parents of children with autism because of continuous and intensive childcare. It is conditioned by various difficulties in the areas of social communication, language and speech development disorders, and limited behavioural patterns. Numerous

studies have shown that parents of children with autism have higher stress levels than do parents of healthy children and of children with chronic diseases (Pisula, 2015a p. 158). However, the results of our study prove that parents of children with autism do not assess their life situation as stressful and excessively burdensome because of special needs childcare. The differences between our results and the results of other studies may be due to individual differences in our sample of mothers and fathers (better coping skills), due to the fact that they completed a set of questionnaires after a successful EEG examination, or due to our use of the PSS-10 questionnaire, which may be inadequate and not sensitive enough to the stress state of parents of children with autism, or due to the small sample. It is possible that using a stress measurement tool for specific subjects, such as the Questionnaire on Resources and Stress for Families with Chronically Ill or Handicapped Members (QRS) developed by Holroyd (1974), would give results in line with other studies, that is, that stress levels in parents of children with autism are higher than in the average population. The QRS contains 66 items and 11 subscales. It measures the level of stress and the availability of coping support resources. The questionnaire measures stress levels in areas related to the degree of the child's dependence on the parents, the child's cognitive disorders and deficits, the parents' problems, lack of reinforcements, and personal burdens, family difficulties caused by limitations in the development of each family member, and the financial condition of the family. In order to accurately measure the stress of parents of children with autism, an interview or in-depth observation can also be used.

The results of many studies indicate a positive impact of self-efficacy on the mental and physical state of an individual and on their ability to cope with stress. The results of our study show that carers of children with autism have a medium level of self-efficacy. This means that they have a sense of agency in their activities, their own capabilities, and competences to perform and control tasks determined by life situations. Małgorzata Sekułowicz (2013, p. 75) obtained similar results when studying self-efficacy in parents of children with autism.

A sense of coherence is considered to be one of the correlates of coping strategies. The results of our study indicate a lower level of

coherence in parents of children with autism compared to the participants examined using the SOC-29. This means that parents of children with autism are not convinced that they fully understand their life situation related to their child's condition, they perceive their ability to deal with this problem as negligible, and consider their competences and skills for dealing with burdensome responsibilities to be insufficient. The time, financial, and physical demands of the therapy for children with autism, often resulting in little improvement, reduce the parents' beliefs in their own ability to cope and take away their faith that their efforts have meaning. The results obtained in our study are not surprising in the context of previous studies. Comparable data concerning the sense of coherence in parents of children with chronic diseases can be found in Pisula (2015b, p. 61–64) and Dąbrowska (2008, p. 30). Researchers characterise parents of children with autism as withdrawn from social interactions, attached to specific patterns of behaviour and hypersensitive to criticism from the environment. These features may play a role in the development of a reduced sense of coherence (Kano et al., 2004). Comparing the results of our study with other studies, the sense of coherence and its three components in parents of children with autism was higher than that in the siblings of patients suffering from schizophrenia. However, it seems that these results need to be approached with a certain degree of caution due to differences between the studied samples. The sample of parents of children with autism and of siblings of people suffering from schizophrenia differed in size, the degree of kinship, age of onset, and duration of the disorder.

One of the factors influencing the severity and specificity of stress related to raising a child with autism is the parents' gender. Mothers and fathers perceive the child's developmental difficulties differently. Mothers are more burdened with everyday childcare and experience their condition more emotionally, give up their personal development more often, have more health problems, lower self-esteem, and a sense of poor performance as parents. The results of our study indicate that fathers do not experience greater difficulties associated with raising a child with autism in comparison with most mothers who assessed their level of stress as elevated. This interpretation is confirmed by the results of many studies showing differences in the stress levels between mothers and fathers regardless of the child's age, severity of

disorder, geographical region, and culture. Moreover, the results of many studies indicate higher stress levels in mothers of children with a pervasive development disorder compared to that of mothers of healthy children, with Down's syndrome, and with other disorders (Dąbrowska & Pisula, 2010; Pisula, 2004; Kasari & Sigman, 1997). However, there are no differences in the subjective assessment of psychological burdens associated with the children's developmental deficits between mothers of children with autism and mothers of children with life-threatening diseases. The results of research on stress in fathers of such children show that caring for a child with autism is more stressful than caring for a child with Down's syndrome or cerebral palsy. Complete information on the stress level in parents of children with autism is provided by the results of studies comparing stressors affecting the mothers and the fathers. Fathers are more worried about the lack of communication and physical fitness, and mothers are more aware of the lack of social support and the labelling and stigmatising behaviour of other people towards them and the child (Pisula, 2015b, p. 43).

Sense of coherence is the central construct of Antonovsky's model of salutogenesis. It describes individual resources required to understand that life events are meaningful and can be coped with using the available resources. The motivation to act is created by the sense of meaningfulness, that is, the individual judging that commitment is worth the effort. Therefore, a high sense of coherence gives confidence in dealing with problems. Currently, there is little research on the sense of coherence in mothers and fathers of children with autism. Based on the results of the few published studies, it can be stated that parents of children with autism have a lower sense of coherence than do parents of healthy children or children with other disorders (Sivberg, 2002; Margalit et al., 1992). Our study has shown that mothers of children with autism had a lower sense of coherence than did fathers of such children. This means that mothers perceive the situation related to the child's condition as uncontrollable and difficult to understand, they feel helpless, and have less confidence in their ability to cope than do the fathers. In contrast, previous research (Klepp et al., 2007; Pisula & Kossakowska, 2010; Roothman et al., 2003) did not find differences in the sense of coherence between mothers and fathers. Thus, our results were unexpected (Oelofsen &

Richardson, 2006). Pisula and Kossakowska (2010) claim that the reasons for the discrepancies in their final results are due to the respondents being in similar situations, meaning that mothers and fathers came from the same families, their children were young, and required commitment to intensive care from both the parents and the specialists (p. 1490–1491). In contrast, the parents in our study came from different families and their children had been participating in various therapies for several years. In the questionnaires, the parents mentioned the support of psychologists, educators, speech therapists, as well as sensory integration therapy, EEG-Biofeedback training, and social therapy the most often.

Self-efficacy affects many aspects of life, makes it possible to set higher goals for oneself, and encourages more effort in meeting them. Research indicates no difference in self-efficacy between the parents of children with pervasive developmental disorders. This may mean that the mothers and the fathers perceive changes in their lives related to caring for a child with autism in a similar way.

It can be assumed that parents who do not have higher education, and thus knowledge about the availability of information about autism and therapy, will have higher stress levels, and lower self-efficacy and sense of coherence. However, our study showed no such differences. It can mean that both parents of children with autism are equally involved in the care and upbringing of their children, regardless of their education levels.

The analyses conducted in our study showed differences in the levels of perceived self-efficacy and sense of coherence, though it they showed no differences in the perceived stress levels between parents of children with Asperger's syndrome and parents of children with severe autistic disorders. The latter reported lower self-efficacy compared to the former. These differences result from difficulties related to the longer time and intensity of care and therapy, as well as the often small functional improvement of the children after such therapy. It would seem that, due to the occurrence of smaller cognitive deficits, parents of children with Asperger's syndrome have lower stress levels compared to parents of children with severe autistic disorders. However, the results of our study indicated no such differences. This means that all respondents experienced equal stress due to the difficulties associated with raising a child diagnosed with

an autism spectrum disorder. High stress levels in parents of children with Asperger's syndrome are caused by the children's low social skills and the resulting problems in interpersonal relationships. Data from other studies also show high levels of stress, anxiety and, depression in parents of children with Asperger syndrome (Epstein et al., 2008; Lee, 2009; Mori et al., 2009).

The results of our study showed a significant correlation between stress levels and sense of coherence and self-efficacy in the entire sample as well as in the mothers and fathers separately. These results may indicate that the intensity of stress can be affected by the belief in the meaningfulness of life, acceptance of one's life situation, as well as the commitment and the effects of the efforts put in childcare. Similar results can be found in the literature. Pisula (Pisula & Kossakowska, 2010, see also Mak et al., 2007) showed that mothers with a strong sense of coherence exhibit lower stress levels, regardless of the severity of their children's developmental disorders. Data from other studies have shown that low self-efficacy of those caring for children with an autism spectrum disorder is associated with higher levels of stress (Cuhn & Carter, 2006; Hastings & Brown, 2002).

Parents of children with autism often have to deal with situations they do not understand and feel helpless about, for example, when therapy does not result in visible improvements. Most often, this situation occurs in the case of severe autistic disorders. The results of our study indicate a negative correlation between stress levels, self-efficacy, and the sense of coherence, particularly in the group of parents of children with severe autistic disorders. Certainly, the severity of the disorder and poor therapy outcomes cause impatience and doubts in the parents about their capabilities, their personal resources, and the meaning of the effort they exert to improve their child's functioning and reduce their high stress. It should be noted that there is little research on the relationship between stress levels and sense of coherence and self-efficacy. This topic has not been well understood. Based on the few existing studies, it can be concluded that the severity of the child's autism disorder is the greatest stress factor for the parents (Lyons et al., 2010). Most often, researchers focus on the correlation between coping strategies and the well-being of the parents of children with autism. There have been no longitudinal studies on the relationship between stress and sense of coherence. It is

worth considering how a lower sense of coherence and self-efficacy as a disposition to cope with difficult situations affect stress levels in parents of children with autistic disorders of varying severity.

The results of the current study do not cover all problems faced by the parents of children with autism. They make it possible, however, to point out differences in their functioning. The mothers perceived their parental role as more stressful, had a lower sense of meaningfulness, and felt more helpless in controlling life difficulties than do the fathers. Often, mothers of children with autism had more problems with somatic illnesses and reported lower life satisfaction. Based on our research results, it can also be stated that the sense of understanding the situation related to the child's condition, the sense of agency, a positive assessment of one's own coping capabilities and resources, and self-efficacy all affect stress levels. Moreover, the results of our study indicate a correlation between stress levels and the sense of coherence and self-efficacy in both mothers and fathers, particularly those of children with severe autistic disorders.

Since the sense of coherence and self-efficacy affects the parents' stress levels, it is worth considering whether specialists can help increase these resources. It can also be considered how professional support can help solve problems related to raising and caring for a child with autism. Many researchers claim that professional support is effective and facilitates the ability to use help in the form of advice or information. This is known to improve well-being and strengthens the motivation to act.

In a study on parents of children with autism (Siklos & Kerns, 2006), the level of satisfaction with the received support was lower in parents of children with an autism spectrum disorder than in parents of children with Down's syndrome. This situation can be explained by various factors: the complexity of autistic disorders and difficulties in their classification and diagnosis, low knowledge about the causes of the disorder, an unsatisfactory number of medical and psychological specialists educated in autism, or the lack of a coherent system of social assistance for parents of such children.

Due to the variety and specificity of disability in the case of autism and the related difficulties in classification and diagnosis, parents of children with autism receive conflicting information about their children's health. The reasons for the parents' dissatisfaction with

specialist help include: a small number of neurologists, psychiatrists, and psychologists specialising in autism, long waiting times for medical examinations, and expensive tests, such as genetic and immunological tests, the EEG, and the MRI.

The parents' difficulties are exacerbated by a lack of a coherent and developed system of services, as well as by the ignorance of specialists about autism. The annual report of the Synapsis Foundation (2013, p.104–108) presents unsatisfactory data about the financial and personnel limitations of state institutions in seven out of 16 Polish voivodeships. The most important results show that social assistance centres established by local authorities do not fully support the parents financially. They lack specialist personnel that is aware of the parents' problems and needs, which causes difficulties in choosing the appropriate form of assistance from employees of social assistance centres. Moreover, due to lack of competence, specialists find it difficult and frustrating to work with children with autism (Pisula, 2015b, p. 41).

Parents of children with autism are often stressed by negative self-assessment of their ability to raise their children because of their unpredictable and inadequate behaviour in public places. Thus, specialists should disseminate information about this disorder, which would positively influence social attitudes towards the parents of such children (Pisula, 2015b, p. 38). Professional support in coping with stress and strengthening the parents' beliefs of self-efficacy can include emotional and instrumental support by providing information on and funding for therapeutic activities. A good parent-specialist relationship as well as the provision of knowledge and specific skills would help parents in their everyday childcare. Specialist support provided in the form of counselling, training, and workshops would increase their involvement, strengthen their faith in their own strength and agency, and thus contribute to improving the children's functioning.

Taken together, results of our study and of the previous studies show that parents function in a variety of ways. Stress levels and sense of coherence are related to the parents' gender and the severity of their children's autism symptoms. Mothers of children with autism react to the child's condition with more negative emotions and assess their ability to face upbringing difficulties as insufficient. Moreover, our

results indicate that strengthening the sense of coherence and self-efficacy can positively affect the parents' stress levels, particularly in parents of children with more severe forms of autism. However, it should be emphasised that our results require further verification due to the small sample size.

Autism presents parents with a special challenge that cannot be met without the help of professionals. In order to regain strength and cope with the resulting difficulties, they need to be provided with appropriate and reliable specialist support, for example, in the form of workshops and skills training. Results obtained by other researchers indicate the beneficial effect of various types of training on the parents' quality of life, self-efficacy, attitude towards their parental tasks, awareness of their parental responsibilities, and their sense of helplessness. Our results demonstrate that parents, particularly mothers, of children with autism and with severe autistic disorders require professional support in the form of advice and assistance of doctors, psychologists, and educators.

The situation in Poland regarding the needs of families of children with autism is unsatisfactory. Provincial social assistance centres often refuse to help parents of such children due to the lack of vacancies in special facilities, an insufficient number of trained staff, and low financial resources. The situation in psychiatric hospitals is also suboptimal, as the staff have difficulty organising therapy and taking into account the specificity of autism manifestations. Currently, nongovernmental institutions are more effective in providing therapeutic assistance to children with autism. For example, the Synapsis foundation and the Navicula boarding school in Łódź enjoy a good reputation.

Therefore, it seems necessary to educate specialist staff as soon as possible and to implement various solutions and forms of assistance for the parents. Professional specialist support can affect the parents' development of personal resources, increase their competence, and strengthen their belief that they can show trust and love.

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Time perception in late adulthood

Introduction

The number of people over 60 years old is constantly increasing in European countries, including Poland. With the number of young people simultaneously decreasing. This leads to a reflection on factors conducive to the physical and mental health of the elderly. According to numerous studies, *temporal perspective* has a significant impact on human functioning. The current chapter presents the results of research carried out on a sample of elderly people. Attempts were made to determine whether the perception of the past, present, and future is affected by factors such as death of a spouse, participation in religious practices, or not having changed one's place of residence.

According to demographic forecasts, by 2050, the Polish population will decrease by over 4 million. At the same time, its demographic structure may change. This is connected with a decreasing birth rate on the one hand and longer life expectancy on the other. As a result, the number of retired people will significantly increase over the next decades.

In 1995, it was estimated that 60-year-old men will live to 75.8 years and women—to 80.5 years. In 2005, the life expectancy of men aged 60 was projected at 77.5 years, and women—at 82.7 years. In 2017, it was 79.2 for men and 84.3 for women. Both the average age of Poles and the number of people past working age are increasing. In 2005, it amounted to 5885000 and it is expected to increase to 8540000 in 2020 (and to 9597000 in 2030). Women past working age predominate, both due to earlier retirement age and longer life expectancy (Statistics Poland, 2004, 2018).

It must be emphasized that the elderly should remain active after retirement by developing their interests and passions for which they did not have time before, maintain social relations with a group of friends and acquaintances, and remain in close relationship with

family, especially young people to whom they can pass on the traditions cultivated by their families, the community in which they live, or the country of which they are citizens. They cannot live in the past, regardless of whether they have good or bad memories, but they must live in the present and continue looking toward the future.

The research presented in this study was aimed at determining how people aged 60+ perceive time psychologically and what factors affect this perception.

Characteristics of Late Adulthood

Old age, currently termed *third age* or *late adulthood*, is a time when a person who is still active, both physically and mentally as well as professionally and socially, gradually falls out of their roles and slowly loses strength. However, there is no concrete moment in the biological development of the body which defines the beginning of old age. Nowadays, especially in industrialized countries, people are living longer due to developments in medicine and improvements in living conditions. Therefore, the socially defined period of old age begins later than before.

In ancient Greece, Pythagoreans assumed that 60 is the beginning of old age, whereas Chinese philosophers believed that it began at 70 (Rembowski, 1984, p. 41). Birren, adopting various criteria for the periodisation of human life, including the anatomical, physiological, psychological, and social, defined the period of late adulthood as 50-75 years, and old age as beginning at 75 (qtd. in Rembowski, 1984, p. 42).

According to Okła, quality of life in old age does not depend on the biological condition of the body, but on the individual arrangement of personality traits and the social context (qtd in. Kurtyka-Chałas, 2014, p. 41). A subjectively experienced high quality of life is maintained by social activity adequate to one's abilities, having friends, family contacts, the opportunity to meet emotional needs, developing one's interests, and so forth.

According to Havighurst's theory, each stage of life involves various tasks that require solving. In the late maturity stage, a person must adapt to a decline in their physical strength, retirement, and reduced income. They must also accept the possibility of their

spouse's death, maintain social relations with people their age, accept and adapt to changed social roles, and arrange living conditions according to their needs and abilities (Przetacznik, Gierowska & Tyszka, 1996, p. 69).

According to Braun-Gałkowska (1987, p. 185), losing the ability to perform various social roles may be sometimes experienced by older people as very difficult and can cause a dual response: (a) complete withdrawal from life and resignation from activities, explained by lack of strength, lack of ability to influence events, or even the feeling of not being needed anymore; or (b) preserving the previous way of life despite changes in abilities.

Many gerontologists stress the importance of socializing for seniors. Unfortunately, people met in their youth or adulthood pass away over time, and the number of family members decreases. The decrease in the number of contacts with friends and acquaintances may, however, result in a deeper bond with a spouse or a long-term partner, as well as with the younger generation.

Unfortunately, withdrawal from life is often facilitated by the prevailing social attitudes, especially among young people, who value youth, health, fun, and wealth. There are cases when they insult older people, for example, saying "when I see such a woman, I would shoot her in the back," "into the oven with old people," "tell me why is she still alive," and so forth. (Krzemińska, 1980, s. 54). Wiśniewska-Roszkowska (1989, p. 35), summing up a book by Simone de Beauvoir, describes a grim picture of old people presented by this novelist. Old people may not be hungry or emaciated, but they often may feel spiritual hunger, a lack of affection, and of kindness. They are ridiculed and humiliated. They are not respected and loved and, therefore, are not happy.

In their youth, people set life goals and create plans that they try to achieve in adulthood. In old age, however, they take stock of life. If the result is a positive balance, if they have managed to achieve the goals they set for themselves in their youth, they may feel fulfilled. But if they come to the conclusion that they have not done anything valuable in life, that their life was mostly empty and meaningless, or when they experienced only defeats, they may feel overwhelmed by apathy and try to blame others for their unsuccessful lives.

When Holmes and his group worked on their theory of stress, they conducted interviews to study which life situations in adulthood cause the most stress. Many such situations were mentioned by the interviewees, for example, job loss, change of residence, or loss of property, but the decisive majority considered the death of their spouse as the most stressful (Zimbardo & Ruch, 1988, p. 363).

Holmes' theory, combining stress with a particularly difficult situation, has not resisted criticism. However, the loss of a spouse is still considered a major stressor in the commonly accepted theory of stress by Lazarus and Folkman (Heszen–Niejodek, 2011). In line with this theory, when a widowed person is unable to cope with this loss, they always experience strong stress. However, the intensity of the experienced stress depends on many factors.

Stress intensity and the period of mourning depends on the sex and age of the widowed person, the relationship they had with the deceased spouse, as well as the activities they must take over after their death.

For a person who has children, is employed, or has a group of devoted friends, losing a spouse is a major blow. It causes sadness, regret, pain, sometimes guilt, but after a period of mourning, that person comes back to life and to regular functioning. Such a situation is more difficult for people whose children have left home, who are retired, or who do not have a group of friends providing them support in difficult times. Usually, being in a long-term relationship with another person, sharing joys and sorrows, as well as caring for them was the meaning of life. The death of a spouse thus divides life into two categories: before and after their death. The *before* can often be idealized, whereas the after can be perceived as sad, empty, or even tragic.

If the bond between the widowed person and their spouse was not very positive, long-term care as well as participation in their prolonged death can be interpreted as a release from a difficult situation, an opening to new experiences, as well as an opportunity to make significant life changes.

Psychological Time

In recent years, interest in time perception has clearly increased among psychologists. Time as a phenomenon is experienced by

everyone, though it is experienced differently by various people. Temporal psychology concerns the subjective, personal experience of time. According to Sobol-Kwapińska (2011), there are many definitions of time: a series of changes which exist only as a mental representation except for the present; a memory trail, or anticipation.

According to Nosal, who is one of the main representatives of temporal psychology in Poland, time is considered as a specific form of information organized by specific mental models. These are cognitive structures integrating various conceptual categories—dimensions of time representation and attitudes towards time (Nosal & Bajcar, 2004).

Zimbardo and Boyd believe that "the perspective of perceiving time is a personal attitude—often unconscious, which each of us manifests in relation to time. It is also a process in which the continuous flow of life is divided into time categories, helping to give our life order, coherence and meaning" (Zimbardo & Boyd, 2014, p. 24).

In psychology, the subjective relation to time is called the *temporal dimension of personality*. There are three types of temporal dimensions: future- (prospective), present-, and past-oriented (retrospective). Specific types of temporal dimensions are associated with specific behaviours and attitudes towards life (Sobol & Oleś, 2002). According to Oleś (2011), if the temporal perspective is distant, a person believes themselves to have time to start implementing new activities, acquire new competences, and develop skills. However, if the temporal perspective is short and one sees their life as being determined and impossible to change, past experience gains significance. Results of some studies show that in general, regardless of age, people think more about the future than about the past, but many studies also show that older people are more focused on the past than on the future, in contrast to young people, who turn more often to the future than to the past (see Sobol-Kwapińska, 2011).

As noted by Zimbardo, well-known for his social experiments, but less known for his studies on time perspective, a happy person who has good interpersonal contacts and is open to new experiences, is living in the present, but not cutting themselves off from the future and not fleeing to the past.

The past can be perceived as a series of positive experiences or as a series of misfortunes, regardless of what it actually was. To function efficiently, one cannot completely cut the past off. However, one cannot also live only in the past.

People who live with a positive attitude towards their past like to reflect on pleasant, nostalgic memories. Their present reality is interpreted through past experiences. They are optimistic about life, but their present and future are of little interest to them.

People with a negative picture of the past treat their whole life as a failure. They no longer remember what was interesting and happy, but they still remember the harm they have suffered from the hands of others and the failures they have experienced. They see the world as unpredictable, and other people as indifferent, unkind, and envious. They often see the present fatalistically and they avoid making plans for the future.

For most people, the most important perspective is that of the present and future. However, people with positive past experiences are open to new experiences in the present and the future, have a sense of agency, believe in themselves, do not fear new tasks, have satisfying contacts with family and friends, make plans for the future, and are happy with life and with themselves.

For people who have a negative past perspective, the present often has, as was mentioned above, a fatalistic dimension. Since they have failed in the past, they lack faith that they can succeed in the present or in the future. They are superficial, impatient, distrustful, inactive, closed to new experiences, and often focus on their ailments, which may be sometimes exaggerated.

According to Zimbardo, there is also one extra category—that of present-day hedonists who do not care about the past and do not look toward the future. They live only for the present moment. They are characterized by their desire for pleasure, which is why they look for exciting activities. They are cheerful and carefree. They do not like routine and chores (Zimbardo & Boyd, 2014).

To help people improve their psychophysical functioning, especially if they are stuck in a negative perception of the past, Zimbardo developed the Time Perspective Inventory, which allows for determining the respondent's time perspective. On the basis of the questionnaire results, a psychotherapy plan can be suggested.

Research Methodology

The current research was undertaken to determine how Poles perceive time and on factors influence this perception. The study included people aged between 19 and 60. A group of high school graduates, students, people aged 26–35 (residing in Poland and England), people aged 35–59, and people aged over 60 were examined.

The results presented in this study are related to people of retirement age. It is essential to understand the factors which influence perception of time (present and future) by elderly people, as it is assumed that the number of people over 60 years of age who—according to predictions—could live at least a dozen years more, is increasing.

Research Method

The study used the Polish experimental adaptation of Zimbardo's Time Perspective Inventory, made by Przepiórka (2014). It includes minor changes of the original version. The questionnaire consists of five subscales — past negative, past positive, present hedonistic, present fatalistic, and future. Zimbardo also highlighted the transcendental future, but it was not included in the questionnaire.

Ideal results reflecting good mental health, a sense of happiness, and satisfaction with life involve low scores in the perception of negative past and fatalistic present, as well as high scores in the perception of positive past and slightly above-average perception of hedonistic present and future.

In addition, the respondents completed the Questionnaire of Life Attitudes by Klamut (2002) and a survey collecting demographic information.

Characteristics of Respondents

There were 66 women and 25 men among the respondents. The group of women comprised 30 widows and 27 nonwidows, mostly married (for 9 women, there was no data on their marital status). The age of the women ranged from 61 to 87 years. Among the widowed women, there were slightly more older women. The average age of the widows was 75.8 and

non-widows – 73.4. The age of the men was between 63 and 88 years old. The age distribution of the studied women is presented in Table 1.

Table 1

Women's Age					
Age	Widows (n = 30)		Nonwidows (n = 27)		Total
	<i>n</i>	%	<i>n</i>	%	%
61–65	1	3.3	8	29.7	15.8
66–70	8	26.7	10	37.0	31.6
71–75	6	20.0	7	25.9	22.8
76–80	8	26.7	2	7.4	17.5
81–85	5	16.7	-	-	8.8
86 and above	2	6.6	-	-	3.5
Total	30	100	27	100	100
Average age = 75.8			Average age = 73.4		

Results

At the current stage of the study, it was impossible to define whether age affects time perception, as the group of respondents over 60 years old was insufficiently large. Marital status is one of the variables that can affect time perception, therefore, it was checked whether time perception differentiates widowed and non-widowed women. The results obtained in the individual subscales of the Time Perspective Inventory are ranged from 1 to 5 points. Table 2 presents means and standard deviations obtained by the examined groups of women.

Table 2

Means and Standard Deviations of Widowed and Nonwidowed Women						
Time perspective	Widows (<i>n</i> = 30)		Nonwidows (<i>n</i> = 27)		<i>t</i>	<i>p</i>
	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>		
Past negative	3.33	0.75	2.77	0.94	3.29	< .05
Past positive	3.50	0.68	3.36	0.48	-	> .5
Hedonistic present	3.00	0.72	3.00	0.72	-	> .5
Fatalistic prsent	3.11	0.59	2.72	0.90	3.25	< .05
Future	3.42	0.41	3.43	0.451	-	> .5

The results show that a negative perception of the past and a fatalistic perception of the present significantly differentiated widowed and non-widowed women. Widows have a much worse perception of the past—perhaps due to the loss of a spouse, excessive burden of responsibilities related to raising children and work, or a lack of support from a close person, most often the spouse. Statistically significant differences were also found in the fatalistic perception of the present. Widowed women, who often are left alone after their children become independent and who have finished their professional life perceive the present time in a more fatalistic way than do people who have not lost their life partner. As P. and J. Chauchard (1977) stated, "it is not good to grow old alone, although this solution is easier, because the old age often intensifies the lack of communication which is connected with human nature. Dialogue and authentic communication are a must in life..." (p. 174).

The results obtained by all the surveyed women differ from the "ideal" results presented by Zimbardo. The greatest differences involve the present fatalistic as well as past negative and past positive perspectives.

Due to the insufficient number of widowed men, their results were not included in the analysis. Among the non-widowed women, the lowest results in the past negative perspective ($x = 1.3$) were obtained by an unmarried woman aged 68, with a university degree and a doctorate, still working professionally. She was a positive person, full of plans for the future. As a manager of a university team, she constantly developed new ideas. She had high self-esteem and believed that what happens to her was due to her work and skills. She had a strong bond with her family, whom she was constantly helping not only financially, but also by dealing with many difficult matters. She also helped many other people. Thinking about the past, she returned to positive experiences among friends, which she gladly recalled. She was an agnostic, but respected believers.

Among the group of widows, the highest results in the past negative perspective ($x = 4.1$) were obtained by two women. One of them, 72, with secondary education became a widow at the age of 30. She worked for 40 years until she retired. After the death of her husband, she had to take care of her children. She did not have close friends. She had never been involved in any nonprofessional activities. She lived alone, although she maintained contact with her children and

grandchildren whom she supported financially. However, she believed that the family, especially grandchildren, keeps in touch with her mainly because she shares her pension with them. She spent her time talking to her neighbours. She went to the cinema sometimes. She considered herself a believer, but not a practitioner. She assessed her current life as sad, difficult, and without joy.

The second woman who also obtained very high results in the past negative perspective was a woman aged 63, with a vocational education. She had been a widow for about 20 years. She lived alone, but her daughter and son visited her often. She knew that she could count on them and they could count on her in financial matters. She met her friends and neighbours once a month. She spent her time reading newspapers and watching TV. She had never been involved in any other activity besides work and homework. She assessed her current life as filled with work and care, but also deprived of joy. She declared herself as a nonpractitioner.

The study also focused on the differences between women and men in their perceptions of the past, present, and future, as it is widely believed that women cope better in life and are more resistant to life difficulties. These results are presented in Table 3.

Table 3

Means and Standard Deviations for Women and Men						
Time perspective	Women (<i>n</i> = 66)		Men (<i>n</i> = 25)		<i>t</i>	<i>p</i>
	<i>x</i>	<i>SD</i>	<i>x</i>	<i>SD</i>		
Past negative	3.00	0.85	2.96	0.78	0.201	.84
Past positive	3.42	0.60	3.33	0.52	0.650	.52
Present hedonistic	3.00	0.72	2.95	0.58	0.306	.76
Present fatalistic	2.9	0.75	3.12	0.69	1.252	.21
Future	3.42	0.41	3.36	0.57	0.539	.59

On the basis of the obtained results, it may be stated that differences in time perspectives among the surveyed women and men over 61 years of age are similar and statistically insignificant. Both women and men in this age group perceived the past, present, and future similarly. It does not mean, however, that such differences do not occur among younger generations, especially among people aged 25–35 and 36–59.

The study also included the analysis of attitudes towards religion and its influence on time perspective among women older than 61 years (see Table 4).

Table 4

**Perception of Time and Attitude Towards Religion
In Women Aged 61 and Above**

Time perspective	Believers and practitioners (n = 24)		Believers and nonpractitionaires (n = 22)		Nonbelievers (n = 11)		F	p
	M	SD	x	SD	x	SD		
Past negative	3.1	0.68	3.3	0.79	2.8	0.82	1.638	.204
Past positive	3.5	0.57	3.5	0.67	3.7	0.48	0.499	.610
Present hedonistic	2.9	0.64	3.2	0.72	3.1	0.76	1.099	.342
Present fatalistic	2.9	0.62	3.4	0.76	2.5	0.82	6.333	.003
Future	3.5	0.43	3.6	0.36	3.5	0.56	0.361	.699

A statistically significant difference was found in the present fatalistic perspective between regular believers and those declaring themselves to be nonpractitioners and nonbelievers. Faith in God and attachment to religion positively influenced acceptance despite difficulties, worries, and suffering which occur in life.

On the basis of the obtained results, it may be stated that having a close person to live with, being involved in professional work, or caring for grandchildren as well as following one’s interests and hobbies allow the elderly to enjoy life and be open to new experiences in old age. Satisfying contacts with family and friends, as well as faith in God and regular participation in religious practices make their lives happier.

Inactive people who are living alone, are usually focused on their current life, perceiving it mainly in terms of failure that can no longer be rectified and the harm they suffered from the hands of fate and others. They usually have lower self-esteem and do not believe that their lives can change for the better. Moreover, they do not see their lives as meaningful. People who spend the last years of their life in social nursing homes are in a very difficult situation. Because of health, disability, and, above all, lack of a family that would support them, they must abandon the place where they spent most of their lives and live with strangers. What is more, they have to adjust to the

regulations of the new institution. Table 5 presents the Time Perspective Inventory results of people over 60 years old living in their environment and people staying in nursing homes.

Table 5

Perception of time and place of residence						
Time perspective	People living outside social nursing homes (<i>n</i> = 66)		People leaving in social nursing homes (<i>n</i> = 30)		<i>t</i>	<i>p</i>
	<i>x</i>	<i>SD</i>	<i>x</i>	<i>SD</i>		
	Past negative	2.88	0.86	3.40		
Past positive	3.45	0.61	3.52	0.65	0.47	.63
Present hedonistic	2.97	0.82	3.14	0.62	0.93	.30
Present fatalistic	2.84	0.76	3.35	0.61	2.06	.04
Future	3.54	0.46	3.41	0.53	1.199	.13

The results show that negative past and present fatalistic time perspective significantly differs between people who, despite reaching retirement age are still independent (or receive such help and support from their families that they can still live on their own) and people who live in social nursing homes. Residents of nursing homes negatively assess their current life, despite the fact that nursing homes provide them with housing, food, medical, and rehabilitation assistance. Unfortunately, functioning well and enjoying life also involves other needs, which no institution can satisfy.

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Assistance to Ukrainian scientists in participating in international scientific events that take place within the territory of the EU countries, in particular, participation in academic conferences and internships, elaboration of collective monographs.

2. Scientific analytical research

Implementation of scientific analytical research aimed at studying best practices of higher education establishments, research institutions, and subjects of public administration in the sphere of education and science of the EU countries towards the organization of educational process and scientific activities, as well as the state certification of academic staff.

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