Psychological Perspectives on Health and Disease

VOLUME 1

Determinants of Somatic and Mental Health

Konrad Janowski
editor

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DETERMINANTS OF SOMATIC AND MENTAL HEALTH

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Konrad Janowski
Institute of Psychology
University of Economics and Human Sciences in Warsaw, Poland

Daniel Pankowski, Kinga Wytrychiewicz
Faculty of Psychology, University of Warsaw, Poland

Corresponding author: Daniel Pankowski
d.pankowski87@gmail.com

Immune Power Personality Questionnaire – rationale, development, and psychometric properties

Introduction

As early as 1964, Solomon and Moos suggested a theoretical model integrating the possible relationships between emotions, immunity, and disease. They made a claim that certain personality factors may make a person more susceptible to disease through the impact of the nervous system on the immune system. In reference to this, Antonovsky (1987) proposed that there might exist personality characteristics which enhance immunity and make a person resistant to negative consequences of psychological stress on physical health. In line with this claim, Antonovsky postulated the concept of the *sense of coherence* – a general personality orientation which also stimulates the immune system to work more effectively and reduce the risk of illness.

Following research in salutogenesis, commenced by Antonovsky, Dreher (1996) proposed a similar concept based on his systematic review of studies that identified specific personality characteristics associated with physiological resilience. He identified seven personality traits which, together, build up what he labelled the *immune power personality* (IPP). While discussing immunologically strong personality traits in detail, Dreher (1996) supplemented their descriptions with findings from empirical studies containing, among others, measurements of immunological parameters and case studies, which were to additionally provide evidence for their relationship with better health.

Dreher (1996, p. 2) believes that the IPP characterizes people who perceive stressful situations or crises as opportunities for development without engaging in avoidance; such people are flexibile and highly adaptive to the environment and social situations; they can find joy and meaning in everyday life.

Immune power personality traits distinguished by Dreher (1996) are associated with more effective coping with stressful everyday events and constitute the so-called ”healthy traits” that protect against distress. These traits can be treated as personal resources that allow the individual to cope with their own emotions as well as social situations, and to enjoy well-being and health.

According to Dreher (1996), the traits that make up the IPP can be strengthened. This proves that they are not fixed and immutable elements of personality that only some people inherit, but are considered by Dreher as resources and so-called “healthy capacities,” possessed from birth and expressed in an individual way. They can be understood as traits or dispositions for a particular behaviour that occur in individuals on a certain continuum.

Despite its name indicating associations with the physiological aspect of human functioning, the IPP is a complex theoretical construct including constellations of various traits for which a connection with mental and physical health has been demonstrated.

Each of the features described in Dreher’s (1996) concept is directly or indirectly related to a stronger and more efficient immune system. These features are:

Attend, connect, and express (ACE)—The concept of the ACE factor is related to the research of the American psychologist Gary E. Schwartz, who recognized that the ability to notice, connect together, and express internal states of the body is associated with more efficient cardiovascular and immune system functioning (qtd. in Dreher, 1996, p. 2-3).

Capacity to confide—the ability to reveal secrets, traumas, deepest thoughts, feelings, and memories (Dreher, 1996, p. 96-124). In numerous studies on the disclosure of traumatic experiences (e.g., Pennebaker et al., 1995, 1988; Pennebaker & O’Heeron, 1984), Pennebaker has demonstrated that individuals who reveal their secrets, traumas, and emotions and confide in others have faster immune responses, healthier psychological profiles, and develop fewer illnesses (see Dreher, 1996).

Hardiness—includes three components: (a) sense of control over quality of life, health, and social conditions; (b) sense of commitment to work, creative activities, and relationships; and (c) sense of challenge – perceiving stress more as a challenge than a threat. People who display high levels of hardiness suffer less from chronic diseases and report fewer of them. Individuals with a hardy character also have a more powerful immune system (Dreher, 1996). Hardiness is thus a constellation of personality traits that function as immune resources during stressful events (Kobasa & Puccetti, 1983, p. 840). People with a hardy personality show a high degree of involvement and control, and tend to perceive stressors as challenges.

Assertiveness—the ability to be assertive in expressing needs, thoughts, opinions, and feelings while also taking into account the feelings and needs of others, the ability to accept praise and criticism, and the ability to refuse and disagree (Dreher, 1996, p. 175). Solomon's research, aimed at identifying psychological factors affecting immunity in AIDS patients, noted that assertiveness was strongly correlated with higher immune cells activity. Interestingly, this effect influenced not only one, but many types of immune cells considered crucial in the fight against HIV infection (qtd. in Dreher, 1996, p. 170–171).

Affiliative trust—positive desires and loving relationships based on respect and trust, in contrast to the motive of affiliation, which only defines the need for people to create relationships (see Dreher, 1996). Affiliative trust is the easiness of establishing deeper relationships (e.g., friendships) with other people and is associated with positive expectations regarding these relationships. In contrast to the experience of love, which positively affects the immune system, a sense of loneliness, as proved by, among others, Kiecolt-Glaser et al. (1984) in psychiatric patients, is associated with lowered activity of immune cells.

Healthy helping—helping others, whether significant others or strangers (Dreher, 1996, p. 255–287). People who help not only friends and family, but also strangers, have a healthier immune system, feel less back pain and feel significantly better compared to people who are not involved in helping others (see Dreher, 1996, p. 258-260; 283).

Self-complexity—characteristic of people whose personality has a variety of well-developed elements (including, among others, social

roles, relationships with other people, activities, interests, and identity), and is versatile and integrated at the same time (Dreher, 1996, p. 289). Such individuals think about themselves in many categories, assume many social roles, have many interests, and, at the same time, are able to integrate them.

It should be noted that tools that would provide an integrated methodology of measuring all seven IPP traits have not been developed thus far.

Material and Methods

The development of the Immune Power Personality Questionnaire (IPPQ) is presented in Figure 1, showing the six stages of research.

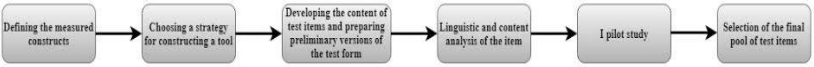

Figure 1. Development plan of the Immune Power Personality Questionnaire.

Results and Discussion

After individually reviewing the available studies and concepts for each of the studied properties, operational definitions of the seven IPP traits were developed (Step 1). The previously defined IPP traits were then reconstructed in the form of questionnaire items (Step 2). On the basis of the definitions and the existing literature, indicators of each of the traits were searched for in the form of behaviours, beliefs, and emotions. This way, preliminary experimental scales were constructed, separately for each of the seven traits. The developed versions used a four-point scale, from *definitely agree* to *definitely disagree* (Step 3). Questionnaire item pools (about 300 items total) were subjected to linguistic and content analysis using the method of competent raters. Students of the 4th year of the MA psychology program at the University of Finance and Management in Warsaw with the specialization in health psychology were selected as competent raters. Each of the competent judges received forms with the definitions of a given trait and its associated questionnaire items. The raters assessed the conformity of each item's content with the given definition. The assessments were made on a 10-point scale, where higher values meant higher relevance. The aim of this stage was

to determine how accurately the individual test items operationalized the definitions of the IPP traits. High accuracy of a given item was evidenced by high average grades issued by the raters and high compliance of the raters' assessments. The results obtained this way were later used as one of the criteria for selecting items for the final version of the questionnaire (Step 4). Pilot Study I (Step 5) was conducted using the entire initial item pool, separately for each trait, in seven different samples. Table 1 presents the basic sociodemographic characteristics of the samples in which initial sets of items for each IPP feature were tested.

Table 1

Pilot Study I Sample Descriptives

Sample	Trait	Sex					Age			
		Female			Male					
		N	*N*	*%*	*N*	*%*	*Min*	*Max*	*M*	*SD*
1	Attend, connect, and express	83	63	75.9	20	24.1	15	61	29.3	10.86
2	Capacity to confide	50	35	70	15	30	19	73	30.74	13.98
3	Hardiness	51	30	58.8	21	41.2	19	46	24.53	5.33
4	Assertiveness	88	48	54.5	40	45.5	18	55	25.3	7.92
5	Affiliative trust	68	30	44.1	38	55.9	19	60	32.56	12.72
6	Healthy helping	72	41	56.9	31	43.1	19	69	34.35	13.18
7	Self-complexity	53	22	41.5	31	58.5	18	71	33.82	11.96

The selection of the item pool in the experimental version of the IPPQ was made based on the combined application of criteria resulting from the assessments of competent raters and Pilot Study I.

– For content validity testing of items performed using the raters' assessments, it was assumed that the final pool for a given feature will include those items that are characterized by the highest average values and, simultaneously, the highest possible rater score, measured by the standard deviation value of the assessments .

– For the criterion from the pilot studies, it was assumed that for each feature, the items that reduce the reliability of the scale (i.e., Cronbach's α value for the scale would increase after removing the

item) will be rejected. Applying this criterion, items reducing reliability were systematically eliminated one by one until further elimination did not lead to an increase in reliability.

A total of 63 items were selected this way. They were included in the experimental test version, containing items for all IPP traits on one sheet (IPPQ v. 1).

Pilot Study II

Items selected in the previous stage were placed on one sheet, but their arrangement was made so that the items concerning a given trait would not be directly adjacent to each other. Pilot Study II, which also included the Social Approval Questionnaire (Drwal & Wilczyńska, 1980), had two aims:

1) Reverification of the items' psychometric properties and subscales in a condition where the items are placed on one test sheet and

2) Assessment of the relationship between the IPPQ results and the variable of social approval.

The study was conducted on a sample of 211 people (153 women, 58 men; M_{age} = 35.05, SD = 13.79)

The properties of the distribution of the IPPQ v. 1 scales were satisfactory. All subscale scores and the global score had distributions which did not differ significantly from the normal. The skew rates were close to low, and the kurtosis values were acceptable (kurtosis exceeded 1.0 only for the global score).

All scales of the IPPQ v. 1 showed statistically significant positive correlations with the variable of social approval. The strongest correlations were recorded for the scales of healthy assistance, affiliative trust, and for the global score. Correlations for these subscales reached values close to 0.50. The analysis of the correlation matrix between individual items and the variable of social approval showed that many items were statistically significantly correlated with social approval, reaching correlations of over 0.40 in the case of a few items. Therefore, the items were revised further, removing those items that most strongly correlated with social approval. At the same time, due to the relatively strong relationship of the IPPQ v. 1 scales with social approval, we decided to introduce a control scale to the

questionnaire, measuring the intensity of the need for social approval. The introduction of such a scale provides the opportunity to better control attitudes towards testing adopted by the subjects.

Additionally, within each subscale of the IPPQ v. 1, the reliability analysis was repeated, analysing the contribution of each item to the incremental reliability of the given subscale.

The content of some of the items has been modified and nine new items have been added, in particular to the subscales with the lowest reliability coefficients. As a result, the number of items was reduced to 55. The resulting version of the questionnaire was named IPPQ v. 2 and subjected to Pilot Study III.

Pilot Study III

The primary goal of this study was to develop a social approval subscale that would serve as a control scale in the IPPQ. To this end, 170 people participated in the study (93 women, 77 men; M_{age} = 28,48, SD = 11.21). In order to construct the internal IPPQ control scale measuring social approval, parts of the Social Approval Questionnaire were used. Therefore, five items were selected which were correlated the highest with the overall result of the IPPQ. Subsequently, these items were included in the IPPQ as a control scale.

An analysis of the reliability of the IPPQ v. 2 subscales was carried out. In the course of this analysis, the items contributing the least to the reliability of a given subscale were eliminated from some of the subscales. Three items were eliminated, leaving six items in each scale. In this way, the final version of the questionnaire was obtained, covering a total of 49 items, comprised of 42 items measuring IPP traits and seven items from the control scale measuring social approval. At the same time, a new order-alignment of the items was introduced.

Validation Study

The validation study was conducted on a sample of 727 participants from the general population. This sample included people aged between 16 and 81 years. About 63% of the sample were women, and about 36% were men.

Among the respondents, the most numerous group was comprised of people with a secondary education (about 34%) and a master's degree (about 32%). The largest subgroup of respondents (about 38%) lived in large cities (over 100000 residents), the least numerous consisted of people living in the countryside (about 18%).

Reliability of the Immune Power Personality Questionnaire

For individual subscales of the final version of the IPPQ, a reliability analysis (internal compliance) was carried out using the Cronbach's α coefficient. The obtained reliability ratios for the eight subscales and the global score are shown in Table 2. The test-retest reliability was expressed as Pearson's *r* correlation coefficients between the two measurements carried out on the same sample four weeks apart. This estimate of reliability was made on a separate sample. The sample consisted of 44 people, 34 women and 10 men. The average age in this sample was 26.32 (*SD* = 8.83). The values obtained are shown in Table 2.

Table 2

Internal Compliance Coefficients and Constancy for Individual Scales of the Immune Power Personality Questionnaire

IPPQ scales	Reliability (Cronbach's α)	Reliability (test–retest)
Attend, connect, and express	0.62	0.72
Capacity to confide	0.87	0.75
Hardiness	0.81	0.67
Assertiveness	0.84	0.85
Affiliative trust	0.8	0.73
Healthy helping	0.85	0.84
Self-complexity	0.84	0.82
Global score	0.92	0.87
Social approval	0.65	0.85

The reliability of the IPPQ was satisfactory. The obtained reliability coefficients estimated by internal compliance (Cronbach's α) for most of the subscales were high (above .80). The highest possible reliability was achieved by the global score and the subscales of the capacity to confide and assertiveness. Relatively lower

reliability coefficients were obtained in the ACE factor and the social approval scale. Satisfactory and high values of Cronbach's α reliability coefficients indicate the internal conformity of the tool and prove that the measurement can be treated as reliable.

The stability ratios were generally similar or slightly lower than the internal compliance rates for most of the scales. For the ACE factor and the social approval subscale, the stability ratios were higher than the internal compliance ratios. The lowest stability rate (0.67) was obtained for the subscale of hardiness. For other subscales, these indices were in the satisfactory (above 0.70) or high (above 0.80) value ranges. The highest value of the stability index was obtained for the global score (0.87). These values generally indicate satisfactory or high stability of the IPPQ results over time and prove that the questionnaire can be treated as reliable also in this aspect.

Factor Analysis of the Immune Power Personality Questionnaire

In order to determine the relevance of the factors in the IPPQ, an exploratory factor analysis was carried out. The main component method with varimax orthogonal rotation and the Keizer correction was used. Eigenvalues greater than 1.0 were assumed as the criterion for the identification of the factors (Table 3).

A 10-factor structure was obtained. Six of the obtained factors were unequivocally equivalent to six predetermined scales of the IPP traits. Two of the obtained factors were created by items belonging to the ACE scale and two factors were created by items belonging to the social approval scale.

The ACE scale did not obtain confirmation as a separate factor in the factor analysis: Items 9 and 25 formed one factor, Item 1 created an independent factor, Items 41 and 33 obtained the highest factor loads in the factor of the capacity to confide, and Item 17 obtained the highest factor load on the scale of ffiliative trust. However, positions that joined the scales of the capacity to confide and affiliative trust had factor loads lower than the items originally forming these scales.

The items that created the social approval scale a priori have also been split. Items 40, 49, and 32 formed an independent factor, Items 16 and 8 also formed an independent factor. Item 48, which is part of

Table 3

Factor Charge Matrix of the Immune Power Personality Questionnaire test items

Scale	Item	Factor									
		1	2	3	4	5	6	7	8	9	10
CTC	10	0.81									
CTC	18	0.78									
CTC	2	0.78									
CTC	34	0.78									
CTC	42	0.71									
CTC	26	0.65									
ACE	41*	0.64								-0.20	0.05
ACE	33*	0.41								-0.07	-0.24
AT	29		0.77								
AT	13		0.7								
AT	5		0.63								
AT	37		0.63								
AT	45		0.57								
AT	21		0.45								
ACE	17*		0.45							0.08	0.08
SA	48*		0.38					0.30	0.18		
HH	30			0.83							
HH	14			0.8							
HH	46			0.71							
HH	6			0.7							
HH	38			0.68							
HH	22			0.58							
HH	24*			0.51				0.26	-0.04		
AS	20				0.80						
AS	4				0.77						
AS	36				0.70						
AS	44				0.66						
AS	28				0.66						
AS	12				0.65						
SC	31					0.77					
SC	15					0.73					
SC	7					0.73					
SC	23					0.72					
SC	39					0.63					
SC	47					0.52					
HA	27						0.7				
HA	11						0.65				
HA	19						0.63				
HA	3						0.61				
HA	43						0.58				
HA	35						0.49				
SA	40							0.68			
SA	49							0.61	0.29		
SA	32							0.55	0.13		
SA	16							0.17	0.72		
SA	8							0.09	0.71		
ACE	1*									0.65	-0.04
ACE	9									-0.03	0.52
ACE	25									0.03	0.49

Note. ACE = attend, connect, and express; AS = Assertiveness; AT = Affiliative trust; CTC = capacity to confide; HA = Hardiness; HH = healthy helping; SA = social approval; SC = self-complexity* = Items that received the highest factor load not in their factor.

the social approval scale joined the affiliative trust scale and Item 24 joined the healthy helping scale. The items that created the social approval scale a priori have also been split. Items 40, 49, and 32 formed an independent factor, Items 16 and 8 also formed an independent factor. Item 48, which is part of the social approval scale, joined the affiliative trust scale and Item 24 joined the healthy helping scale. The last two items of the social approval scale obtained relatively lower charges in these factors than the items originally forming them.

Ten isolated factors explained a combined 59% of the variance in the test (see Table 4).

Table 4

Variance in the Immune Power Personality Questionnaire explained by factors distinguished in the factor analysis

Factor	Sum of squares of loads after rotation		
	Together	% variance	% cumulated
1	4.66	9.5	9.5
2	4.2	8.56	18.06
3	3.97	8.09	26.16
4	3.61	7.36	33.51
5	3.51	7.17	40.68
6	3.07	6.27	46.95
7	1.74	3.54	50.5
8	1.71	3.48	53.98
9	1.39	2.83	56.81
10	1.14	2.33	59.14

Although no eight-factor structure was obtained, six out of seven scales measuring the IPP traits achieved an almost perfect mapping, consistent with the assumptions. This confirms the validity of the items in the subscales constructed a priori and the legitimacy of distinguishing these scales as measuring relatively independent constructs.

Conclusions

In sum, the results of the factor analysis did not confirm the validity of the ACE and social approval as separate scales. This may indicate a common range of variance between both ACE, social approval, and other IPP traits. It should also be emphasized that the ACE factor, by its definition, is heterogeneous—it includes the ability to recognize

own internal states, the ability to associate them with the stimuli that cause them, and the ability to adequately respond to them.

Analyses showed that for six out of the seven scales measuring IPP traits, it was possible to fully confirm the legitimacy of separating these subscales in the exploratory factor analysis. The results obtained on the IPPQ can be treated as personality correlates of various aspects of physical health. Further research should focus on verifying the validity of the IPPQ. In particular, it should focus on the comparison of the IPPQ results between clinical groups of people suffering from various diseases and healthy individuals. In addition, further research should aim to verify hypotheses about the relationship between IPPQ results and parameters of the immune system.

The application of the questionnaire may include not only scientific research, but also the assessment of IPP among healthy people as well as patients, allowing for determination of the strength of individual traits. In practice, the analysis of an individual profile of IPP traits can help to identify those characteristics that can contribute to an increase or decrease in physiological immunity and thus affect health. It seems that the intraprofile analysis in particular may be a valuable source of information orientating therapeutic or prophylactic activities for a specific person (e.g., an individually developed training program).

Summary

In his book, Henry Dreher (1996) described research on seven personality characteristics which had been found to be linked to the functioning of the immune system. His literature review concluded that the IPP encompasses such dimensions as the ACE factor, the capacity to confide, hardiness, assertiveness, affiliative trust, healthy helping, and self-complexity. So far, however, no tool has been developed that would allow for a simultaneous measurement of these traits. This chapter presents the summary of Dreher's research on IPP and results of the studies on the development and psychometric validation of the IPPQ. The results provide data confirming the reliability and validity of this new tool. The IPPQ can be used in the future in both scientific research and in clinical practice to enhance the diagnosis and therapeutic process.

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Gabriela Chojnacka-Szawłowska, Daniel Siemionko
Institute of Psychology
University of Economics and Human Sciences in Warsaw, Poland

Corresponding author: Gabriela Chojnacka-Szawłowska
g.chojnacka-szawlowska@vizja.pl

Cognitive representation of disease, sense of coherence, and health behaviours of women and men with type 2 diabetes

Introduction

Diabetes is a rapidly growing global health threat. The number of people currently suffering from diabetes in Poland is estimated at around 3 million, and it is assumed that over 700000 of those people are not aware of suffering from this disease. Estimates illustrate that after the age of 60, one in four people become affected, and after 80, almost half of the respondents report suffering from diabetes. Type 1 diabetes affects almost 200000 children and adolescents in Poland (Czupryniak & Strojek, 2015; Nowakowski, 2002; Tatoń et al., 2008)

Diabetes is usually defined as a group of metabolic diseases characterized by hyperglycemia resulting from a defect in insulin secretion and/or action. An important element of the clinical picture, hyperglycemia is determined at a level equal to or higher than 126 mg/dl in a fasting test (double determination, i.e., on two different days), above 200 mg/dl in a 75 g glucose test after two hours, and by any occurrence of glucose concentration equal to or higher than 200 mg/dl within 24 hours (Czupryniak & Strojek, 2015; Nowakowski, 2002).

According to the World Health Organization (WHO) classification, there are four common types of diabetes: type 1, type 2, gestational diabetes (Van Lieshout & Voruganti, 2008) and others. This disease may occur after the use of certain drugs, as a result of pancreatic diseases, genetic and immunological conditions, or due to qualitative deficiencies in nutrition (Nowakowski, 2002; Skupień & Małecki, 2007).

Type 1 diabetes (diabetes mellitus) is most often perceived by patients as a disease that hinders functioning, causes changes in the current lifestyle, and imposes the need for control, at least in relation the concentration of glucose. These difficulties also relate to the need for constant medicine taking, medical visits, observance of a diet, and so forth (Czupryniak & Strojek, 2015; Korzeniowska-Jabłecka, 2008; Koziarska-Rościszewska, 2008; Nowakowski, 2002; Tatoń et al., 2008).

Type 1 diabetes is most commonly diagnosed in childhood and adolescence. The cause is considered to be the destruction of beta cells in the pancreas, which causes a lack of insulin conditioning proper metabolic changes. Alternatively, the insulin may have a defective structure which prevents the transport of glucose to the cells. Insulin therapy is used in the treatment of type 1 diabetes—the patient regulates the doses depending on the current level of glycemia, which, in turn, depends on the type and amount of food consumed and physical activity. Insulin is administered by injection or by means of a personal insulin pump in a subcutaneous infusion.

Type 2 diabetes is diagnosed in about 90% of the population, usually after the age of 30, although it is increasingly often diagnosed in the developmental period (Peterson et al., 2007). This type of diabetes is most commonly associated with obesity. Reduced, relatively normal, or excessive insulin secretion is observed in the patients, but their cells show resistance to insulin activity.

Management is very similar in the treatment of type 1 and type 2 diabetes despite their different pathogenesis and course. The primary aim of treatment is to prevent complications, especially vascular and those associated with acute hyper- or hypoglycemic conditions. In order to assess the metabolic control of diabetes, the percentage of glycated hemoglobin HBA1C is used (Czupryniak & Strojek, 2015; Otto-Buczkowska, 2003; Tatoń, 1982; Tatoń et al., 2008).

Excess glucose is removed from the body through the kidneys to the urine. Persistent impaired glucose metabolism gradually leads to numerous systemic dysfunctions, fatigue, and even life-threatening comas. Elevated blood glucose levels and the presence of sugar in urine contribute to the reduction of the immune defense against bacterial infections and fungi. Diabetes causes changes in blood vessels and the nervous system, and gradually leads to diabetic

polyneuropathy. It is associated with damage to the eyesight, including the risk of blindness, kidney damage, cerebral strokes, risk of dementia, gangrene as a result of impaired wound healing, amputations of lower limbs, and sexual dysfunctions. Depression is diagnosed two to three times more often in type 1 diabetic patients than in the general population. In modern therapeutic approaches to diabetes, treatment is also targeted at comorbidities such as ischemic heart disease, hypertension, kidney disease, anxiety disorders, depression, and so forth (Anati-Otong, 2007; Bishop, 2007; Czupryniak & Strojek, 2015; Hu et al., 2007; Langley-Ewans & Carrington, 2006; Sheridan & Radmacher, 1988; Tatoń et al., 2008). Depression in an advanced stage of diabetes may be associated with vascular pathology, comorbidities, and an increased risk of early death, but the nature and direction of these relationships is not sufficiently understood (Brown et al., 2006; Cleaver & Pallourios, 1994). It was found that social support in the form of perceived availability of help from family and friends protects against depression and indirectly affects emotional functioning by facilitating less catastrophic perceptions of the disease (Starowicz, 2009).

The risk factors for diabetes include a number of biological, environmental, as well as psychological factors, including stress and, especially, trauma (Cleaver & Pallourios, 1994; Hu et al., 2007; Langley-Evans & Carrington, 2006; Martz & Livenh, 2007; White et al., 2007). Patients with diabetes and depression report more stressful past events than do those without depression (Pibernik-Okanovic et al., 2005).

Clinical and Psychosocial Problems of Diabetic Patients

People with diabetes usually experience four categories of stressors:

– cognitive stressors, the appearance of which is related to the perception of the disease itself, its symptoms, treatment options, and limitations that affect many areas of life.

– emotional stressors, which are associated with feelings of hurt, guilt, disability, helplessness, reduced self-esteem, and the belief that the diagnosis is final and impossible to change.

– behavioural stressors, associated with strict adherence to the necessary medical recommendations. An additional stressor is the necessity of coping with situations requiring immediate intervention such as hypoglycemia or ketosis. Patients are also burdened by the need to make their own medical decisions based on self-control.

– social stressors, which concern functioning in different social roles such as parent, spouse, or employee. Diabetes often forces occupational limitations, which increase stress (Tatoń et al., 2008).

The negative role of stress in the course of diabetes is documented in many studies. They show that the quality of life of diabetic patients is affected to a large extent by dietary restrictions, medicine, current symptoms, and comorbid diseases (Eren et al, 2008). The subjective evaluation of quality of life by diabetic patients is strongly influenced by depression. A higher level of depression is associated with reporting of more severe diabetes symptoms, lower active involvement in treatment, lower health control, and lower level of physical functioning. With regard to type 2 diabetes patients, the improvement of health-dependent quality of life is one of the priorities of treatment, aimed at normalizing metabolic parameters and thus improving quality of life.

The patients' cooperation in the treatment and prevention of adverse somatic and psychosocial consequences is conditioned by many factors, depending on the patients' individual characteristics, age, gender, the clinical course of the disease, and quality of treatment, as well as general social conditions. Adaptation to the disease process is physically unpleasant, involving continuous control of glucose levels, treatment, prevention of health deterioration, as well as the process of adjusting to various limitations (Chojnacka-Szawłowska, 2012; Korbel et al., 2007).

The Importance of Cognitive Representation of Disease in the Treatment Process

People base their efforts to cope with possibile health deterioration and risks on their perceptions of these threats, also known as cognitive representations of disease/health hazards. Emotions are also incorporated into these cognitive representations through an emotional response to the perception of health threats, known as the emotional

representation of disease/health hazards. These processes also occur in diabetic patients (Lange & Piette, 2006; Singh, 2011; Starowicz, 2009).

The model of self-regulation (Leventhal et al., 1980; Leventhal et al., 1984; Singh, 2011), also known as the common sense model of illness (CSM), explains and confirms the role of beliefs, emotions, and behaviours that determine participation in the treatment processing and the functioning of a person as a patient (Hagger & Orbell, 2003). Several variables were distinguished as important in the self-regulation model. These include cognitive processes involving the perception of susceptibility to disease, as well as the ability to act and manage the disease and the emotional responses to it. Another category concerns the intentionality of action, based on the perception of costs and benefits of avoiding the disease. The variables also include views on positive and negative health behaviours. Lastly, perceptions of self-competence or effectiveness in health-related activities play a part. The self-regulation model (Leventhal et al., 1984) also distinguishes five dimensions forming the cognitive representation of the disease: (a) causes (beliefs about biological and/or psychological factors responsible for the disease), (b) consequences (beliefs about the impact the disease has on the person's quality of life), (c) identity of the disease (a concrete or abstract notion that used to describe the illness), (d) timeline (beliefs about how long the illness will affect the person's life), and (e) controllability of treatment (the ability of to control treatment by themselves or with the help of others).

According to Leventhal et al. (1984), a process of emotional representation of the disease develops parallel to the cognitive representation. It allows the person to build a plan for managing emotions in response to the disease and for an active process of behavioural self-regulation. In turn, this plan influences the cognitive representation of the disease and the current evaluation of personal coping effectiveness. In this process, the patient assesses the effectiveness of coping strategies used in the cognitive and emotional system. The person assesses whether the coping strategies are adeqguate to the representation of the disease. Results of empirical studies confirm the importance of the content of various disease representations in treatment and adaptation, including diabetes

(Leventhal et al., 2016; Moss-Morris et al., 2002; Singh, 2011; Starowicz, 2009). It was noted that in adolescents, beliefs about the impact of physical exercise and diet on disease course, subjectively assessed as serious and with possible complications, influenced their frequency. In adolescents, beliefs about the effectiveness of glucose control had a greater predictive value for this type of behaviour than did the belief that diabetes is a life-threatening disease. Among adult diabetes patients, the belief that glucose control has a positive effect on the course of diabetes was positively correlated with objective glucose levels (Starowicz, 2009).

The Sense of Coherence in the Treatment of Diabetes

The divergence from a purely pathogenic view of disease and the inclusion of a pro-health orientation in its course is part of Aaron Antonovsky's (1995) concept of salutogenesis.

This approach emphasized the influence of those health resources and potentials which play a pro-health role in the face of external and internal stressors (Dolińska-Zygmunt, 1996). Individuals do not have any pre-established procedures of response to stressors in order to adapt to new situations. These stressors do not have to lead to negative emotions every time, as they can play a mobilizing role, which can help create the sense of coherence.

There are three types of stressors: chronic stressors, important life events, and situations that do not force resources to be mobilized to counteract them but are nevertheless negative and increase stress.

In this context, an important component of the salutogenesis model are the generalized immune resources, which include the properties of the individual and their environment that help avoid stressors and cope with tension without it transforming into a process and state of stress (Kirenko & Byra, 2011).

According to Antonovsky's (1995, 1997) definition, the sense of coherence is

> a global human orientation that expresses the extent to which a person has a dominant, stable but dynamic sense of certainty that the stimuli flowing from the internal and external environment throughout life are structured, predictable and explainable. Resources are available to meet the demands of these stimuli. These requirements are the challenge worthwhile effort and commitment (Antonovsky, 1995, p. 34).

Research on the sense of coherence has led to distinguishing three components of this construct: the sense of comprehensibility, meaningfulness, and manageability. Patients with type 1 or 2 diabetes are characterized by different levels of coherence. Higher coherence was associated with more frequent pro-health behaviours regardless of diabetes type (Ahola et al., 2012, qtd. in Rynkiewicz-Andryśkiewicz et al., 2014).

Studies have shown that a lower level of coherence in diabetic patients, on all its components, was strongly associated with more severe depression. On the other hand, a high level of coherence is associated with lower depression. Also, diet increases coherence and decreases depression levels (Kurowska et al., 2009).

The study by Sanden-Eriksson (2000, qtd. in Kurowska & Figiel, 2009) involving people with type 2 diabetes is very important in this trend, as it indicated a direct link between the sense of coherence and treatment effects, which were influenced by the acceptance of the disease, health state control, and patient involvement. It was observed that people with a higher sense of coherence had better motivation to cope with and manage the symptoms of the disease, and that people with a low sense of coherence were much more likely to lead a lifestyle that adversely affected their health, were less involved in treatment, and did not follow medical recommendations as strictly.

However, the study by Kurowska and Rusińska (2011) showed that diabetic patients were characterized by a moderate degree of coherence. The lowest results were obtained in the component of meaningfulness, which, according to the authors, may suggest that people with diabetes were only slightly focused on coping with the disease. They were not fully convinced that what they were doing made sense because the disease would accompany them to the end of their lives. Discussing these results, the authors point out that diabetic patients received the least emotional support, below the expected level.

Health Behaviours

In the psychological, medical, and sociological literature, there are different definitions of health and health behaviours.

Among the various theoretical approaches, the concept of health is related, for example, to individual goals. If a satisfactory goal is not possible to achieve, the hierarchy is re-evaluated and changed. Therefore, health is understood as the ability to modify and change

goals in accordance with new conditions (Juczyński & Ogińska-Bulik, 2003).

Sęk (2000, p. 539) characterized health behaviours as reactive, habitual, and/or intentional forms of human activity, based on objective knowledge of health and subjective beliefs. Therefore, the division into habitual health behaviours, that is, relatively constant behavioural patterns related to health activities and everyday health habits, and intentional health behaviours, targeted at specific goals, is important (Juczyński & Ogińska-Bulik, 2003).

Subjective beliefs about the disease were noted to exert an influence on health behaviours, especially dietary changes and increases in physical activity undertaken by patients suffering from type 2 diabetes (White et al., 2007). The emergence of chronic disease triggers new, individualised coping mechanisms and strategies (Juczyński, 2000).

The coping style itself is a relatively constant, individually developed set of behaviours activated in stressful situations (Heszen & Sęk, 2008).

According to Heszen-Klemens (1979), health behaviours are activities oriented towards health objectives. Referring to this approach, anti-health and pro-health behaviours can be distinguished. According to Gochman (1982, qtd in. Sęk, 2000) individual attributes such as expectations, motivation, beliefs, and a broader cognitive component should be included in the health behaviour concept. It is also worth noting that the emotional component as well as habitual behaviours are included in this definition.

An example of a narrow approach to the discussed issue is the classification by Harris and Guten (1979), who distinguished five groups of health behaviours on the basis of factor analysis:

– health practices, for example, weight control;

– safety practices, that is, preventive behaviours, for example, having basic medicine for sudden illnesses at home;

– preventive medical examinations;

– avoidance of environmental risks;

– avoidance of harmful substances, for example, tobacco.

Juczyński (2001) classified health behaviours into the following categories:

– good eating habits;

– preventive behaviours (including compliance with medical recommendations, seeking health/disease information);

– daily health practices (including physical activity and an adequate amount of sleep);

– appropriate psychological attitude (e.g., avoiding overly strong emotions).

A number of studies conducted in the early 1950s confirmed that the development of diseases of civilization is undoubtedly influenced by health behaviours and, consequently, lifestyle (Basińska, 2009). Lifestyle can be defined as health decisions and the resulting behaviours. This is a very important factor, as appropriate lifestyle changes allow for avoiding many diseases, and, in the event of a disease, changing its course (Basińska, 2009; Sheridan & Radmacher, 1998).

According to Sęk (2000), raising health awareness, enabling health control and participation in the achievement of health objectives, as well as developing and strengthening the health resources of the individual, including those in their immediate environment, is important in bringing about lifestyle changes (Basińska, 2009).

Research Methods

Taking into account the role of gender in the process of adaptation to disease and undertaking health behaviours (Rodin & Salovey, 1997) as well as the recently increasing physical activity of women (Wolańska et al., 1998, qtd. in Lipowski, 2005), the current study aimed at searching for similarities and differences in the perception of diabetes, sense of coherence, health behaviours, and their mutual relationships, in a sample of diabetic women and men.

Leventhal's Illness Perception Questionnaire was used to measure how the participants perceived their disease. The shortened version of this questionnaire consists of eight questions answered on a 10-point Likert scale. The questions concern (a) the impact of the disease on life, (b) beliefs about the duration of the disease, (c) possibilities of controlling the disease, (d) beliefs about the effectiveness of treatment, (e) beliefs about the intensity of disease symptoms, (f) beliefs about commitment to treatment, (g) personal understanding of the disease, and (h) beliefs about the impact of the disease on emotions (Moss-Morris et al., 2002).

An additional open-ended question asks the respondents to identify the causes that they consider most probable in the emergence of their

disease. Consent to use the Illness Perception Questionnaire in the current study was obtained from its authors by the co-author.

In order to measure the sense of coherence, Antonovsky's (1995) Orientation to Life Questionnaire was used. It contains 29 statements, with responses given on a 7-point Likert scale. The questionnaire is divided into three subscales: comprehensibility, manageability, and meaningfulness.

The participants' health behaviours were measured using the Health Behaviour Inventory by Juczyński (2001). The questionnaire contains 24 statements, with responses given on a 5-point Likert scale. The results can be calculated on four scales: (a) normal eating habits, (b) preventive behaviours, (c) health practices, and (d) positive mental attitude. It is also possible to calculate the overall result by summing up all test items.

Sixty people suffering from type 2 diabetes, including 30 women and 30 men, took part in the study. The participants were aged between 46 and 72 years (their mean age was about 62 years). The participants were patients of the Diabetes Clinic of the Central Clinical Hospital of the Ministry of Internal Affairs in Warsaw, Poland.

Results

There were no statistically significant differences between women and men with diabetes in the perception of their own disease. Thus, it can be concluded that they perceived their disease in a similar way. However, differences in the perception of the causes of the disease emerged. Men indicated obesity as the cause of their disease significantly more often than did women. In relation to other causes of the disease, the results did not differ significantly. Also, men and women suffering from diabetes did not differ in terms of their sense of coherence.

On the other hand, women differed from men in health behaviours. Statistically significant differences were found for general health behaviours, normal eating habits, and prophylactic behaviours. In each case, higher scores were obtained by women compared to men. Therefore, women suffering from diabetes were characterized by a higher level of health behaviours than men (see Table 1). Table 2 presents the correlation results for sense of coherence and perception of the disease by women and men. According to the results in Table 2, sense of coherence was significantly related to the perception of the disease in both women and men suffering from diabetes.

Table 1

Health Behaviour Inventory Results

Health Behaviour Inventory	Women		Men		*t*		
	M	*SD*	*M*	*SD*	*t*	*df*	*p*
General health behaviour	86.70	10.94	79.70	11.98	2.36	58	**.021**
Normal eating habits	3.54	0.73	2.98	0.71	2.98	58	**.004**
Preventive behaviour	3.83	0.61	3.31	0.66	3.22	58	**.002**
Positive mental attitude	3.43	0.67	3.53	0.52	−0.62	58	.537
Health practices	3.59	0.68	3.40	0.63	1.13	58	.264

Table 2

Correlations Between the Sense of Coherence and Disease Perception

Disease perception	SOC-29							
	Women				Men			
	SOC	COM	MAN	MEA	SOC	COM	MAN	MEA
Impact on life	−0.34	−0.32	−0.36	−0.27	**−0.71****	**−0.73****	**−0.68****	**−0.64****
duration	−0.15	−0.18	−0.22	−0.14	−0.15	−0.22	−0.25	−0.17
Control possibility	**0.58****	**0.50****	**0.59****	**0.61****	0.22	0.17	0.09	**0.37***
Treatment effectiveness	**0.65****	**0.57****	**0.66****	**0.65****	**0.53****	**0.54****	**0.54****	**0.49****
Symptom intensity	−0.35	−0.32	**−0.37**	**−0.40**	**−0.56****	**−0.57****	**−0.63****	**−0.54****
Commitment to treatment	**−0.43***	**−0.38***	**−0.46***	**−0.44***	**−0.54****	**−0.58****	**−0.61****	**−0.44***
Understanding of disease	0.28	0.28	0.23	0.36	0.22	0.13	0.16	0.27
Impact on emotions	**−0.70****	**−0.65****	**−0.68****	**−0.70****	**−0.72****	**−0.76****	**−0.71****	**−0.67****

Note. SOC = Global sense of coherence; COM = sense of comprehensibility; MAN = sense of manageability; MEA = sense of meaningfulness.
* $p < .05$; ** $p < .01$

Sense of coherence positively correlated with such variables as the possibility of control and confidence in the effectiveness of treatment. It negatively correlated with such variables as the impact of the disease on life, intensity of symptoms, involvement in the treatment, and the

impact of the disease on emotions. The obtained results show that the greater the participants' sense of coherence, the greater the belief in the ability to control the disease and the greater the belief that treatment can help. Greater sense of coherence in the participants was related to lower concern about the impact of the disease on their lives, lower symptom intensity, less worries about the disase, and a lower belief about the impact of the disease on their emotional functioning.

Table 3 presents correlation results for health behaviour variables and disease perception in women and men.

Table 3

Correlations Between Health Behaviours and Disease Perception

Disease perception	Health Behaviour Inventory									
	Women					Men				
	DH	NEH	PB	PMA	HP	GH	NEH	PB	PMA	HP
Impact on life	−0.23	−0.05	−0.03	**−0.45***	0.11	**−0.36***	−0.30	**−0.40***	−0.33	−0.27
Duration	−0.03	−0.03	0.27	−0.20	0.10	0.07	0.12	−0.04	0.13	0.14
Control possibility	**0.58****	**0.40***	0.21	**0.79****	0.16	**0.54****	**0.38***	**0.48****	**0.41***	0.39*
Treatment effectiveness	**0.41***	0.26	0.13	**0.46****	0.08	**0.52****	0.29	**0.38***	**0.59****	0.27
Symptom intensity	−0.06	0.07	0. 00	−0.14	0.17	−0.17	0.16	−0.28	−0.30	−0.02
Commitment to treatment	**−0.36***	−0.16	−0.11	**−0.53****	−0.01	−0.36	−0.22	−0.27	−0.40*	−0.31
Understanding of disease	0.20	0.16	0.10	0.18	0.18	**0.54****	0.28	**0.57****	**0.38***	**0.45***
Impact on emotions	−0.44*	−0.29	−0.12	**−0.54****	−0.04	−0.25	−0.20	−0.23	−0.32	−0.08

Note. GH = general health behaviours; NEH = normal eating habits; PB = preventive behaviours; PMA = positive mental attitude, HP = health practices.
* $p < .05$; ** $p < .01$

Statistically significant correlations between health behaviours and disease perception in women and men were observed. Health behaviours positively correlated with such variables as the ability to control the disease, the belief about treatment effectiveness, and understanding of the disease. Negative correlations were observed between health behaviours and the impact of the disease on life, commitment to treatment, and the impact of the disease on emotions. The strength of the correlations was mostly moderate, but there were

also single weak and strong correlations. In summary, the feeling of control over the disease was related to an increased belief in treatment effectiveness and understanding of the disease, as well as to a lower feeling of being negatively impacted by the disease. The feeling of control was also related to the frequency of health behaviours.

Discussion of the Results

Kurowska and Figiel (2009) conducted a study on the sense of coherence and health behaviours in people with diabetes. They noted a low level of the general sense of coherence in the patients (M = 117.25). In the current study, the results were slightly higher (women: M = 123.47, men: M = 135.17). However, it is difficult to assess whether these differences are statistically significant, and it is impossible to state unequivocally whether the sample in the current study had a slightly higher level of coherence than the sample in Kurowska and Figiel (2009). A possible reason for this discrepancy is the fact that we examined only hospitalized people. However, this should be statistically verified. Kurowska and Figiel (2009) did not provide the mean results of women and men in their sample, so it was impossible to check whether any of their subsamples had a higher level of sense of coherence.

In the current study, women suffering from diabetes differed from men also with respect to health behaviours. Women reported a higher frequency of health behaviours concerning normal eating habits, preventive behaviours, as well as general health behaviours. In this context, it can be assumed that women were more likely than men to attribute more importance to normal eating habits and thus to healthy eating, as well as to preventive behaviours and healthy behaviours in general. Men reported a lower intensity of these behaviours, which may indicate that health may be of less importance to them. However, in order to verify this, it would be necessary to carry out an appropriate study in this direction. The women in the current study reported more concern about their health, which may be due to the fact that for women, appearance is also more important than for men. Perhaps this is the reason why they were more concerned about nutrition and health in general—better health is conducive to better appearance. However, this should be verified in further research.

The results of the study Juczyński (2001) were similar to those obtained in the current study. Juczyński noted that women reported higher levels of health behaviours than did men. The results of the current study parallel those of Juczyński in terms of normal eating habits, preventive behaviours, and general health behaviours. In the study by Kurowska and Figiel (2009), the level of global health behaviours of people suffering from diabetes was only slightly lower (M = 77.24) than the results obtained in the current study (women: M = 86.7, men: M = 79.7). Kurowska and Figiel did not provide a breakdown of results results by the participants' gender, so it was impossible to check whether women or men were characterized by a higher level of reported health behaviours.

The analyses showed partial differences in the perception of the disease by women and men. However, these differences appeared only in regard to the perceived causes of the disease. Men perceived obesity/weight as one of the causes of their disease more often than did women. In order to verify these results, further research would need to check the participants' body mass index (BMI), which would help determine whether the men tested were actually more overweight than the women tested.

According to the study conducted by Sak et al. (2011), women and men hospitalized due to various chronic diseases differed in their perceptions of disease. The women perceived their disease as less threatening than did men. This is in line with the results of the current study, but only to the extent that gender differences have emerged.

The results of our study showed significant positive correlations between the sense of coherence and health behaviours in women and men. Therefore, it can be concluded that the greater the sense of coherence in women and men suffering from diabetes, the more often they undertake behaviours aimed at improving or maintaining their health. However, the lower their sense of coherence, the lower the frequency of their health behaviours.

Health behaviours may be modified to some extent throughout life, but, as Antonovsky (1997) states, sense of coherence (although it may also be subject to minor changes through relatively less radical life experiences) is more difficult to modify.

Certain correlations between health behaviours and the sense of coherence can be observed in the study by Kurowska and Figiel

(2009). In their study, correlations were only revealed between health behaviours, the sense of comprehensibility, and the general level of coherence. These correlations were positive and of small size. In our study, some similarity of results can be observed—the correlations were also positive, but they were much more numerous and of much greater strength, as most of them were moderate or large.

Our study suggests that there is a stronger link between health behaviours and a sense of coherence than was shown by previous studies.

The results of our study show that the sense of coherence is related to the perception of the disease in both women and men suffering from diabetes. The sense of coherence in women and men was positively connected with the belief about controlling the disease and that treatment can help. It was negatively connected with the perceived influence of the disease on life, symptom intensity, worrying about the disease, and the influence of the disease on emotions. This may mean that greater sense of coherence in people suffering from diabetes denotes a greater sense of control over the disease, a greater faith in the effectiveness of treatment, a lower belief about the disease's impact on their lives and emotions, lower disease symptoms, and less worry about the disease The combination of the sense of coherence and the perception of the disease was significant, as the correlations were numerous and moderate/large. It can be concluded that the sense of coherence was conducive to less threatening perceptions of the disease.

In addition, the perceived causes of the disease were associated with the sense of coherence, but only in men. Men who considered comorbid diseases as one of the causes of diabetes were characterized by a higher sense of coherence in terms of comprehensibility, manageability, and general sense of coherence. Although statistically insignificant, this trend was also observed in men in the case of obesity/weight as one of the causes of diabetes. Men who considered obesity/weight as one of the causes of diabetes had a lower sense of coherence in terms of meaningfulness and general sense of coherence. Therefore, the sense of coherence could be important for the perception of the causes of the disease.

The relationship between the sense of coherence and the knowledge about the disease is evidenced in the study by Kurowska

and Żytko (2015), who examined people with chronic kidney failure. Their results showed that people with this chronic disease exhibited certain links between the sense of coherence and the knowledge about the disease. People with an average level of disease knowledge were characterized by a higher level of general sense of coherence and comprehensibility, and people with a high level of disease knowledge were characterized by a higher level of manageability and meaningfulness. To some extent, this can be related to the results of the current study, because knowledge of the disease may contribute to a less negative perception. In addition, both the current study and the study by Kurowska and Żytko examined samples of chronically ill people. In this context, some correspondence can be assumed between the results of our study and the study by Kurowska and Żytko - in our study, the sense of coherence was positively correlated with a better perception of the disease, and in Kurowska and Żytko (2015), there were positive links between a higher sense of coherence and better knowledge of the disease.

The current study revealed significant relationships between health behaviours and disease perceptions in both women and men with type 2 diabetes. Greater frequency of health behaviours in women and men was related to a greater feeling of control over the disease, belief in the success of treatment, understanding of one's own disease, lesser impact of the disease on one's own life and emotions, and lesser worry about the disease. Health behaviours and perceptions of the disease were significantly related in a sample of diabetic patients—it can be assumed that a less negative perception of the disease is conducive to more frequent health behaviours or vice versa. Moreover, health behaviours were also linked to the perception of the causes of the disease. Women suffering from diabetes who mentioned obesity/weight as one of the causes reported fewer preventive behaviours. On the other hand, women who mentioned stress as one of the causes of their diabetes reported a higher level of preventive behaviours and general health behaviours. Also, in men, the perceived causes of the disease were important for health behaviours. Men who mentioned stress as the cause of their diabetes were less likely to report positive mental attitudes and health practices. Thus, different mechanisms appeared in women and men—the perception of stress as a cause of disease was associated with more frequent health

behaviours in women and with less frequent health behaviours in men. These differences are interesting and it would be worth looking for their cause and source. Perhaps they are caused by differences in attitudes towards stress and coping, manifested by the fact that in the women in the current study, coping strategies were more task-oriented, while they involved more avoidance in men—hence, in women who, in their opinion, experienced diabetes due to stress, behaviours supporting health were undertaken more often, and in men who believed that the cause of their diabetes was stress, health behaviours were less frequent. However, it would be advisable to further assess stress management styles as well as perceived stress in order to better understand and explain the results of the current study.

The results of women and men showed some differences. However, not all the differences were equally statistically significant. The correlations between health behaviours and the sense of coherence were small. Differences in the correlation of preventive behaviours with the sense of coherence were also lower for women than for men. On the other hand, the differences were greater for the correlation between the sense of coherence and the perception of the disease. In men, there were correlations that were not found in women and vice versa. However, the general mechanisms were similar—the sense of coherence was positively related to the perception of the disease in both women and men. Moreover, the perception of the causes of the disease was significantly related to the sense of coherence in men but not in women. For the correlation between health behaviours and disease perception, the general mechanisms remained the same in both groups—more frequent health behaviours were associated with a less negative perception of one's own disease. However, health behaviours specifically in women were related to the perception of obesity/weight and stress as causes of disease. In men, the perception of stress as a cause of the disease was related to health behaviours, but of different types than in women.

Gender differences in these relationships may be linked to different factors, such as personality, biological differences, and social roles. It would be worth exploring this subject matter in order to broaden the theoretical knowledge and practical applications of this direction of research.

Conclusions

The results of this study confirm the existence of relationships between the perception of diabetes and the sense of coherence and health behaviours in women and men. Although this study is not free from certain limitations, such as a relatively small sample size and the incidental selection of participants, the results may provide some guidance for education of psychologists assisting such patients.

The results encourage reflection on in the central aspects psychological support for people with type 2 diabetes. It is particularly important for patients to strive for health and, therefore, to shape appropriate health behaviours. This can be achieved by providing patients with information on possible strategies of action to eliminate its symptoms, such proper nutrition, physical activity, and taking care of overall health.

In a chronic disease such as diabetes, an individual approach to patients and their perception of the disease and related behaviours is important, as was illustrated by results of the current study.

In addition, an important element is the patients' sense of coherence. The current study shows that it is strongly related to both health behaviours and disease perception. Therefore, it is worthwhile to support a high sense of coherence in patients, as it shows a positive connection with other aspects of life—perhaps it makes it easier for patients to find purpose and order in their life despite the disease, which helps them understand their situation. According to Ziarko (2014), it is important to develop a sense of influence on the disease course in people with diabetes because it helps implement medical recommendations.

When planning further studies, it would be worth to examine people in hospital and nontreatment conditions, which may allow for more diverse relationships between the groups to emerge. Also, collecting more data, such as height and weight and calculating the BMI for the participants would be useful in explaining the results. Referring to the relatively unknown role of stress in diabetes, it would be important to understand the contribution of traumatic stress and the preferred coping strategies in patients with different types of diabetes, which would help not only to enrich the results and their interpretation, but also to develop more relevant, individual educational and psychological support strategies.

Summary

Diabetes as a growing health threat poses a challenge to an interdisciplinary approach to disease prevention and health promotion. The inspiration for the current study were the relatively little-known similarities and differences in the functioning of diabetic patients with respect to gender.

The aim of the current study was to search for similarities and differences between women and men suffering from diabetes in the perception (cognitive representation) of this disease and its links to the sense of coherence and health behaviours.

Theoretical issues this field of research concern the clinical and psychosocial aspects of diabetes. Cognitive representation of disease in terms of the theory by Leventhal et al. (1984) were also presented. Next, the sense of coherence in the model of salutogenesis and its role in type 2 diabetes was characterized. The issue of health behaviours and their different definitions was also outlined.

The study was carried out on 30 women and 30 men with type 2 diabetes, treated in a hospital outpatient clinic in Warsaw, Poland. The study used the Illness Perception Questionnaire by Leventhal et al. (1984), the Sense of Coherence Questionnaire by Antonovsky (1997), and the Health Behaviour Inventory by Juczyński (2001).

The results showed numerous similarities and differences in the relationship between the cognitive representation of the disease, the sense of coherence, and health behaviours in relation to the patients' gender. These results constitute a preliminary report on the importance of individual patient education aimed at shaping health behaviours and supporting a sense of coherence as well as building a realistic, though not pessimistic, set of beliefs about the disease.

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Katarzyna Szymona-Pałkowska
Department of Clinical Psychology
John Paul II Catholic University of Lublin, Poland

Konrad Janowski
Institute of Psychology
University of Economics and Human Sciences in Warsaw, Poland

Corresponding author: Katarzyna Szymona-Pałkowska
szymona@kul.pl

Psychological and physiological predictors of affect in premenopausal and perimenopausal women

Introduction

Menopause is the last natural menstruation, after which no bleeding occurs for 12 months. This period typically occurs in women aged between 44 and 55 (Utian, 1999; World Health Organization, 1996). Research shows that, on average, symptoms preceding the approaching menopause start at the age of 47 and last approximately 4 years. The mean age of onset of menopause in Poland is 51 (Kaczmarek, 2007; Skrzypulec et al., 2007).

The menopausal change occurs along with changes in hormonal secretion. The follicle-stimulating hormone (FSH) activates follicular growth and the production of oestrogens. The perimenopausal period is characterised by an elevated concentration of FSH in blood. It increases throughout premenopause (reaching levels exceeding 30 IU/l). The highest concentrations of FSH (10–20 times higher than normal) are found 1–3 years after menopause. The concentration of estradiol in perimenopausal women remains constant, but after menopause, it falls below 20 pg/ml.

Menopause is a normative physiological process, but in some women, hormonal changes are accompanied by somatic and psychological symptoms at levels exceeding ordinary adaptation capabilities (Pinkerton & Zion, 2006). The symptoms may cause, exacerbate, or overlap with other disorders (Sprawka et al., 2008). An accurate diagnosis followed by early administration of hormonal

therapy enables the prophylaxis of circulatory diseases, osteoporosis, urinary incontinence, as well as psychological disorders related to menopause.

Many studies indicate that women in the perimenopausal period are more depressed, anxious, and irritable. Approximately 90% of women experience at least one of these states. Studies demonstrate that 40% of women report mood problems of a depressive type related to menopause (Prairie et al., 2015), and 40% regard this time as emotionally difficult and potentially bringing about many somatic diseases (Vesco et al., 2007). Biochemical research indicates that a decreased concentration of oestrogens is directly related to biochemical processes in the brain which lead to depression. Mood disorders can be caused by a disturbed balance of neurotransmitters, which regulate and mediate the function of neurons (Schmidt et al., 2015). Other studies suggest that an elevated risk of depression is associated not so much with a lower level of oestrogens as with its sudden decline (Dennerstein, 1996). The menopause-related decrease in oestrogens is thought to be a factor responsible for vasomotor symptoms (e.g., hot flushes, night sweats) in the course of menopause (Pinkerton & Zion, 2006). Other reports indicate that the frequency of vasomotor and somatic symptoms increases along with depressed affect (Borkoles et al., 2015; Prairie et al., 2015), although some studies have failed to confirm a higher prevalence of depression during the perimenopausal period (Vesco et al., 2007). Undesirable symptoms of menopause also include those associated with psychological functioning, for example, confusion, worse memory, anxiety, and so forth. Lipińska-Szałek et al. (2003) point out a possible influence of oestrogen levels on cognitive function. However, researchers emphasize the ambiguity of this correlation, since some studies do confirm the influence of oestrogens on verbal memory but not on concentration. Other studies failed to establish a link between cognitive function and hormones (Henderson, 1999).

Hormonal changes associated with menopause can influence emotional states, but they are not the only predictors of a disturbed mood (Schmidt et al., 2015). During the perimenopausal period, women experience many conflicts between their actual capabilities and their personal and social expectations. Some aspects of their appearance deteriorate (e.g., teeth, voice, skin). Facial hair is likely to

appear, while hair on the head is shed or/and becomes grey, and body mass increases. Western culture promotes beauty, youthfulness, independence, and self-actualisation. However, this may be experienced as a source of anxiety and may influence women's affect in the perimenopausal period (Stotland, 2002).

Affect is the totality of experienced feelings and emotions (Hogg et al., 2010). It is the individual's emotional disposition, or a tendency to have particular feelings/emotions in particular circumstances. Historically, emotions were described using a set of basic labels, such as sadness, joy, happiness, and unhappiness, arranged in two opposing dimensions. An increasing level of positive emotions was tantamount with a decrease of negative emotions. Watson and Tellegen (1985) proposed an alternative approach, suggesting that individual emotions can be grouped in two uncorrelated dimensions: positive and negative affect (Tellegen et al., 1999; Watson & Tellegen, 1985). Positive affect is associated with various states of pleasant mood (e.g., joy or enthusiasm), while negative affect is manifested in states of unpleasant mood (e.g., sadness, guilt). Their bipolar relation remains in place only for intense emotional experiences (Fajkowska & Marszał-Wiśniewska, 2009; Watson, 2000; Watson & Clark, 1992, 1994; Watson & Tellegen, 1985). The independence of valence of positive and negative affect can be seen when mood is appraised as an affective trait characterized by relative stability in various circumstances. The stable nature of affect derives from personality or temperamental factors such as neuroticism or extraversion (Clark et al., 1994; Watson, 2000). Watson (2000) claims that all people have a predominant affective state and a prevalent mood, in other words, a relatively constant emotional tendency. Negative affect is a general dimension of subjective distress and dissatisfaction that involves a wide range of negative moods, including sadness, fear, anger, or guilt. Its presence in structural analyses reflects the fact that these various negative emotions co-occur both within and among various individuals. Similarly, the general positive affect dimension reflects important co-occurrences among various positive mood states. For example, someone who is happy will also report feeling energetic, confident, and alert (Watson et al., 2008). Positive affect is associated with good health and a good psychological state (Watson et al., 2008; Watson et al., 2011). Positive and negative emotional responses have

been linked to different personality dimensions and to different kinds of behavioural activation. Extreme levels of both positive and negative affect that are permanently present become maladaptive and indicate psychopathology (mania, depression, psychosis). Affects of low motivational intensity broaden the cognitive scope whereas affects of high motivational intensity narrow down the cognitive scope regardless of their valence. A negative emotional tendency has a bearing on attention, information processing, thinking, and decision-making. A prolonged negative emotional state has a role in the emergence of mood disorders (Kaczmarek, 2007). The higher order positive affect factor has stronger (negative) associations with depression than with anxiety (Watson et al., 2011). Negative affect represents a specific dimension that is common to depression and anxiety, whereas low positive affect is a specific factor that is (negatively) related primarily to depression (Watson et al., 2011), though sadness and guilt are more strongly correlated with depressive (major depression) than with anxiety disorders.

Women in the perimenopausal period are particularly exposed to fluctuations in their emotional state and are subject to a higher risk of developing psychopathological symptoms. Therefore, the aim of the current study was to find predictors of positive and negative affect in women before menopause and in women in the perimenopausal period.

Participants and Methods

Participants. The study involved 113 women, aged from 25 to 65, divided into two subgroups: 58 premenopausal women aged 25–40 and 55 perimenopausal women aged 45–60. The inclusion criteria for the perimenopausal group were: age and typical perimenopausal symptoms which are identified during a medical physical examination and an interview (dryness of the mucous membrane, irregular menstruation, and changed intensity of menstrual bleeding). For diagnostic purposes, concentrations of FSH and estradiol hormones were assessed. The thyroid-stimulating hormone (TSH) in the blood serum was analysed in order to distinguish menopausal symptoms from those caused by dysfunctions of the thyroid gland. As a result, the individuals whose TSH level was too low or too high were excluded.

Methods.

1. Assessment of hormone levels in the blood serum, carried out as part of a routine diagnostic-therapeutic procedure.

2. Menopause Symptoms Scale by Kraczkowski and Szymona-Pałkowska (see Rykowska-Górnik 2016)—features a list of 67 symptoms divided into 9 categories. The respondent assesses the severity of a given symptom on a scale ranging from 0 to 10. The symptom categories are: Sexual symptoms, mass and body shape, vasomotor symptoms, skin/hair/voice, sleep and fatigue, affective symptoms (depression-anxiety), pain symptoms, cognitive symptoms, and urinary incontinence. The method has good psychometric properties. Cronbach's α coefficients range from .716 for the skin/hair/voice scale to .957 for the affective symptoms scale (Rykowska-Górnik, 2016).

3. Appearance Self-Rating Sheet (ASRS, Janowski et al., 2011)—features a schematic diagram of the human body (woman/man, depending on the gender of the respondent) with numbers 1–25 labeling specific body areas. The respondent is requested to assess how satisfied they are with the appearance of these body areas and how important the appearance of these body areas is to them. Each body area is assessed on a scale ranging from 0 (*entirely unsatisfied/unimportant*) to 10 (*totally satisfied/ important*). Then, a mean satisfaction index of appearance satisfaction (ASRS-Satisfaction) is calculated, as well as a mean index of appearance importance (ASRS-Importance).

4. Body Dysmorphic Symptoms Questionnaire (BDSQ, Awruk et al., 2011)—measures the severity of symptoms of body dysmorphic disorder. The items were formulated on the basis of diagnostic criteria for body dysmorphic disorder in the DSM-IV. The questionnaire consists of 33 statements concerning thoughts, activities, and fears associated with defects in bodily appearance. Answers are given using a five-point scale of *always, often, sometimes, rarely,* and *never.* The questionnaire consists of four subscales measuring: (a) the sense of a defect in one's appearance, (b) efforts to mask defects, (c) obsessive preoccupation with defects, and (d) checking up/controlling defects. The total score is also calculated, which is the overall measure of body dysmorphic concerns. The BDSQ has a satisfying Cronbach's α: .98

for the total score, and .97, .86, .77, and .81 for the respective subscales.

5. Positive and Negative Affect Schedule (PANAS-X, Watson et al., 1988; Polish version by Fajkowska & Marszał-Wiśniewska, 2009)—features 60 adjectives describing various affective states (positive and negative). It is used to calculate the general positive affect (PA) and general negative affect (NA). Eleven additional subscales are distinguished, which make up three general categories. The general negative affect subscale consists of four dimensions: fear, sadness, guilt, and hostility. The general positive affect subscale is composed of three dimensions: joviality, self-assurance, and attentiveness. The other affective states subscale comprises four dimensions: shyness, fatigue, serenity, and surprise. Reliability of the scales (based on the coefficient of internal consistency) ranges from 0.83 to 0.90 for PA and NA, and equals 0.85 for the other affective states subscale.

6. Generalized Self-Efficacy Scale (GSES)—draws on concepts of expectations and perceived self-efficacy developed by Bandura (1977, 1997). The Polish version of the scale was developed by Schwarzer, Jerusalem, and Juczyński (see Juczyński 2012). The scale consists of 10 statements. It measures the respondent's beliefs about their efficacy in dealing with difficult situations and obstacles. The Polish version of the scale has good psychometric properties, with Cronbach's α of .85 (Juczyński, 2000).

Statistical Analyses

In order to extract statistically significant predictors of positive and negative affect, a series of stepwise regression analyses was conducted. Each analysis was carried out separately for the subgroup of premenopausal women (aged < 45 years) and perimenopausal women (aged ≥ 45 years). Two global indices of affect were introduced as dependent variables: positive and negative affect. The following independent variables were introduced: (a) variables associated with the body mass index (BMI) and (b) variables pertaining to body image: mean ASRS-Satisfaction, mean ASRS-Importance, and total BDSQ score, (c) variables reflecting the severity of the nine groups of perimenopausal symptoms, (d) total GSES score, and (e) hormone (FSH and estradiol) levels.

Results

Negative and Positive Affect in Both Subgroups. The mean levels of negative affect were 2.43 (*SD* = 0.61) in the premenopausal women and 2.33 (*SD* = 0.54) in the perimenopausal women. The mean levels of positive affect were 3.11 (*SD* = 0.61) in the premenopausal women and 2.92 (*SD* = 0.57) in the perimenopausal women.

Predictors of Negative Affect. In the premenopausal subgroup, self-efficacy, as measured by the GSES, proved to be a statistically significant predictor of negative affect. The resultant model was statistically significant, $p = .025$, and it explained about 10% of variance in negative affect. The β coefficient was negative, –0.32, which means that higher self-efficacy was a predictor for lower negative affect (see Table 1).

Table 1

The Regression Model of Negative Affect in Premenopausal Women

Independent variables	*R*	R^2	adjusted R^2	R^2 change	*F* change	*p*
Self-efficacy	0.32	0.10	0.08	0.10	5.33	.025

In contrast, in the perimenopausal subgroup, the total BDSQ score was revealed to be a statistically significant predictor of negative affect. The resultant model was of high statistical significance, $p = .002$, and it explained about 19% of variance in negative affect. The β value was positive, 0.44, which means that higher dysmorphic symptoms were a significant predictor for higher negative affect (see Table 2).

Table 2

The Regression Model of Negative Affect in Perimenopausal Women

Independent variables	*R*	R^2	adjusted R^2	R^2 change	*F* change	*p*
Total BDSQ score	0.44	0.19	0.17	0.19	10.40	.002

Note. BDSQ = Body Dysmorphic Symptoms Questionnaire.

Predictors of Positive Affect. In the premenopausal group, the regression model yielded three variables which turned out to be statistically significant predictors of variance in positive affect. These variables were: ASRS-Satisfaction, self-efficacy, and cognitive symptoms measured by the Menopause Symptoms Scale. The model encompassing these three predictors was statistically significant, p = .046, and it explained about 54% of variance in positive affect.

Table 3

The Regression Model of Positive Affect in Premenopausal Women

Independent variables	*R*	R^2	adjusted R^2	R^2 change	*F* change	*p*
ASRS-Satisfaction	0.61	0.37	0.35	0.37	27.86	.000
Self-efficacy	0.70	0.49	0.47	0.13	11.65	.001
Cognitive symptoms	0.73	0.54	0.51	0.04	4.21	.046

ASRS-Satisfaction and self-efficacy turned out to be positive predictors of positive affect, which means that a higher level of these variables predicts a higher level of positive affect. Cognitive symptoms were a negative predictor (see Tables 3 and 4).

Table 4

Significant Predictors of Positive Affect in the Premenopausal Group

Predictors which were statistically significant in the model	*β*	*t*	*p*
ASRS-Satisfaction	0.44	4.09	.000
Self-efficacy	0.36	3.36	.002
Cognitive symptoms	–0.21	–2.05	.046

In the perimenopausal group, the resultant regression model revealed self-efficacy as one statistically significant predictor of positive affect. This model was highly statistically significant, p = .006, and accounted for about 16% of variance in positive affect.

Table 5

The Regression Model of Positive Affect in Perimenopausal Women

Independent variables	*R*	R^2	Adjusted R^2	R^2 change	*F* changes	*p*
Self-efficacy	0.40	0.16	0.14	0.16	8.52	.006

Table 6

Significant Predictors of Positive Affect in the Perimenopausal Group

Predictors which were statistically significant in the model	*β*	*t*	*p*
GSES	0.40	2.92	.006

Self-efficacy was a positive predictor of positive affect (β = 0.40), implying that a higher level of the former makes it possible to predict higher positive affect in this group of women (Tables 5 and 6).

Discussion

In order to identify predictors of positive and negative affect in the premenopausal and perimenopausal women, a stepwise regression analysis was carried out. The premenopausal period is relatively stable in terms of hormonal activity, therefore, variability in affect is determined chiefly by personality and temperamental factors, as well as life experiences (Dennerstein, 1996). Our findings show that general negative affect in the group of premenopausal women is best explained only by self-efficacy (as measured by the GSES). Self-efficacy is a measure of ego-strength, and people who score highly on this trait tend to feel an internal drive pushing them to achieve their goals despite various adversities (Fajkowska & Marszał-Wiśniewska, 2009). The level of self-efficacy also affects coping strategies and effective problem solving. People with low self-efficacy tend to give up active coping more easily (Watson, 2005). Our results indicate that, among the included factors, low self-efficacy best explains variance in negative feelings and the general tendency for negative affect in the premenopausal women. No variable related to body image was found to be a significant predictor of negative affect in this subgroup.

Our results show that in the premenopausal period, body image and concerns about flaws in one's appearance do not contribute to negative affect. However, positive body image accounts for positive feelings. Our analyses demonstrated that general positive affect is explained by appearance satisfaction (ASRS-Satisfaction), self-efficacy (GSES), and a lack of cognitive symptoms associated with menopause (negative relationship). This suggests that stronger cognitive symptoms of menopause are linked with lower positive affect. It seems that the constellation of these predictors—positive body image, efficient cognitive processes, and beliefs about one's coping competences—imply a higher frequency of positive experiences, that is, joy and pleasure.

It was pertinent to verify whether changes in appearance, hormonal fluctuations, as well as physiological and psychological changes occurring during the perimenopausal period are predictors of affect during this time. Apparently, menopausal symptoms and concentrations of sex hormones did not prove to be significant predictors of general positive or negative affect.

Negative affect in perimenopausal women was best accounted for by the global index of dysmorphic symptoms (BDSQ). Preoccupation with physical appearance defects seems to constitute a predictor of negative emotions. Positive affect in the group of premenopausal women was best explained by self-efficacy (GSES), which means that positive feelings experienced in this period correlate with a sense of empowerment.

Self-efficacy was the strongest predictor of positive affect regardless of the period in the women's lives. A positive body image contributes to satisfaction, especially in younger women, but in some perimenopausal women, changes in their appearance bring about dysmorphic oversensitivity. This is a predictor of negative affect, causing fear, sadness, and dissatisfaction.

Conclusions

In the current study, the sense of self-efficacy was the strongest predictor that explained both positive and negative affect, and this was especially true of perimenopausal women.

Women's psychological well-being was also affected by their perception of their body. In younger women, however, satisfaction with their body was a predictor of positive affect whereas in older women, that is, those in the perimenopausal period, dysmorphic symptoms (BDSQ) were predictors of negative affect.

These results indicate that good emotional state of premenopausal women is not determined by hormonal changes. The intensity of positive affect, which is a risk factor in depressive disorders (Watson, 2005; Watson et al., 2011; Watson et al., 2008), is explained by the concept of self-efficacy beliefs. The sense of competence and efficacy generates activation and motivation, bringing internal peace. Prevention of mental health disturbances in women in the perimenopausal period should aim at enhancing their sense of self-efficacy.

Summary

During menopause, undesirable vasomotor, somatic, and psychological symptoms can occur, which may be accompanied by increased negative affectivity. The current study aimed to identify psychological and physiological factors related to affect in premenopausal and perimenopausal women. One-hundred thirteen women took part in the study, including 55 women aged 45 to 60 (the perimenopausal group) and 58 women aged 25 to 40 (the control group). Blood serum hormone levels were assessed and questionnaires measuring body image, self-efficacy, menopausal symptoms, and affect were used.

In the premenopausal group, self-efficacy was found to be a statistically significant predictor of negative affect. In the perimenopausal group, the global index of dysmorphic symptoms was a statistically significant predictor of negative affect. In the premenopausal group, three were statistically significant predictors of positive affect: satisfaction with one's own appearance, self-efficacy, and severity of cognitive symptoms of menopause (negative predictor). In the perimenopausal group, positive affect was predicted by self-efficacy.

Factors which have an impact on positive affect and negative affect are different before and during the menopause period.

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Olena Falyova
Department of Scientific Basics of Management and Psychology,
H.S. Skovoroda Kharkiv National Pedagogical University, Ukraine
alyonafalyova@ukr.net

Marianna Markova
Department of Sexology, Medical Psychology, Medical and Psychological Rehabilitation,
Kharkiv Medical Academy of Postgraduate Education, Ukraine
mariannochka1807@gmail.com

Health as a result of one's own behaviour in women undergoing chronic stress

Introduction

The health of people depends on many factors: the development of the healthcare system, socio-economic, psychological, family. These interconnected factors can cause certain illnesses or improve health.

Safiullina (2003) notes that the formation and preservation of health is influenced by personal factors, which determine the conscious (or unconscious) attitude of a person towards his or her health in addition to medical-biological and external factors. Among them, the priority is taken by self-preserving behaviour, which is largely determined by motivation and value orientation and depends on the self-esteem of own health.

Romanova (1996), Maksymenko (2006), Shevchenko (2007), and Maruta (2015) linked severe somatic diseases and mental health with the meaning of life and love.

In Ukraine, the number of various factors of psychotraumatization has increased recently in connection with an increase in the level of social and stress destructive-destabilizing factors. The action of these factors, both classical and new, characteristic of modern Ukrainian realities, causes deterioration of physical and psychological health, destructive changes in family functioning, manifested in the form of defeat as of separate levels of family interaction, so in general, resulting in the formation of a family crisis and violation of family health.

Despite significant interest in resolving issues of provision of medical and psychological assistance to members of families in a state of family crisis, the problem of the impact of the family crisis on personal development, self-actualization of the personality of a woman, physical and psychological health, depending on certain individual psychological, behavioural, and psychosocial patterns, remains unresolved.

The central element of most of the family crises, conflict situations, and destructive responses of family members are the problems associated with the violation of family interaction (FI), that is, deformed and destructive social interaction that is congruent to the concept of "family crisis". Its manifestations occupy their niche in a series of socio-psychological and psychic phenomena. They exist along with such phenomena as mental illness, pathological conditions, neuroses, psychosomatic disorders, deviant behaviour, and sometimes they cause them. However, medical phenomena are considered from the viewpoint of the medical norm on the axis of "health-pre-existing disease-disease," the deviant behaviour expresses the socio-psychological status of the individual on the axis "socialization-disadaptation-isolation." The status of family interaction reflects the personal contacts of family members, as a result of which there is a mutual change in their personality, behaviour, activity, relations, therefore, we will consider it on the axis "norm-deformation-destruction-decay" and distinguish 4 states of FI and 4 levels of family crisis.

Normal family interaction involves the absence of a clearly identified family crisis (level 1). The second level of the family crisis indicates deformed family interaction. Some researchers define the concept of latent family disturbance (Eidemiller et al., 2007). That is, it is a disturbance that does not have a significant negative impact on family life under normal conditions; however, it can play a significant role in difficult life situations, defining the inability of the family to resist them.

Under normal circumstances, certain disturbances are permissible (insignificant complications of mutual understanding, communicativeness, responsibility, violations of sexual disharmony of spouses, moderate proneness to conflict, hostility, anxiety, interpersonal sensitivity, tension). However, in difficult situations, the

degree of mutual understanding, favour, sympathy, love, and resistance to stress, which are characteristic of this family, is becoming insufficient. It is in this way that the formation of preconditions for the emergence of family-caused traumatic conditions takes place: family and personal dissatisfaction, states of anxiety, depression, feeling of guilt, hostility, proneness to conflict, mental and somatic disorders.

Medical and psychological correction and support can promote internal mobilization, exit from the situation of deformed FI, and reach the level of development and personal self-realization. Negative dynamics can lead to the FC of the third level—destructive FI and strengthening of psychotropic states: the emergence of psychopathological symptoms, increased psychosocial stress, worsening of family and personal dissatisfaction, states of anxiety, depression, emotional states, self-esteem, self-perception, hostility, proneness to conflict, level of responsibility, somatic disorders. Further deterioration of the situation, the destruction of family interaction lead to the 4th level of family crisis and completely destroyed FI.

Structure and Methods of Research

The purpose of the study—to determine the factors of the destructive behaviour of women from crisis families and the targets of medical and psychological correction.

We conducted research on the factors of psychoemotional, personal spheres and behavioural, psychophysiological, and partner patterns among women from crisis families. At the first stage, anamnesis was collected and, with the help of appropriate methods, we examined women who sought medical and psychological assistance in connection with the family crisis, deterioration of somatic and psychological health.

The objectives of this phase were: when analysing the mental, psychological, socio-psychological, and somatic conditions of women from crisis families, to study persons with constructive and destructive types of response to the destruction of marriage; on the basis of research of subgroups of women, to establish psychological factors that promote the development of somatic problems in the conditions of a family crisis in women with a constructive one and developmental

factors of mental disadaptation (targets of psycho-correction) in persons with a destructive type of response.

Our research envisaged the study of conditionally allocated three blocks: the actual psycho-emotional state, personal (individual psychological features), and the block of the family crisis (behavioural, psychophysiological, and partner patterns) in middle-aged women.

The contents of the block of the actual psycho-emotional condition involved the study of psychopathological symptoms, psychosocial stress, and anxiety and depression. The content of the personal block envisaged the study of individual psychological characteristics of the women under study, self-actualization, subjective control, ways of getting out of difficult life situations, and lifestyle index (the intensity of psychological defences). The block of the family crisis includes indicators of marital satisfaction, possible styles of personality behaviour in conflict situations, indicators of expression of love, sympathy, understanding, emotional attraction, and authority and sexual attitudes.

Inclusion of specific tests in the methodical apparatus of the research was carried out on the basis of the following criteria: the conceptual substantiation of the method, high validity, compliance with the set goals and objectives.

Taking into account the specifics of our study, we have identified the most optimal type of psycho-diagnostic work – voluntary participation in the study. We were interested in obtaining absolutely objective, accurate data, so the maximum of anonymity was introduced. In the study, we focused on the accuracy of the average characteristics, the distribution of the levels of the studied indicators, their interrelations. The procedures for studying the entire contingent were unified. All women included in the study had equal opportunity to participate in psycho-diagnostic activities and confirmed their consent to participate in the study.

The sample included women in a total of 224 people who asked for advice and assistance. By the time of anamnesis collection, the age of the respondents was in the range from 29 to 56 years.

Previously, with all the subjects, anamnesis was collected (the main subjective research method, which consists in obtaining

information about the patient and his/her illness by questioning), which classically consisted of five consecutive sections:

– passport part (the full name, age, gender, marital status, address, contact phone number, date of appeal, education, occupation, place of employment, position were determined. These data have some diagnostic value, for example, the age may indicate the possibility or the impossibility of a certain illness);

– complaints (purpose: to list the complaints characteristic of this group of subjects: psychological, somatic, as well as those that reflect complications, background and concomitant illnesses);

– history of the problem (in the process of questioning, it was necessary to find out in detail from what time the investigators believe that they have certain problems, or from what time do they consider themselves ill, how problems began, the disease, with what the women under study associate their occurrence, whether they have already addressed for psychological or medical help, which treatment was carried out and its effectiveness);

– general anamnesis;

– anamnesis vitae.

The next step, after the initial conversation and collecting anamnesis, was to carry out a psychodiagnostic study. The collection of anamnestic data and psycho-diagnostic examination were carried out in favourable conditions along with establishing trusting relationships between the psychologist and the patient, which ensured the success of the examination.

The following techniques were used in the work: Derogatis, a questionnaire on the severity of the psychopathological symptoms (Simptom Check List'90'Revised SCL-90R); the scale of psychosocial stress by Reeder; Hospital Anxiety and Depression Scale (HADS; Zigmond & Snait); Self-Actualization Test (SAT; Aloshyna et al.); the level of subjective control (LSC); lifestyle index (diagnostics of frequency of use and expressiveness of defence mechanisms, Plutchik et al.); adaptation (Vasserman et al.); the test "Way Out of Difficult Life Situations" by Nemov, marriage satisfaction test (Stolin et al.), the test "Modes of Behaviour in Conflict Situations" by Thomas, sexual attitude questionnaire (Eysenck), the Understanding, Emotional Attraction, Authority (UEA) questionnaire

by Volkova, and the scale of love and sympathy (Rubin, version by Hozman & Aloshyna).

The obtained results are processed using mathematical and statistical methods. Correlation analysis was carried out with the definition of the Pearson correlation coefficient. Also, factor analysis was conducted. The specificity of this method is that when combining parameters into factors, each factor accumulates general patterns in all parameters, rejecting the features of each parameter separately.

Analysis of the Indicators of Actual Psycho-Emotional State

During the collection of anamnesis and psychodiagnostics, certain psychological and somatic problems were identified. Women under study complained of personal, emotional problems, problems in interpersonal family relationships: decreased self-esteem, fears, increased anxiety, depressive symptoms, panic attacks, self-aggressiveness, distrust towards a partner and others, and suicidal thoughts. At the same time, problems related to the cardiovascular, digestive, nervous, respiratory systems and problems associated with the locomotor system were detected.

The analysis of the obtained psychopathological symptoms data showed that among women from crisis families, low level prevails on all scales. However, according to the scales of interpersonal sensitivity (4%), depression and anxiety (1.3% each), hostility (2.7%), paranoid symptoms (0.9%), and the scale of additional questions (2.7%), high level of manifestations of these disorders was found. The average level is most pronounced on the scale of depression (46%) and hostility (40.6%). In 37% of the women surveyed, the average level was determined on the scale of additional questions, in 34.8%—on the scale of somatization, and in 27.7%—on the scale of interpersonal sensitivity. Distribution of indicators by the average level on other scales is as follows: 18.8%—anxiety scale, 17.4%—obsessive-compulsive disorders, 9.8%—paranoid symptoms, 6.7%—psychoticism, 3.6%—phobic anxiety [7].

At this stage, we also studied levels of anxiety and depression on the hospital scale and the level of psychosocial stress. The analysis of the results of women from crisis families showed that less than 1/3 of the total number of all women in this group (24.5%) have clinically

significant anxiety level and almost one-third – the clinical level of depression (30.3%) and high psychosocial stress level (33.9%).

The number of women from crisis families, which show the norm for indicators of anxiety, is 27.7%, according to the indicators of depression—21.9%, according to the indicators of psychosocial stress—19.2% of the total level of the surveyed. Accordingly, the subclinical level of anxiety and depression is characteristic for 47.8% (equally on both scales), the average level of psychosocial stress—for 46.9% of women surveyed. Thus, in the group of women from crisis families, indicators of subclinical anxiety and depression and the average level of psychosocial stress prevail (Falyova & Vysotskaya, 2016).

Thus, the psychological profile of women under survey from crisis families is as follows: the low level of all scales of psychopathological symptoms prevails; high enough is the share of women with average indicators of hostility, somatization, and interpersonal sensitivity; subclinical level of anxiety and depression and the average and high levels of psychosocial stress prevail.

Analysis of Individual Psychological Peculiarities

The analysis of the results of studying the levels of self-actualization of women from crisis families showed that half of the respondents had an average level of competence in time (50.4%); more than one-quarter of the total number of women in this group had a low level (26.8%). Low scale assessments are typical for people with neurosis, with various forms of border psychic disorders. They were detected in 17% of women from crisis families.

Only 5.8% of women from crisis families have a high level, are able to live today, and feel the continuity of the past, the present, and the future, that is, see their life as holistic. It is such a time perception by the subject that shows the high level of self-actualization of the individual.

12.5% of women from crisis families have a high level according to the scale of support, indicating the relative independence of people in their actions, the desire to be guided in their lives by their own goals, beliefs, attitudes, and principles without manifestations of hostility to

others and confrontation with group norms, that is, it is "inwardly directed" (Reisman) personality.

An average level was found in 42% of women from crisis families, low level – in 37% according to the support scale, and 8.5% of the respondents noted neuroses on this scale. This suggests a rather low degree of independence of the values and behaviour of these women from outside influence (internal-external support). It is the low score that indicates a high degree of dependence, conformity, dependency of women (outwardly directed personality), and the external locus of control.

The analysis of additional scales for women from crisis families showed that on all scales (value system, behavioural flexibility; sensitivity (reactive sensitivity); spontaneity; self-esteem; self-acceptance; acceptance of human nature; synergy; acceptance of their own aggression; sociability, cognitive needs; creativity), the average level prevails.

Almost one-third of the total number of women has a low level by the scale of value system (33.9%), that is, these women from crisis families do not share the values that are inherent in self-actualizing personality. A significant share of the low level was found on the scale of behavioural flexibility (42.9%), which indicates the low degree of flexibility of women in implementing their values in behaviour, interaction with others, the low ability to respond quickly and adequately to a changing situation.

21% of women from crisis families have found a low level according to the scale of self-esteem, which diagnoses the low ability of the subjects to appreciate their merits, positive character traits, and to self-respect. The low level is also noted in 36.2% of women on the scale of self-acceptance, which accounts for a low degree of acceptance of a person as such, regardless of the assessment of their merits and demerits, and possibly, contrary to the latter. That is, we can talk about the low level of the whole block of self-perception among women from crisis families. 29% of women from crisis families have shown a low level of acceptance of their own aggression, this suggests that such women are not able to accept their irritation, anger, aggression as a natural manifestation of human nature.

In women from crisis families, the high level was found on the following scales: 15.2%—value system, 8.4%—behavioural

flexibility, 0.9—sensitivity, 5.8%—spontaneity, 5.8%—self-esteem, 12%—self-acceptance, 3.1%—acceptance of human nature, 8.9—synergy, 4.5%—sociability, 1.8—cognitive needs, and 0.4%—creativity. The high level of acceptance of self-aggression in this group of women was not detected at all.

The task of this stage of work was also to determine the ways out of difficult life situations, the level of subjective control, and frequency of use and expression of the defence mechanisms of the women under survey. An analysis of the findings of the identification of the dominant ways of solving life problems has shown that almost half of the total number of women from crisis families (45.1%) has the average level, that is, those respondents do not always withstand strokes of misfortune with dignity. They can lose their temper, upset when problems occur, and upset others. Almost a third of women (32.1%) have a low level, suggesting that such individuals can not normally experience troubles and usually react psychologically inadequately to them. 22.8% of women from crisis families easily reconcile with troubles, correctly assess what is happening, and maintain a mental balance.

At this stage, we investigated the level of subjective control. Since most people tend to more or less variety in behavioural patterns depending on specific situations, one can say that the characteristics of the level of subjective control of one person may vary, depending on how complex or simple, pleasant or unpleasant this person imagines a certain situation. That is why we used a multi-scale questionnaire and found the level of locus of control according to seven scales. For women from crisis families, according to the scale of general internality, average level prevails (54%), that is, such individuals often take responsibility for them but often also try to shift it to other circumstances, people. Almost one-third of the total number of women surveyed (31.7%) showed a low level, and 14.3% – a high level of subjective control and can take responsibility for what happens to them.

The prevalence of middle-level locus of control of women from crisis families is marked by internality scales in the field of achievements (42%), failures (58.5), interpersonal (67.4%) and productive (40.2%) relations, and on the scale of internality in relation to health and disease (73.7%).

According to the scale of internality, low level prevails in family relations. The number of such women is 46% of the total number of women surveyed. The average level on this scale was found in 43.3% of women. Almost a third of women from crisis families have a low level of general internality (31.7%), more than one-third of the total number of surveyed have a low level of internality in the field of achievements (37.5%), failures (35.3%), industrial relations (35.7%).

The task of this stage of work was also to reveal the peculiarities of defence mechanisms of women from crisis families. We determined the tension of each psychological defence. Analysis of the stress in a group of women from crisis families showed the presence of problems associated with the psychological protection of substitution (57.5%), which involves the discharge of suppressed emotions (anger, malice) in objects that are not dangerous to the individual.

The tension in the psychological defence of denial of women from crisis families reaches 49.5%, that is, such women deny some aspects of external reality, which are obvious to others but are painful for the recognition by this person. One can also note a certain level of rationalization stress (45.2%), which relates to constructive defences, regression (44.3%), that is, women return to behavioural patterns associated with earlier and more primitive phases of psychosexual development and compensation (43%), this protection also applies to the constructive form and is an attempt to find a suitable replacement for a real or imaginary disadvantage, a feeling of inferiority by means of fantasizing or appropriating the desirable feelings, qualities, and merits of another person.

Thus, certain problems related to the indicators of self-actualization (competence in time, self-support, value system, behavioural flexibility, self-esteem, self-perception), personal qualities, and stress of psychological defences of women under survey in crisis states.

Analysis of Indicators of Behavioural, Psychophysiological, and Partner Patterns

The influence of complex life situations on the family touches on different spheres of its life, leads to violations of its functions. These violations, in turn, affect the well-being of family members, cause the

states of internal stress, discomfort, lead to somatic diseases, neuropsychiatric, behavioural disorders, and inhibit the development of personality. Therefore, it is important and relevant to study the psychological features of the family crisis. The objective of this research stage was to provide a general description of the manifestations of the family crisis in women.

The analysis of the obtained results revealed that among the women from crisis families, there are no persons with significant and complete satisfaction with marriage, that is, the total absence of functional and absolutely functional families from the viewpoint of women.

43.3% of women from crisis families are more likely to be satisfied with their marriage, that is, they consider their families to be rather functional. 13.8% of women can be attributed to the so-called transitional families, that is, they marked a partial satisfaction with the marriage. Rather dissatisfied with their marriage are 8.9%, much dissatisfied—13%, and 21% of the total number of women from crisis families are completely dissatisfied with their marriage.

The analysis of the results of the study of behavioural modes of women from crisis families showed that by the competition mode, the low (46%) and average (43.7%) levels prevail with predominantly low.

The average level prevails according to all other behavioural modes: cooperation (84.4%), compromise (82.6%), avoidance (69.2%), and adaptation (66.5%). Almost a third of the surveyed have a low level by behavioural modes: avoidance (23.7%) and adaptation (32.6%). 10.3% of women from crisis families have a high level of competition, while by other behavioural modes, high indicators are on the scale from 0.9% to 7.6%.

For women from crisis families, more than half of the surveyed have a high level of love (55.7%) and sympathy (50.5%). One-third of women in this sample has an average love level (35%) and 42.3%—an average level of sympathy. In this sample of the women, a low level of love was marked in 9.3% and a low level of sympathy – in 7.2% in the overall number of women from crisis families. The overall emotional relationships in dyad from the viewpoint of women are at high and average levels (47.7% each). 5.5% of women noted it as low (Falyova & Markova, 2016). The analysis of the results of studying indicators of understanding, emotional attraction, and authority of

women from crisis families showed that the high level of understanding (54.9%), average level (52.7%) of emotional attraction, and average level (75.9%) of authority prevail. According to the indicators of understanding, 44.2% of women have an average level and 0.9%—low. According to the indicators of emotional attraction, 37.5% of the women surveyed show a high level and 9.8% – low. According to the indicators of authority, it is found that more than twenty percent of women from crisis families have a low level (20.5%) and 3.6%—a high level.

An analysis of the results of the study of sexual attitudes of women from crisis families showed that the high level prevails only on the scale of sexual satisfaction and is 56.3% of the total number of respondents of this group. The prevailing low level was marked by sexual shyness (55.8%), chastity (66.1%), and aggressive sex (54.5%). On all other scales, women with average levels got the highest percentage. According to the scales of sexual neuroticism and masculinity-femininity, there are no respondents with a high level of expressiveness and on the permissiveness scale – persons with a low level (Falyova & Markova, 2016).

The Interrelation of Self-Actualization and Indicators of Blocks of Actual Psycho-Emotional State, Personal and Family Crises

To determine the interrelation, we have analysed all the studied psychological indicators. We considered the main linkages between the indicators of the actual psycho-emotional state, the personal and the family crises (behavioural, psychophysiological, and partner patterns) and self-actualization.

Significant correlations are found on all scales of groups of women from crisis families. The greatest number of correlations in the group of women from crisis families is noted by indicators of interpersonal sensitivity, anxiety (psychopathological symptoms). Their number is 50%. 42.86% of relations were detected on the scale of depression and phobia. The third place in the number of connections is occupied by the scales of the level of mental distress and anxiety (psychological scale)—35.71% each. Also, 28.57% of connections of self-actualization were detected on the scale of psychosocial stress. Scales

of somatization, obsessive-compulsive disorders, paranoia, psychoticism, depression (psychological scale) have the same number of correlations, which is 21.43%. The smallest number of links was shown by the scales of additional questions (7.14%) and hostility (14.28%).

Analysis of the results of the correlation analysis showed that the ability of women from crisis families to live for the today, which suggests a high level of self-actualization of the individual, reduces the level of psychopathological symptoms on such scales, as: somatization (−0.164, $p < .05$), depression (−0.147, $p < .05$), anxiety (−0.196, $p < .01$), phobic anxiety (−0.195, $p < .01$), paranoid symptoms (−0.140, $p < .05$), psychoticism (−0.170, $p < .05$), and general level of mental distress (−0.186, $p < .01$). The relative independence of women from crisis families in their actions, and also disinclination to external influences (support scale) inversely correlate with the scales of psychopathological symptoms: interpersonal sensitivity (−0.61, $p < .05$) and depression (−0.189, $p < .01$) and with psychological scales of anxiety (−0.243, $p < .01$) and depression (−0.139, $p < .05$).

Values that are inherent in self-actualizing person are mutually conditioned with the level of psychopathological symptoms on the scales of anxiety (−0.167, $p < .05$), phobic anxiety (−0.167, $p < .05$), and the level of mental distress (−0.146, $p < .05$). The high level of behavioural flexibility in the realization of their values, interaction with others, the ability to respond quickly and adequately to changing situations reduces the risk of development of psychopathological symptoms on the scales of obsessive-compulsive disorders (−0.137, $p < .05$), interpersonal sensitivity (−0.133, $p < .05$), anxiety (−0.139, $p < .05$), phobic anxiety (−0.150, $p < .05$), psychoticism (−0.147, $p < .05$), and psychological anxiety scale (−0.133, $p < .05$).

Understanding by women from crisis families of their needs, feelings (the scale of sensitivity to oneself) is revealed through interdependence with interpersonal sensitivity (−0.174, $p < .01$) and depression (−0.157, $p < .05$). Such women are not characterized by self-denial, discomfort in interpersonal interaction, lack of interest in life, lack of sense of personal inadequacy and inferiority.

The inverse relation of the entire block of self-perception with the indicators of psychological scales of anxiety (self-esteem: −0.337, $p <$

.01; self-acceptance: −0.428, $p < .01$) and depression (self-esteem: −0.224, $p < .01$; self-acceptance: −0.296, $p < .01$) is revealed. It can be concluded that the more women from crisis families value their merits and respect themselves for them, the lower are the indicators of psychopathological symptoms: interpersonal sensitivity (−0.142, $p < .05$), depression (−0.190, $p < .01$), anxiety (−0.133, $p < .05$), phobic anxiety (−0.145, $p < .05$). At the same time, if women accept themselves as they are, without assessing their merits and demerits, the lower are psychopathological indicators of depression (−0.277, $p < .01$) and additional questions (−0.196, $p < .01$), although they do not fall under the definition of symptomatic disorders but may point to some of them.

The analysis of the results showed the existence of significant correlations of the block of the concept of a person with the scales of the actual emotional state of women from crisis families. The woman's perception of human nature as a whole as positive contributes to the reduction of manifestations of such psychopathological symptoms as somatization (−0.187, $p < .01$), obsessive-compulsive disorders (-0,338, p<0,01), interpersonal sensitivity (−0.343, $p < .01$), anxiety (−0.324, $p < .01$), hostility (−0.153, $p < .05$), phobic anxiety (−0.266, $p < .01$), paranoid symptoms (−0.212, $p < .01$), psychoticism (−0.162, $p < .05$). The ability of women to holistic perception of the world and people, understanding the connection of opposites (synergy scale) helps to deprive manifestations of somatization (−0.166, $p < .05$), obsessive-compulsive disorders (−0.241, $p < .01$), interpersonal sensitivity (−0.310, $p < .01$), depression (−0.167, $p < .05$), anxiety (−0.181, $p < .01$), phobic anxiety (−0.206, $p < .01$), paranoid symptoms (−0.177, $p < .01$), and the general level of mental distress (−0.223, $p < .01$).

In the least way, the scales of the emotional state of women from crisis families are characterized by a connection with blocks of interpersonal sensitivity and attitude to cognition. The high level of acceptance of aggression involves a reduction in the psychological scale of anxiety (−0.154, $p < .05$). Significant correlations of the scales of sociability and cognitive needs with the scales of the actual emotional state were not revealed. Self-actualization on the scale of creativity is revealed due to the connection with the indicators of

interpersonal sensitivity (−0.226, $p < .01$), anxiety (−0.144, $p < .05$), and the general level of mental distress (−0.137, $p < .05$), that is, the more expressed the creative orientation of the individual, the less characteristic of it will be disturbing states, discomfort in interpersonal interaction, and lack of interest in life.

At this stage of the study, we conducted a quantitative analysis of the total volume of interconnections of self-actualization with the components of the family crisis block (marital satisfaction, behavioural modes in conflict situations, sexual attitudes, love and sympathy, understanding, emotional attraction, and authority).

In the group of women from crisis families, the scale of physical sex prevails at the level of 57.14% from the total number of correlations for this block. In the second place, according to the number of interconnections, there are scales of sexual shyness and chastity, the share of which is the same – 42.86%.

In the third place, by the number of links, there is a scale of masculinity-femininity—35.71%. In the fourth place, the authority and pornography scales with 28.57% can be placed. Thus, the greatest interconnections among women from crisis families are marked by scales of physical sex, sexual shyness and chastity, masculinity-femininity, authority, and pornography.

Components of Family Interaction

An important link of further research is to define components of the family interaction (FI) system. Based on the analysis of the data obtained through correlation and factor analysis, we determine 5 components of FI: psychoemotional, individual-psychological, behavioural, psychophysiological, and partner.

1. The psychoemotional component includes indicators:

– psychopathological symptoms (obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid symptoms, psychoticism, additional questions);

– psychosocial stress;

– hospital scale of anxiety and depression;

– emotional states (emotional stability, carelessness, emotional sensitivity, anxiety, development of self-control, tension).

2. The individual-psychological component includes the following:

– individual-psychological features of the person (general level of intelligence, development of imagination, dreaminess, diplomacy, innovativeness, courage, moral normality, self-discipline);

– self-actualization (orientation or competence in time, self-support, value system, behavioural flexibility, reactive sensitivity, spontaneity, self-esteem, self-acceptance, acceptance of human nature, synergy, acceptance of own aggression, sociability, cognitive needs, creativity;

– the level of subjective control (general internality, internality in the field of achievements, failures, in family, production, interpersonal relations, internality in relation to health and illness).

3. The behavioural component includes indicators:

– behavioural modes in conflict situations or 5 ways to regulate conflicts (rivalry (competition), adaptation, compromise, avoidance, cooperation);

– ways to get out of difficult life situations;

– communicative qualities (openness, closeness (sociability), courage, degree of domination-subordination (dominance), attitude towards people (suspicion), diplomacy, dependence on the group, independence).

4. The psychophysiological component includes the following:

– sexual attitudes (permissiveness, realization, sexual neuroticism, impersonal sex, pornography, sexual shyness, chastity, sexual aversion, sexual arousal, physical sex, aggressive sex, masculinity-femininity);

– somatization (somatic equivalents of anxiety).

5. The partner component includes indicators:

– satisfaction with the marriage;

– love and sympathy;

– understanding, emotional attraction, authority.

Definition of the concept involves the allocation of essential features of the phenomenon. It is advisable to identify those specific features of FI that will allow us to distinguish it from other phenomena, as well as, if necessary, to state the presence and levels of its violation, the dynamics in a particular family.

1. FI violations cause internal family relations and individual psychological characteristics of family members.

2. These are violations of the most important rules for this family.

3. The family's resilience to life and personality difficulties, which leads to a violation of the FI, can be explained by a mechanism that provides for success – coping strategies for problem-solving (family resources, subjective interpretation of the stressor; Hill, 1946).

4. The peculiarity of the violated FI is that it causes real damage, as the personality of the wife and the husband, and the family as a whole and the people around them. This may be a destabilization of the existing family order, personal injury, physical violence, and deterioration of mental and somatic health. In extreme cases, FI violation poses a threat to the family existence and the lives of its members (suicidal behaviour). The psychological marker of harm is the suffering experienced by a person, or what he/she brings to the family.

5. Violations of FI, if they are not diagnosed, reflexed and corrected, can be characterized as persistently repeated or chronic.

Analysis of the results of our study made it possible to identify diagnostic markers that allow establishing the aetiology of family, personality, somatic, emotional, and self-actualization disorders, characterizing the dynamics, forecasting further destructions or positive development, evaluating the effectiveness of medical and psychological correction.

At the same time, these markers are targets for medical and psychological correction: self-actualization (support, value system, self-esteem, spontaneity, acceptance of aggression, sociability, self-acceptance, behavioural flexibility, sensitivity, creativity, competence in time), internality (general, in the field of achievements, family and industrial relations), sexual liberation (sexual libido, impersonal sex, permissiveness, pornography, masculinity-femininity), and sexual attitudes (sexual arousal, physical sex, sexual aversion, sexual neuroticism), family relationships (understanding, emotional attraction, authority, marital satisfaction), psychological defences, behaviour in conflict situations.

Conclusion

Thus, the analysis of the relationships of psycho-emotional states, the factors of the family crisis, the personal qualities of women from crisis families, and the semantic relationships of factors allowed determining the factors and criteria for forecasting the development of

the family crisis (personal growth and destructive response of the individual), the level of somatic health and the growth of self-realization of a woman's personality in a family crisis.

1. The states of family interaction, levels of family crises, and the relationship between them are established; certain components, specific features of the family interaction system, and diagnostic markers (targets of medical and psychological correction and support) are determined.

2. The presence of significant correlations of self-actualization and the scales of blocks of the family crisis in the surveyed women is determined. The presence of significant correlations of self-actualization and scales of the personal block, self-actualization and scales of the actual psycho-emotional state is revealed. Self-actualization of women is characterized by interdependence with psychopathological symptoms.

3. The obtained results of the research of women from crisis families and the revealed targets of psycho-correction of mental disadaptation and violations of the self-actualization of a woman's personality in a family crisis indicate the necessity of carrying out psycho-preventive measures, correction of the psycho-emotional state, and increasing the level of self-actualization as risk factors for psychosomatic illness and preparing a program of psycho-correction aimed at primary treatment of somatic disorders, negative psycho-emotional states, further work with the personal qualities of the subjects, provoking a family crisis, emotional and cognitive disorders; carrying out a control cut after psycho-correction work, further processing of the research results, determining the effectiveness of the corrective program for its introduction into the practice of medical institutions and medical psychologists.

Summary

In Ukraine, the number of various factors of psychotraumatization has increased recently in connection with an increase in the level of social and stress destructive-destabilizing factors. The action of these factors causes deterioration of physical and psychological health, destructive changes in family functioning.

We conducted research on the factors of psychoemotional, personal spheres and behavioural, psychophysiological, and partner patterns

among women from crisis families, who are in chronic stress. The sample included women in a total of 224 persons who asked for advice and assistance. By the time of anamnesis collection, the age of the respondents was in the range from 29 to 56 years.

Analysis of the results of our study made it possible to identify diagnostic markers that allow establishing the aetiology of family, personality, somatic, emotional, and self-actualization disorders, characterizing the dynamics, forecasting further destructions or positive development, evaluating the effectiveness of medical and psychological correction.

The obtained results indicate the necessity of carrying out psycho-preventive measures, correction of the psycho-emotional state, increasing the level of self-actualization as risk factors for psychosomatic illness, and preparing a program of psycho-correction for its introduction into the practice of medical institutions and medical psychologists.

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Inna Gubenko, Angela Demchenko
Cherkasy Medical Academy, Ukraine
medacademy@ukr.net
dem4enkoav@gmail.com

Svetlana Mukomel
Ukrainian Academy of Acmeology, Ukraine
smucomel@mail.ru

Sanogenic thinking of future specialists of the emergency medical aid service as a factor of counteraction to emotional stress and as a condition of preservation of their professional health

Introduction

One of the main tasks of the present time is the formation of a healthy person, and the problem of psychic health support is becoming more and more relevant. The acceleration of the pace of life, the rapid development of information technologies intensify the nervous tension, which leads to the emergence of depression, stress disorders, neuropsychic pathology, the morbidity rate increases rapidly. The quality of life of a young person, his/her relationship with the environment, ways of responding to the circumstances of everyday life, and so forth, is determined by the type of thinking that can affect the state of psychic and somatic health of a person.

Sanogenic thinking allows you to get rid of the state of stress, the negative effects of emotional stress, leads to a decrease in suffering from negative emotions. The main function of sanogenic thinking is the constructive regulation of emotional states of a person. The study of the problem of sanogenic thinking, in our opinion, will allow us to go deeper into the solution of urgent problems in the psychic field of future specialists of the medical profile. As you know, the formation and preservation of the psychic health of future specialists of the emergency medical aid service is mainly connected with the peculiarities of the emotional and volitional sphere of a person, in particular with such his/her features as perseverance, determination, initiativity, endurance, and so forth. Herewith, the prevention of professional deformations, which are most often associated with

changes in this field, should be considered not as a treatment, but as the management of the mechanisms that determine the development of the employee's personality, contribute to the formation of positive self-perception, readiness for change, the adoption of a high degree of responsibility for the results of performed actions which is a sign of a sanogenic type of thinking of a person.

In domestic psychology, the problem of sanogenic thinking, developed by Orlov (2006), was systematized the most. He believes that the main role of this type of thinking is to create conditions for reaching the goals of self-improvement, harmony of traits, consent with himself/herself and environment, getting rid of bad habits, management of his/her emotions, control of their needs (Ananiev, 2006). This thinking reduces internal conflict, tension, prevents diseases, strengthens health. Unlike pathogenic thinking, sanogenic one contributes to the improvement of psyche, elimination of obsolete resentments, complexes, eliminates difficulties in communicating, gives success in activity and life.

In the psychological literature, the term "sanogenic potential of an individual" is used. It is understood as the psycho-energetic potential of an individual, which was formed as a derivative of the wealth of his/her inner world, the breadth of social and spiritual spaces, the acquisition of experience, the achievements of his/her own well-being, and directly proportionally affects his/her psychic health, as well as the means that allow to support it (Kaloshin, 2008).

The purpose of the article is to characterize the peculiarities of sanogenic thinking of future specialists of the medical profile, to describe the connections of sanogenic thinking with reflexivity, self-perception, persistence, self-control, etc., for the preservation of their professional health.

The basic concepts of emotional stress in domestic and foreign psychology and the role of positive thinking in counteraction to emotional stress.

It separates a person from natural conditions: artificial lighting, steam heating, synthetic clothing, multistory houses and elevators, synthetic food. A person works when according to sunny and monthly rhythms it is worthwhile to rest or sleep. A person moves a little, although he/she is naturally programmed to extract bread, making significant efforts (Alexander, 2008). At the same time, psychic

overload has become a daily reality and stress is superimposed on stress not giving time to recovery. According to the World Health Organization, the number of diseases due to the negative effects of stress over the past 60 years has increased by 25 times.

The effects of stress are so large and broad-scale that even the economy started to suffer from them. For example, the American specialists have estimated that the stress in general costs the US economy 150 billion dollars a year. And, when billions are put at stake, companies and firms are starting to take appropriate measures. The dozens of them introduced the courses to fight stress for their employees, providing workers with a variety of help (Ananiev, 2006). And, although the psyche was responsible for the fact that the body became ill, nobody thought that it was possible to force the body to recover again by influencing it. Almost everyone has experienced stress. But, hardly anybody has thought about what stress is. Stress is a part of everyday life, and although it is caused by various factors (stressors), they trigger the same biological response. However, stress can be counteracted. Stress can be weakened or eliminated altogether from human life by changing the attitude towards reality by managing our thoughts. The human mind has an extraordinary power that needs to be directed to weaken the stress, not to amplify it. A person feels stress in case if he/she has convinced himself/herself of this. She is helpless only when she feels helpless. She falls into a situation with no way out when she has really decided that there was no way out. By changing thoughts, expectations, guidelines, a person learns to live without stress (as stated in Oliynyk, 2004).

Changing himself/herself, a person must necessarily experience the feeling that people and events that previously caused her to stress have changed (Kovalenko, 2003). It would be wrong to assume that there is a certain stressful environment around a person, which only waits for ruining him/her. The stress state is largely determined by how a person responds and what he/she says, and not just by external factors causing stress. The theory of stress suggested by G. Selye is the most common one. In his work *Theory of Stress*, the author proves that stress is a nonspecific response of a body to any demand. The problems causing stress are different, but the body responds stereotypically, with the same biochemical changes, the purpose of which is to cope with irritants. Each new demand is specific and peculiar. However, despite

what changes they cause in the body, all the stressors have something in common. They put forward a demand of readjustments. This requirement is nonspecific, stipulates adaptation to any difficult situation. In other words, in addition to a specific reaction to the stressor, there appears a nonspecific need for an adaptive function that will restore the body's balance (Korolchuk, 2002). The word "stress," which had recently enjoyed particular popularity, came from the English language, and its translation means "onslaught, pressure, stress". As stated in (Roman, 2004): stress is a state of psychic tension that a person starts to experience in the process of the activities complicated by certain circumstances (for example, during a space flight, in the event of an emergency, fire, during the preparation for a complex examination, etc.). Stress is an adaptative syndrome that can have a different effect on the state of the body. In some cases, the mobilization of internal resources of the body occurs and a person carries out such activities, which he/she cannot carry out under normal circumstances, in others—a complete disorganization of the body until the appearance of stupor occurs. Therefore, it is important to study the adaptation of a person to difficult circumstances with the purpose to predict his/her behaviour in similar situations.

Sometimes the notion of stress is interpreted wider: it includes a strong negative impact on the body and unfavorable for the body physiological or psychological reaction to the action of the stressor, a strong reaction of the body as favorable and unfavorable to it» (Greenberg, 2002). However, stress is an individual reaction that may differ from the reaction of any other person. It is based on a person's attitude to this situation, as well as his/her thoughts and feelings. By changing his/her thoughts and reaction, a person gets an opportunity to completely change his/her feelings and reduce the stress level. Consequently, the reaction to a situation depends on the person, on his/ her thoughts that can be managed. Certain factors cause a person's stress reaction under which he/she consciously or subconsciously tries to adapt to a new situation. Then the alignment or adaptation comes. A person either finds a balance in the current situation and stress does not produce any consequences, or does not adapt to it. As a result, different psychic or physical abnormalities may occur. Frequent stresses can lead to the depletion of the adaptative protective system

of the body, which in its turn can cause diseases. In general, the human body reacts to stress differently (Timchenko, 2000).

Passivity. It is elicited in a person whose adaptation reserve is insufficient and his/her body cannot withstand stress effectively. The state of helplessness, hopelessness, depression emerges.

Active protection against stress. A person changes a scope of activity and finds something more useful in order to achieve a balance, which contributes to the improvement of health.

Active relaxation (relaxation) enhances the natural adaptation of the human body – both psychic and physical. This reaction is the most effective one. In 1935, the American physiologist W. Cannon first identified the mechanism of human response to stress—this is a reaction of struggle or escape (Nikiforov, Ananyev, Gurevich, 2000).

The information about anxiety enters the brain through the sensory organs. During fractions of a second, the information is transmitted to the thyroid gland through the nerve endings. Receiving an anxiety signal, this body immediately throws a huge number of «battle hormones» into the blood, that is adrenaline that spreads all over the body. The pumping-over of blood happens: it moves to where it is most needed for the appropriate actions. The brain continues to send signals—psychic tension increases, attention is intensified, preparation for action is carried out. All this happens with lightning speed—the tension, and hence the stress, grow at an amazing speed. Adrenalin increases the frequency of pulse and breathing, blood pressure rises. And, if a person does not realize the created stock of energy (does not run away, does not attack), it leads to the emergence of psychosomatic diseases (cardiovascular, liver, nervous system, decrease in immunity, etc.). Every person has his/her own «threshold of sensitivity to stress» (which can get changed, which can be controlled) – that individual level of tension to which the effectiveness of the activity increases.

But, if the impact on the stressor lasts for a long time, the threshold of sensitivity increases and exceeds, the person's success of work and quality of life are significantly reduced. It is impossible to live and work without stress at all, and it is harmful: without the need to fight and overcome difficulties, a person ages, becomes weak and helpless. However, having crossed the individual «threshold» by force and duration of influence, stress becomes disastrous, a person experiences

tiredness from stress, exhaustion, he/she may even get sick. It has been established that 10–15 years of work in extreme conditions can wear out the human body as if it had survived the worst heart attack. And, conversely, short-term severe stress can mobilize and activate a person, increase his/her vitality (Berezjuk, 2011).

In order to prevent stress in a certain way, everyone needs to know its signs. As you know, the physical and psychological reactions to stress are diverse. Already on its own, the emergence of a stressful situation leads to negative consequences: pain in the stomach, severe headaches, inability to breathe deeply, because something interferes. These serious timely signals which the human body sends should be understood unambiguously—it is stress. While they only warn a person (it is still far away to the danger signal), however, having received them, one should think about the causes of certain disorders in the body. In addition to physical, in this case, biological stress signals, there are also signals of the emotional sphere about the need for behaviour change.

The stress of one person might be disclosed in impatience (at least when he/she is waiting for a public transport at a stop, or in a classroom—the student's response). Another one seems to be constantly in a hurry: he/she speaks quickly or walks too fast. The third one suffers from the deterioration of memory. The fourth one has his/her thoughts continuously running from one thing to another one and he/she cannot concentrate (Korolchuk, 2002). The increased nervousness, wild mood swings, rapid fatigability, a state of devastation are also the manifestation of stress. Some stresses are disclosed in sudden anger. And, someone becomes too distrustful: after having read or listened to the symptoms of various diseases, he/she tries to find them in himself/herself. By the expression of the face of most people, but not all, it is evident that they are in a state of stress. It happens that the tension is also felt in other muscles of the body. The shoulders strain and slump, a person bends forward, instinctively trying to protect himself/herself. He/she can cross legs or arms, trying to defend himself/herself (Kraynova, 2010). These and other psychic and biological signals should make people think about their health, lifestyle. The analysis of the reaction of the organism to such signals will help to understand the emergence of stressful situations and make the first step towards their overcoming. It is worth

to consider the various states that can signal the presence of internal tension in the body. This state, as a rule, burdens, and a person begins to determine what the reason is. The conscious assessment of a state can transfer these signals from the sphere of senses into the sphere of mind. This will enable you to achieve psychic balance and thereby eliminate unwanted stressful state. The signs of stressful state are: increased anxiety, feeling of crisis or great obstacle, inability to focus on something, too frequent mistakes in work, memory deteriorates, too often there is a fatigue feeling, very fast speech, feeling of loss of control over himself/herself, thoughts often get changed, fairly often pains (head, back, stomach) appear, increased excitability, irritability, work does not give the former joy, loss of sense of humor, the number of smoked out cigarettes sharply increases, passion for alcohol, constant feeling of malnutrition, the appetite gets lost, the inability to finish work in time (Oliynyk, 2004).

Having considered the signs of stress, it is necessary to get acquainted with the causes of stress. The common causes of stress are (Orlov, 2006):

– the impact of the environment (noise, pollution, heat, cold ...),

– load (high intensity): physical (muscular), physiological (illness, disorder, trauma ...), informational (excessive amount of the information to be remembered, remade ...), emotional, production (significant changes at work, difficulties and conflicts ...), load in medical activities,

– monotonousness in activities, in emotional contacts,

– everyday irritants: lack of necessary amenities, small quarrels with others, tense psychological atmosphere, waiting, late attendance,

– absence of habitual, wanted social connections, social isolation, violation of emotionally significant interpersonal relations,

– difficult life situations: illness, death of relatives, difficulties experienced by relatives, loss of work or threat of loss of work, rapid changes in living conditions,

– the critical times of life: divorce, the birth of children, the beginning and the end of training, the transition to a new job, retirement,

– personal disharmony: intrapersonal conflicts, the crisis of inconsistency of the real and desired I, the crisis of personality development;

– dissatisfaction with material provision,

– uncertainty or specific threat,

– social and socio-psychological factors (unemployment, social insecurity).

Along with the stress-producing factors common to all people, there are a number of professional stress-factors in the work of specialists of the emergency medical aid service (Oliynyk, 2004): responsibility, the need to constantly be the object of observation and assessment, to confirm their competence, as well as the variability of activity. The latter factor needs to be allocated specifically not only because it is associated with the brightest distinguishing feature of the activities, but also because its effect over the years is intensifying, unless a specialist of the emergency medical aid service develops his/her own individual strategy of behaviour. Everyday stress consists of actions of many stressors of small power, ordinary troubles in labor, training, household and family life. People often underestimate the consequences of this influence. However, it is becoming increasingly widespread that the dozens of small troubles is more harmful to health than rare severe stresses. In addition, the causes of stress may be caused by the following :

– much more often a person has to do not what he/she would like to do, but what he/she needs to do, what is included in his/her duties,

– a person constantly lacks time – does not have time to do anything,

– something or someone hurries, a constant rush,

– it begins to seem to a person that all the surrounding people are in a state of some internal tension,

– a person does not like almost anything,

– there are constant conflicts at home, in a family,

– constant feeling of dissatisfaction with life,

– a person has nobody to talk about the problems, and there is no particular desire; absence of a sense of self-respect at home, at work.

According to some authors, the main criterion of stress resistence of a person is the level of his/her ability to adapt in a complicated and demanding world (Timchenko, 2000).The whole aggregate of human qualities that promote or hinder adaptation (adjustment) is called adaptibility. Successful adjustment of a person to realities, to life is called adaptedness, and the violation of such an adjustment—

maladaptation, which leads to various disorders in the body's activities, including diseases (Nikiforov, Ananyev, Gurevich, 2000).

This especially concerns the "youngest system" of the human body, a nervous one, which was unable to manage in its development (adjustment) by the grand changes that had emerged in the life of all mankind in the last century. This was it which was the weakest link in the human body. Therefore, the main cause of stress is the maladaptation of the nervous system to the conditions of modern life.

According to P. Simonov, adaptability increases with "armament." Armament is good education, high professional training, possession of many attainments and abilities, developed ability to contact with people, the ability to compromise, positive thinking attainments, art to have plenty of self-control and be different. "Armed" can do everything, he/she is honored and appreciated, he/she is not threatened by unemployment, he/she does not feel fear of life, self-assured. And he/she, having no exceptional natural gifts, is well adapted to life and to stress (Tracy, 2000). However, a person does not quite increase his/her armament. Moreover, he/she significantly worsens his/her disease-resistance by ignorance, which according to Tibetan medicine is understood as lack of education in matters of health preservation, and eclipse, which is treated as neglect of the state of health of informed, educated people. A man constantly has to overcome difficulties, but not all of them affect the psyche and cause stress. The psychological fortitude of a person allows to maintain even spirits and internal harmony. Internal (personal) and external (interpersonal) resources support the psychological fortitude (stress resistance). The internal resources are: concurrence of realistic and desired I of a person, self-respect, conformity of achievements with harassment, sense of meaning of life, consciousness of activity and behaviour; belief in reaching the goals set, the assurance that everything that happens to a person is a consequence of his/her own efforts and actions, extraversion, a personality characteristic that defines the orientation of interests on the surrounding world, good physical health, endurance, the ability to use effective methods of overcoming stress (relaxation, positive thinking), a high level of psychological culture (Kraynova, 2010). The main external resources are interpersonal and social support—support of relatives, friends, employees, their specific help in matters. This gives a person the

opportunity to make emotional disclosure, to experience a sense of cohesion. The important thing is also the preservation or desire to change the status—a family, official, social one. The individual features that cause a decrease of stress resistence include: increased anxiety; irascibility, hostility, aggression, directed at himself/herself; emotional excitement, instability; pessimistic attitude to a life situation; long-lasting negative experiences; unsociability. In addition, the psychological fortitude is reduced by: complication of self-realization; perceiving himself/herself as a loser; intrapersonal conflicts. The knowledge of resources of human stress resistance gives him/her the opportunity to consciously work on himself/herself, preventing their negative action.

Thinking in the psychological scientific space is defined as a process of cognitive activity of an individual characterized by a generalized mediated reflection of reality. Thinking often unfolds as a process of solving a problem in which conditions and requirements are distinguished.

Positive thinking as a way of psychic self-regulation is characterized by the fact that a person consciously controls his/her thoughts, emotions and does not allow negative thoughts and emotions to be rooted. At the same time, a person believes in himself/herself, believes in ultimate success, remains optimistic in all circumstances.

As a rule, it is typical of the positive "I-concept" of an individual and is a habit to a certain extent.

Mastering positive thinking helps a person to realize his/her potential and create his/her life. It gives a person who persistently and passionately goes to it (masters it):

– self-belief,
– contributes to obtaining success in any business,
– successful overcoming of obstacles, failures, crises,
– more "calm" adaptation to changes in life,
– optimism, self-control, benevolence, life satisfaction,
– good relations with people,
– healthy lifestyle.

In addition, positive thinking is invariant. It can be used by any person in all spheres of his/her life.

The “Smart World” system takes the important place in the formation of optimistic personal qualities. It was developed by a popular Russian writer, psychologist Oleksandr Svyiash. It has already helped a large number of people in many countries of the world to make their lives the way they want. That is, these people managed to get rid of the problems that filled their lives with negative experiences. And they managed to reach those goals in various spheres of life that previously seemed unattainable to them.

The «Smart World» system is a positive life philosophy, according to which:

1. Any person is born for joy and spiritual development.

2. Any person in the potential has unlimited opportunities to create his/her life. But in most cases, he/she uses them unsatisfactorily.

3. The situation, which each person is in, is the best situation that he/she has been able to create for himself/herself today. This is the result of his/her efforts only, so you need to start enjoying it right now.

4. There is nobody except for us who creates problems for us. We are responsible for everything we have in our lives (other people are responsible for their lives themselves).

5. Each person can change his/her (not the other!) situation for better at any given time. In order to do this, he/she only needs to understand how he/she created his/her own problems and change his/her attitude to this situation.

6. Our consciousness in the form of explicit and hidden thoughts and attitudes defines our actions, and our actions form that objective reality that we are dissatisfied with. So, by changing our thoughts, we will change our actions and our reality.

Smart way helps those people who believe in themselves and make efforts to change their situation for a better one. Smart way will provide such people, including future specialists of the Emergency Medical Aid Service, with a real tool for managing their lives, happiness and success.

The psychic self-regulation of one’s life is a strategic direction that will help people become healthier, happier and more joyful. And therefore the most important task of any person who wants to regulate his/her relationship with the external and internal world – to completely switch to the principle of self-regulation of your body, to move away from the passive-subordinate life orientation to the active-

creative one. In general, self-regulation (especially psychic) in its modern form is the main skill of a person to adapt to life and act adequately to circumstances, achieving desired happiness.

Training program of the formation of sanogenic thinking of future specialists of the Emergency Medical Aid Service as a factor of counteraction to emotional stress.

Today the problem of the formation of sanogenic thinking of future specialists of the Emergency Medical Aid Service is relevant to both science and society. So that the specialists could successfully adapt to the new conditions of life, harmonically and effectively solve conflicts, interact in a particular environment, it is necessary that they acquire appropriate adaptive forms of thinking and behaviour and are able to maintain their health and health of the people that got into an emergency, are ecological for others.

The application of various active forms of learning – role games, trainings, solving situational tasks, organizing thematic discussions or "brainstorming"—is gradually being spread both in the world in general and in Ukraine in particular. Psychological training as a method of active social psychological training today is one of the most common types of psychological work. It is the most relevant and dynamic in the market of psychological services, which can be provided by social psychology, because it attracts people by its efficiency, confidentiality, internal openness, psychological atmosphere, individual and group reflection and other phenomena. Its significance is that it allows to effectively solve problems related to the development of communication attainments, management of our own emotional states, self-knowledge and self-perception, personal growth (Tracy, 2006). The use of training sessions provides an opportunity in an accessible form to acquire the knowledge that is necessary for the formation of sanogenic thinking of a person. That is why the training program is one of the effective means of forming sanogenic thinking of the future specialists of the Emergency Medical Aid Service. The training program is generally directed at the development of attainments of adaptive work with negative thoughts, the formation of self-observation and self-examination attainments, growth of self-awareness, recognition of the emotions emerging as a reaction to automatic thoughts, psychic work with negative emotions and states, the development of interpersonal communication

attainments, the development of positive attitude towards yourself and others, which with result in the achievement of the psychological well-being of the specialists of the Emergency Medical Aid Service. The intensive group communication is a promising form of psychological aid. The experience, which the specialists of the Emergency Medical Aid Service are gaining in a training group, helps to solve the problems that arise in various areas of their lives. As K. Rudestam notes, "a group is a microcosm, a miniature institution that reflects the outside world and adds realism to artificially created interaction" (Scherbatyh, 2008). In the process of work with the help of intensive group experience, they carry out the reconstruction of existing attitudes, practical mastering of a spectrum of professional attainments, optimal participation in communication, transformation of existing interpersonal relationships into truly personal ones, the process of self-acceptance, self-disclosure and self-realization is happening. The training program includes the following blocks:

– recognition and awareness of emotions,

– work with nonadaptive cognitions and destructive attitudes,

– psychic practice of working with emotions and feelings (shame, guilt, insult, envy, fear),

– formation of positive self-perception and attainments of social contacts.

Also, in the process of the development of the training program, we relied on the ideas of positive psychotherapy, in particular on the peculiarities of forms of conflict resolution (physiology and psychosocial strain situation; Scherbatyh, 2008). which is modeled in a particular life situation involving specific concepts:

1. Body (sensation): in the foreground there is a body-I-perception. Basic questions are: How does a person perceive his/her body? How does he/she experience different feelings and information from the external environment?

2. Activity (mind): here are the ways of forming the norms of activities and their inclusion into the I-concept. «Thinking» and the mind make it possible to systematically and purposefully solve problems and optimize activities. There are two multidirectional escape reactions: (a) "escape" to work and (b) "escape" from the requirements of activities.

Typical symptoms are the problems of self-esteem, overload, stress reactions, dismissal fear, attention failure and «deficit symptoms», such as pension neurosis, apathy, decreased activity, and so forth. The most common concepts of this area are: "If you can do something, then you represent something out of yourself," "Settle a case—enjoy playtime with a clean conscience," and "No pains, no gains," "Time is money" and so on.

3. Contacts (tradition): this field implies the ability to establish and maintain relationships with himself/herself, partner, family, other people, groups, social strata and other people's cultural circles; the attitude towards animals, plants and things. Social behaviour is formed by the influence of experience and acquired traditions, especially this concerns the formation of our abilities to forge relationships. There exist socially determined selection criteria that govern them: for example, a person expects politeness, sincerity, justice, accuracy, community of certain interests, and so forth. from a partner and chooses a partner according to these criteria.

4. Fantasy (intuition): you can react to conflicts activating fantasy, imagining a solution to conflicts, picturing in your mind the desired success or punishing and even killing in your dreams the people whom the anger accumulated on due to the fact that someone was unfaithful, was wrong or adhered to other beliefs. For example, fantasy and intuition can violate and even satisfy the need during creative researches and sexual fantasies. As a "personal world," fantasy separates from traumatic and painful interferences of reality and creates a temporarily comfortable atmosphere (for example, alcohol, toxic substances addiction).

The application of the four forms of conflict resolution aims at preserving the balance of mind of a person, a decisive factor for a balanced state of mind is the ability to think sanogennically. In the personal sphere, one-sidedness in the four qualities of life appears outwardly in the open forms of the four "escape" reactions—this escape to the disease (somatization), into vigorous activity (rationalization), into loneliness or communication (idealization or depreciation) and fantasy (negation; Berezjuk, 2011). The training program envisages the development of characteristics of the psychological profile of a person who thinks sanogenically, namely: the development of reflexivity, volitional self-regulation, the creation

of a positive energy potential (the situation of the emotional experience of joy) and positive emotional reaction and environmental stimuli, the development of neuropsychiatric resistance and stress resistance, the provision of a sustainable level of adaptation resources, the development of behaviour flexibility, the ability to preserve a certain degree of psychological stability in stressful conditions and independently return to the state of balance, the creation of a situation of inner peace and harmony (Berkovits, 2006). Therefore, in our opinion, the key in the fight against pathogenic automatic thoughts is the training of future specialists of the Emergency Medical Aid Service of sanogenic thinking in stressful situations associated with special conditions of professional activities. All these psychological technologies allow to carry out psychic recovery, that is the restoration of psychic performance capacity and adaptibility to the social environment by restoring the amount of energy and harmonizing the human psyche (Greenberg 2002). The expansion of the possibilities of psychic self-regulation contributes to the harmonious balance of the whole organism. Such a bulky integral approach to the formation of sanogenic thinking will ensure the full value of the psycho-physiological functioning of an individual at all levels of his/her activities. In our opinion, mastering the sanogenic thinking attainments, which includes the development of self-observation and reflection attainments, the reconstruction of existing attitudes, the removal of physical and psycho-emotional stress, the regulation of the behaviour of future specialists of the Emergency Medical Aid Service, will improve the person's adaptibility to the social environment. The main goal of the training program is the formation of sanogenic thinking among future specialists of the Emergency Medical Aid Service. Based on the results of the diagnostics and interviews, the following training objectives were identified: (a) to familiarize future specialists of the Emergency Medical Aid Service with the main ideas of the sanogenic thinking concept, (b) to reduce the manifestation of pathogenic and automatic thoughts arising in situations of strain and stress, (c) to acquire the basic ways of mastering sanogenic thinking: familiarization with the range of methodologies of Yu. Orlov, A. Ellis, N. Pezeshkian, J. Jampolsky, L. Hay and others; (d) to form skills and attainments of constructive conflict resolution in communication, emotional and behavioural self-regulation, psychological analysis of

situations, (e) to form positive self-perception and social attainments of future specialists of the Emergency Medical Aid Service in the process of acquirement of sanogenic thinking. The principles of work of the group are as follows: (a) a clear structured style of conduct—all classes are clearly planned, conducted on certain days and at a certain time, the duration of each lesson is fixed, all instructions are clearly formulated, (b) avoidance of emotional and information overload, (c) a gradual transition from rigid structuredness with a focus on the trainer's explanation to increasing spontaneity in intergroup interaction, (d) a gradual transition from a more directive style to a less directive one, (e) a gradual transition from emotionally neutral material to emotionally rich, (f) a gradual introduction of new material and the transition to more complex goals and objectives, (g) constant repetition and working out of preliminary tasks, (h) obligatory feedback between the trainer and future specialists of the Emergency Medical Aid Service, (i) a ban on criticism both on the part of the trainer and on the part of other group members, (j) the saturation of sessions with positive emotions—any success, even the most insignificant one, is marked, (k) exchange of thoughts, observations and experiences at all stages of work, (l) attraction of active rest and occupations of different kinds of hobby as an additional way to overcome tiredness and stress, and (m) control over performance of homework by future specialists on the Emergency Medical Aid Service.

In the process of training the following techniques are also used: (a) instruction—how to overcome certain situations that cause stress, pathogenic thoughts, (b) feedback—analysis of certain coping strategies and types of behaviour, reinforcement of the correct decisions, (c) modeling—working out a certain model of behaviour (with the participation of the trainer or other members of the group), (d) role-playing, and (e) social reinforcement—encouragement during finding the right coping strategy, homework. The training program on acquirement of sanogenic thinking consists of 20 sessions and is designed for 40 hours. The program envisages the humanistic position of the trainer and aims at awareness of the participants of themselves, value orientations, the growth of an individual, the confirmation of the need for self-actualization. It is based on the principle of graduality, stepping: each subsequent step should logically flow from the

previous one. Due to this, a man is gradually deepening in the process of awareness of himself/herself, revealing different sides of his/her «I», which is the basis for change, transformation of his/her thinking in sanogenic thinking. Each session involves: (a) receiving new information about sanogenic thinking and about yourself, (b) rethinking the notions about the image of his/her "I," his/her thoughts, feelings, actions in the light of receiving new knowledge, (c) reproduction, experience of the investigated emotion, (d) building a new type of relationship with himself/herself and others, and (e) consolidation of positive experience in acquirement of new thinking and getting rid of non-constructive ways of responding. Each session begins with reflection, which allows the host to get information about the state of participants, the desire to start work (whether they had a good rest, what they dreamt about, whether they had any difficulties in communication at sessons, at home, in the street). Next, the trainer asks if the homework was done: whether they tried to do it, what difficulties occurred, what they were feeling while performing the tasks on acquirement of sanogenic thinking.

Then the topic and the objectives of this sesson are announced, the transition to its main stages is carried out.

At each meeting, a warm-up is performed. It usually takes place after the reflection stage and before the start of acquirement of new information. Warm-up can be performed at the beginning, in the middle and at the end of a sesson in order to remove fatigue, tension or inclusion in the work. At the end of each session, the "here and now" reflection of the work process is performed (attitude to events, your contribution to the work, who supported and who disturbed the work, etc.). Then, homework is offered in order to consolidate the knowledge and attainments gained at the past meeting. Social and psychological training on the sanogenic thinking formation included four blocks. In order to understand whether the goals have been achieved, we shall analyse each of them.

The first block "Development of emotion recognition and awareness skills" was aimed at the self-observation and self-examination skills formation in future specialists of the Emergency Medical Aid Service. The following main tasks were defined: (a) motivation, problem statement, acquaintance, (b) creating a positive atmosphere and mood, (c) introduction of group interaction

elements, (d) identification of typical problem situations in the employment activity of lifesavers, (e) working out the skills of detection of automatic thoughts and their estimation on the game models, (f) recognition of emotions that appear as a reaction to automatic thoughts, (g) development of self-observation skills through journaling for the recording of situations and thoughts and emotions related to them, and (h) discussion of techniques and methods for negative emotion overcoming, which are already used by future specialists of the Emergency Medical Aid Service. The block consists of four classes.

The second block "Working with inadaptive cognitions and destructive attitudes" was aimed at the development of self-observation and self-examination skills in future specialists of the Emergency Medical Aid Service, as well as the formation of skills of adaptive work with negative thoughts. The following main tasks were defined: (a) identification of the causes of inadaptive cognitions, the manifestation of pathogenic thinking, (b) training of the evaluation of automatic thinking, (c) search for a rational response to automatic thinking, (d) identification of the thoughts that suppress the confidence of future specialists of the Emergency Medical Aid Service the most, and (e) discussion of difficulties and ways to overcome them. The block consists of four sessions.

The third block "Mental practice of working with emotions and feelings (shame, guilt, insult, envy, fear)" was aimed at the formation of self-observation and self-examination skills in future specialists of the Emergency Medical Aid Service, as well as the mental work with negative emotions and conditions. The following main tasks were defined: (a) acquaintance with the emotion formation mechanism, (b) determination of the role of personality's thinking and affection, (c) development of the ability to reflect and analyse the products of self creation on the basis of studying the peculiarities of sanogenic thinking, (d) ability to track down your own negative emotions, understand the nature of their formation, (e) to acquaint the group participants with the peculiarities of the formation of insult, shame, guilt, envy, fear and the ways of working with them, and (f) development of skills of sanogenic thinking mastering. The block includes six sessions.

The fourth block "Formation of positive self-perception and social contact skills" was aimed at the formation of self-observation and self-examination, interpersonal communication skills in future specialists of the Emergency Medical Aid Service. The following main tasks were defined: (a) discussion of difficulties in communication that arise in the educational activities, (b) identification and discussion of real interpersonal situations that caused difficulties, (c) discussion of possible behavioural options and dialogues in such situations, (d) role-playing, (e) discussion of results of the role-play, identification of the ways to overcome difficulties during communication, and (f) development of skills of sanogenic thinking mastering. The block includes six sessions. The result of the training sessions on the sanogenic thinking formation in future specialists of the Emergency Medical Aid Service should be the formedness of sanogenic thinking characteristics.

The training should change the attitude of future specialists of the Emergency Medical Aid Service towards themselves, helps them to understand themselves and the behaviour of others, allows them to look for constructive ways to solve problem situations in mutual relationships, will have a positive impact on their success, will promote the professional and social formation.

Conclusion

The sanogenic thinking of future specialists of the Emergency Medical Aid Service that helps to overcome negative emotions and to improve psychological well-being of a person is directly related to the positive type of emotional response to stimuli, the medical students have a positive personal sense or social value for them (good weather, joyfulness, compliment of others, joke). During this type of thinking, a student separates himself/herself from his/her own emotional experiences and observes them; he/she recreates the stressful situation amid the peace and concentration of attention, adapts to it.

The sanogenic thinking determines the intensity of psychosomatic complaints, which is characterized by reaction expressiveness regardless of their quality or orientation, and is inversely related to the high level of neuropsychic fortitude. The latter suggests that future specialists of the Emergency Medical Aid Service are notable for their maturity, high adaptibility, and lack of noticeable tension. The

sanogenic thinking, which plays a fundamental role in solving individual's own internal problems, is directly dependent on maintaining a positive attitude towards oneself, recognizing and accepting all his/her own personal diversity, which includes both good and bad qualities, including a positive evaluation of his/her own past.

Apart from that, the sanogenic thinking directly depends on reflexivity, which manifests itself in the ability to analyse your deeds and actions, to critically understand your peculiarities, to see the possibilities for self-regulation of your activity, especially in cases when it is necessary to solve any vital tasks, to make decisions in a variety of situations, and envisages the formation of a certain moral and psychological image of an individual, which, as a function, is aimed at the individual's spiritual world, to increase moral dignity of a man. The sanogenic thinking also directly depends on the component volitional self-regulation, which reflects the level of arbitrary control of emotional reactions and conditions. This characterizes future specialists of the Emergency Medical Aid Service as emotionally firm, they have a good self-control in different situations. They are characterized by inner peace, their self-confidence increases readiness for the perception of new, unpredictable and, as a rule, is combined with the freedom of judgements, with a tendency towards innovation and radicalism.

Summary

The article deals with the theoretical and methodological principles of the sanogenic thinking formation in specialists of the Emergency Medical Aid Service.

The specific features of pathogenic and sanogenic thinking, which are typical of the specialists of the Emergency Medical Aid Service, were analysed.

Some directions of the formation of recreational thinking in specialists of the Emergency Medical Aid Service were offered, which will provide the latter with the reliable moral and ethical functioning in the process of fulfilling the tasks for the intended purpose.

These tasks should be solved gradually. Firstly, the professional training period is favourable for the thinking type correction. The acquaintance of the medical students with the basics of professional activity, their first steps in it make adjustments in the worldview of a

future specialist, in his/her thinking, which will ensure a reliable moral and ethical functioning of an individual. Secondly, the provision of emergency aid to all categories of injured cannot but affect the personality of a specialist. Therefore, a special attention should be paid to the issue of development of psychological correctional programs by psychologists and the restoration of professional health of specialists of the Emergency Medical Aid Service in order to prevent the occurence of different levels of professional deformation. A person cannot become really healthy, to provide medical care to those who need it, unless he/she learns to manage his/her own state of mind, emotions, feelings and thoughts. That is why the sanogenic thinking is one of the effective means of psycho-traumatic problem solving, which is based on conscious analysis and experience, conscious reflection of your own emotions and emotiogenic (stress-producing) factors and high degree of your own responsibility for the results of the performed activity.

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Viktoriia Khramtsova
Department of Medical and Social Expertise and Rehabilitation in Internal, Nervous Diseases and Psychosomatic Disorders,
State Institution "Ukrainian State Research Institute of Medical and Social Problems of Disability Ministry of Health of Ukraine,"
Ukraine
xvv2004@gmail.com

Psychological determinants of health-saving behaviour and its disorders among young people with the status of a disabled-child

Introduction

Health is a quite complex formation which is interpreted from the standpoint of a bio-psycho-social approach. It is closely associated with both physiological and mental processes, as well as with social phenomena. An individual is a mediator in the complex process. His/her significant relationships with the world around are a formative aspect and determine health behaviour. Features of the implementation of significant relationships of the individual identify whether external factors will act as destabilising or contributing to health protection (Ierusalimceva, 2012).

Despite the fact that health psychology is quite new discipline, there are a lot of research papers devoted to the study of psychological determinants of health. Although they are all diverse good health is associated with such mental and psychological factors as stability of the emotional-volitional sphere, favourable conditions for the development in childhood, stable family relationships.

The psychological component of health is manifested in accepting own self-image, striving for self-development and harmonization of personality, high adaptive potential. Thus, it can be defined that psychological health mainly acts as a resource, and its preservation and promotion – careful action in relation to oneself. Subjective perception of health is refracted by the degree of life satisfaction. In this context, health saving behaviour serves both as a strategy and activity (Jakovleva, 2013).

First of all, social support makes it possible to cope with different stressors is a social condition influencing health. However, with regard to health saving behaviour, close people can support unhealthy

types of behaviour and interfere with health promotion (Kuznecov & Zotova, 2016). The way an individual will use social support depends on his/her orientation. Consequently, the concept of valeological mindset, which is included in the structure of personality orientation, is the closest one. From that point of view, the paper concerns with marked types of valeological mindsets, which were studied along with neurotic features of a person. *Resource* type is an internal need for keeping a healthy lifestyle and its implementation through dynamic actions. A person has a coherent idea of health and disease. *Supportive* type is a need to get support from a family member. There are no clear visions of a healthy lifestyle, and taking care of others activates own resources. *Manipulative* type—state of health becomes a form of influence on others. There are differentiated beliefs about disease, and health attitude is manifested in personal passivity. *Deficiency* type—there are no visions of a healthy lifestyle, general passivity both towards health and disease (Fel'dman, 2017).

Attitude to own health is developed as a personal new formation in teenage and holds a key position in the system of values (Ierusalimceva, 2012). The target property of health is associated with professional achievements, a happy life, and diseases prevention. Emphasising the loss of health as a loss of life purpose puts it into the category of sense-making concepts.

It also was found out the difference between the appreciated value of health and maintaining a healthy lifestyle that is most often associated with such a psychological feature as ignoring the fact of health and not consider it as a current need.

The study of factors influencing the attitude to own health and socio-psychological factors of health makes it possible to mark factors which correlate with health and disease. *Independent* ones include behavioural, emotional patterns and personal characteristics, as well as cognitive, social and demographic resources. Cognitive resources make up health, a healthy lifestyle and behaviours as activities of an individual that provide means for relating them to health saving behaviour. *Transmissive*—coping with stress and behaviour forms. *Motivators*—stresses and diseases (Nikiforov, 2006). Health continuum is studied as a dynamic interrelation from "optimal" to "fragile" one that becomes very important for young people with the status of a disabled child.

The very situation of social development, as well as the situation of medical and social expertise, has a significant impact on the

personality of young people with chronic diseases and early disability status (Jakovleva et al., 2016). The ambiguity of the influence of the social environment, socio-economic assistance, assessment of disability category based on new criteria differing from children's emerges full blown to study the interrelation between psychological factors oriented to health and disease of the mentioned individuals.

Methodology

The goal of the research is to study the aspects of health saving behaviour and psychological factors determining its disorder in the structure of life prospect of young people with the status of a disabled child.

Methods. It was used analysis of medical records, empirical and mathematical methods for achieving the goal. The author carries out a psychological assessment of personal traits, identity, personal attitude to selfhood, characteristics of time perspective, life goals, level of satisfaction with life, health values, the importance of the disease aspect when formulating objectives and ways for their fulfillment and the interdependence of these characteristics with limited activity and participation of young people in the implementation of health-saving behaviour. It was used the relevant psychodiagnostic tools: Cattell's 16PF No. 187, MMPI, multilevel personality questionnaire "Adaptability", test "Who Am I?", Satisfaction with Life Scale (SWLS) by Diener, adapted by Leontyeva et al., Zimbardo Time Perspective Inventory adapted by Syrtsova, Terekhina questionnaires for the construction of time perspective by the subject and implementation features of life goals, diagnostic of parental relations by Varga & Stolin, Schutz Fundamental Interpersonal Relations Orientation (FIRO-B) adapted by Rukavishnikov, Rokeach Value Survey, Panteleev's Self-attitude questionnaire (Fin'kevich, 2002; Karvasarskiy, 2004; Kun & Makpartlend, 2006; Mitina & Syrcova, 2008; Nikiforov, 2001; Osin & Leont'ev, 2008; Panteleev, 1993; Raygorodskiy, 2000; Rukavishnikov, 1992; Terehina, 2014), ICF, participation and activity section (in the form of patients self-report). The paper focuses on the characteristics which can be attributed to health saving behaviour: in the "Self-service" domain it is about health care, dieting and a healthy lifestyle, health maintenance, and in the "Everyday routine" domain—support of others in maintaining their health. These indicators were presented in the form of percentage

reduction. The ICF studies health components and takes a neutral stance in relation to the etiological factors that makes it possible to investigate cause-and-effect relations as well as different determinants and risk factors triggering disability (World Health Organization, 2001). The articled carries out the statistical description of the sample using methods of primary statistical analysis due to which it determined the arithmetic mean (*M*) and the error of the arithmetic mean (*m*) of indicators and also studied the normal distribution of indicators (Babak et al., 2001). The assessment of differences in the distribution of indicators for patients of different groups was conducted by virtue of Student's *t* test and the Wilcoxon signed-rank test (Ferster & Rents, 1983). It was considered that the distribution of the samples significantly differed if *p*-values did not exceed .1. The research identifies the interrelations between indicators by means of correlation analysis (Ferster & Rents, 1983; Ayvazyan, 1974). Spearman's rank correlation coefficient was used as the assessment of dependence degree between two indicators, which the research considered significant and consequently concluded about the availability of dependence if *p*-values did not exceed .1.

Participants. It was examined 95 young people with the status of a disabled child who were under socio-medical assessment due to the matter of disability group. There were 59 men and 36 women aged 18–29. The exclusion criterion was mental illnesses, mild cognitive impairment, age over 29, and a lack of disabled child status in past medical history. The data was distributed according to age and social indicators. Taking into account age periodization of Gauld et al. and Abramova periodization of the development of the mature personality, it was marked young adult (18–22 years) and adult age (22–29 years; Abramova, 1999; Kreyn, 2002;); the percentage ratio of the individuals was 60% and 40%, respectively; the average age of young adults was 19.2 ± 1.4 years and 25.1 ± 1.7 years of adults. The social indicator concerned the fact of a medical expert conclusion: it is established the status "disabled" according to medical (impaired functions and systems) or social (assessment of disability for a period of training or employment) factor, or a disability category is denied (medical condition limits social functioning at a minimum).

Statistical data. Young people were examined based on the following disease categories (according to ICD-10): Endocrine, nutritional and metabolic diseases (E00-E90); Diseases of the nervous

system (G00-G99); Diseases of the eye and adnexa (H00-H59), Diseases of the ear and mastoid process (H60-H95), Diseases of the digestive system (K00-K93), Diseases of the skin and subcutaneous tissue (L00-L99), Certain conditions originating in the perinatal period (P00-P96); Diseases of the circulatory system (I00-I99); Diseases of the respiratory system (J00-J99); Diseases of the genitourinary system (N00-N99); Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99).

The regional DDS set life activity limits for patients, who re-register disability group, in work activities (52.6%), self-care (28.4%), mobility (27.4%), training and professional training (7.4% and 6.3%) and education process (3.2%). Patients with a disability group established for the period from birth to 3 years accounted for 18.9%. 34.7% of people contacted the Medical Assessment Board of the institute to appeal against a decision of DDS (Disability Determination Services), 45.3% re-contacted and 19,0% contacted for the first time. The structure of parent family was presented as follows: 29.8% of patients grew up in single-parent families and 6.3%—without both parents, 28.4% were the only children in the family, 66.3% lived in urban areas. Young people not engaged in social activities made up 37.9%, employed—33.7%, people interested in work activities and studying—37.9%. 25.3 % of patients had DDS record about pronounced manipulative attitude. According to an expert decision of the institute, 56 patients were denied a disability group, 39 persons were assigned to a disability group (15 people for medical reasons and 24 people for social reasons).

Results

The study of the degree of individual's involvement in a real situation and the implementation of behaviour focus on health saving found out certain features (see Table 1).

People with a minimum disorder of functions and structures tried to keep a healthy lifestyle least of all. Patients, who were denied the status of "a disabled person", were characterized by a more expressed decline in the implementation of all components of health saving behaviour.

Table 1

The Mean Values of the Decrease in Implementing Activity and Participation in the Components of Health Saving Behaviour Among Young People With the Status of a Disabled Child

Social status indicators	Components of health saving behaviour in the ICF			
	Support of others in maintaining their health	Health care	Dieting and a healthy lifestyle	Health maintenance
Disabled person status based on disease factor	13.8±3.9	13.1±5.1	13.5±3.5	13.1±3.6
Disabled person status based on a social factor	19.5±6.1	11.9±3.2	20.0±3.5	14.3±3.6
Denied disabled person status	18.3±3.4	19.2±1.6	24.3±2.5	15.5±2.5

Note. Here and in the following tables, the ICF indicators are presented in the form of % reduction. In accordance with the reduction level: 5–24% is little difficulties; 25–49% is medium difficulties.

Analysis of the ranking of values system by age and social groups showed that the majority of young people with the status of a disabled child put health, as a priority value, in the foreground. Differences in the attitude to own health as a value depending on age development were also found out. In youth days, the value of health was more significant than among adult people (p = .00002). As for differences between patients depending on social status, 84.6% with disability status based on medical reasons put health as an important factor first, 76.2% based on social ones and 74.1% of persons who were denied a disability status. Unlike patients with the status of a "disabled person," the neglect of the health value was higher both in the group without disabilities (p = .019) and among people who have this status for social reasons (p = .000003).

The value point of health among all participants was closely associated with adequate self-esteem (0.54; p = .027), personal life values (0.31; p = .048), satisfaction with life in general (0.38; p = 0.012) and in the future (0.31; p = .049); had negative connections with affect rigidity (−0.33; p = .36), extremely high self-esteem

(−0.51; p = .02) and physical self-image (−0.61; p = .028). No links with parenting were found.

Personal complexes. Such components of self-awareness as closeness, diffidence, association of negative attitudes of others with oneself, low self-esteem, proneness to conflict, self-reproach and internal instability were mostly related to restrictions on the implementation of health care and health maintaining (see Table 2).

Table 2

Self-Attitude and Health Saving Behaviour

Indicators	Components of health saving behaviour in the ICF		
	Health care	Dieting and a healthy lifestyle	Health maintenance
Sociability	−0.36, p = .001	−0.24, p = .03	−0.39, p = .0003
Self-confidence	−0.22, p = .049	-	-
Looking-glass self	−0.27, p = .016	-	−0.26, p = .019
Proneness to conflict	0.29, p = .008	-	0.28; p = .011
Self-reproach	0.23, p = .039	-	0.27; p = .013
Self-esteem	−0.30, p = .006	-	−0.31; p = .004
Internal instability	0.26, p = .017	-	0.28; p = .01

The adequacy of self-esteem, as a significant characteristic in forming a healthy identity, negatively correlated with a decrease in health care (p = .01).

Anxiety transformation by a person with the formation of depressive, antisocial tendencies, difficult corrected concepts, in particular, regarding health, were closely related to a decrease in the implementation of health care and maintaining own health (see Table 3). Anxiety as a personality trait positively correlated with declines in the implementation of a healthy lifestyle as well as maintaining health. The low superego affected all the factors reducing the implementation of health-saving behaviour. Thus, personality traits were associated with a decrease in the implementation of maintaining health and a healthy lifestyle to a greater extent, and personality traits—with health care.

To a greater extent, the implementation of health care was associated with a disorder of adaptability, namely, low neuropsychic stability, moral standardisation, personal adaptation potential as well as with severe asthenic feelings and general maladaptation (see Table 4).

Table 3

Personal Traits and Health Saving Behaviour

Indicators	Components of health saving behaviour in the ICF		
	Health care	Dieting and a healthy lifestyle	Health maintenance
Depressiveness	-	-	0.23; p = .035
Psychopathic disorder	0.29; p = .009	-	-
Affect rigidity	0.36; p = .001	-	-
Low/high super-ego (G)	−0.36, p = .002	−0.26, p = .017	−0.33, p = .003
Harria/Premsia	-	-	−0.29, p = .008
Hyperthymia / hypothymia	-	-	0.28, p = .011
Low/high self-esteem	-	−0.24, p = .03	-
Low/high Ego-constrain	-	-	0.26, p = .02
Low/high anxiety	-	0.28, p = .009	0.34, p = .001

Table 4

Adaptability/Maladaptation and Health Saving Behaviour

Indicators	Component of health saving behaviour in the ICF		
	Health care	Dieting and a healthy lifestyle	Health maintenance
Neuropsychic stability	−0.30, p = .006	-	−0.29, p = .01
Moral standardisation	−0.30, p = .006	-	-
Personal adaptation potential	−0.28, p = .013	-	-
Asthenic feelings	−0.28, p = .012	-	-
Maladaptation	−0.29, p = .009	-	-

Axiological and time aspects. The decline in the implementation of health care and health maintenance was associated with low general satisfaction with life (−0.41, p = .0001; –0.30, p = .005) as well as dissatisfaction with life at present (p = .04) and in the future (–0.36, p = .001; –0.34, p = .002) and low satisfaction with own

achievements in realizing life goals in the future (–0.24, p = .028; –0.29, p = .009).

The priority of professional values positively correlated with a decrease in the implementation of health care (0.38; p = .02). The priority of business and individual values also had a positive relation with a decrease in a healthy lifestyle (0.45, p = .005; 0.32, p = .044) and maintaining health (0.37, p = .022; 0.35, p = .029). The importance of the values of personal life was associated with minimum limits restrictions for the implementation of health care and a healthy lifestyle (–0.47, p = .003; –0.34, p = .036).

The factors of the negative past and the excessive perception of the fatalistic present influenced the decline in the realization of health saving behaviour. And vice versa, the reliance on the future was a factor contributing to the realization of health care and its maintenance (see Table 5).

Table 5

Time Perspective and Health Saving Behaviour

Indicators	Components of health saving behaviour in the ICF		
	Health care	Dieting and a healthy lifestyle	Health maintenance
Negative past	0.34, p = .002	0.30, p = .007	0.37, p = .001
Fatalistic present	0.23, p = .034	-	0.24, p = .023
The future	−0.28, p = .01	-	−0.26, p = .016

In making up life plans and setting goals, health saving behaviour was mainly associated with the efforts expended, possible hindrances due to the disease, as well as hindrances not related to health (see Table 6). The more efforts for realising life goals were invested, the less the lack of behaviour aimed at preserving health was expressed. The less a healthy lifestyle and health were maintained, the more patients needed external resources.

The previous social situation of development. The study of child situation of development found out certain features. Building of a disabling character, as well as based on the type of rejection, had the most influence on the constraint of the implementation of health saving behaviour among the examined patients (see Table 7). The lack of skills to take care of own health was associated with insufficient

upbringing according to the type of social desirability (p = .035), a difficulty in the relationship between mother and child, which formed deficience behaviour in the term of control (p = .048) and low emotional connection (p = .028).

Table 6

Life Goals and Health Saving Behaviour

Indicators	Components of health saving behaviour in the ICF		
	Health care	Dieting and a healthy lifestyle	Health maintenance
Invested efforts for realising life goals			
In the past	−0.32, p = .003	-	-
At the present day	−0.22, p = .045	-	−0.41, p = .0001
Ideal life	-	-	−0.34, p = .001
Disease as a hindrance in setting life goals			
For the next year	-	0.31, p = .005	0.22; p = .048
For the next 5 years	-	0.26, p = .019	-
Hindrances not related to health in setting life goals			
For the entire life	-	0.29, p = .007	0.23, p = .037
Resources required	-	0.23, p = .035	0.27, p = .012

Table 7

Parent Upbringing and Health Saving Behaviour

Indicators	Components of health saving behaviour in the ICF		
	Health care	Dieting and a healthy lifestyle	Health maintenance
Parent-child relationships			
Rejection	0.31, p = .004	-	-
Social desirability	−0.23, p = .035	-	-
Disability	0.34, p = .002	0.28, p = .009	0.27, p = .013
Interpersonal interaction			
Need for affect	−0.24, p = .028	-	−0.31, p = .005
Control deficit	0.54, p =0,048	-	-

Help to others in maintaining health was associated with sociability (−0.26, p = .017), spent efforts for realising goals in the past (−0.22, p = .048) and a socially excessive type of interpersonal interaction (0.57, p = .001).

Discussion

The research studies out that health is quite significant value in lives of young people with the status of a disabled child but to a lesser extent than among healthy people of the same age group (Ierusalimceva, 2012). During the conversation, each of them differently understood the essence of health, ways of maintaining and caring for it, as well as a healthy lifestyle. But nevertheless, their health saving as an activity was difficult for them from mild to a moderate degree, and in some cases–intense.

The study found out that the decrease in the implementation of dynamic actions to preserve the health of young people with the status of a disabled child is primarily determined by personal complexes: personality traits and characteristics, adaptability and self-relation.

Personal traits and related particularities of anxiety transformation, which cause difficulty in health-saving behaviour, are represented by four positions.

1. *Susceptibility to feelings*, the protest against social norms and rules, with possible antisocial inclinations, focus exclusively on own desires and intentions, internal discontinuity and incomplete self-concept, and non-acceptance of control from outside were intensified by depressive tendencies and manipulative attitudes ($p = .033$).

2. *Difficulties in adapting to others*, disorder of activity due to a high level of personal anxiety were amplified by depressive tendencies and rigid attitudes ($p = .001$).

3. *Lack of self-confidence*, hypersensitivity to the emotional states of the surrounding people in addition to guilt feeling and high ego-tension along with irritability and lack of understanding of the order were aggravated by depressive tendencies, rigid attitudes, psychopathic disorder and manipulative attitudes ($p = .000002$).

4. *Low sensitivity*, neglect of bodily needs and obvious practicality combining with manipulative attitudes ($p = .001$).

Adaptability is the second significant personal factor. Developed behavioural regulation and high neuropsychic and emotional stability, acceptance of social norms and rules, adequate self-assessment in a team, adaptability to new conditions, good stress tolerance are determinants of health saving behaviour. Misbalance of these parameters, as well as the availability of maladaptations and asthenic

conditions, leads to difficulties in the implementation of health saving behaviour.

Self-attitude, as a personal complex, is a regulating factor of health saving behaviour. The determinants of health are positive emotional-value system; this is the ability to celebrate oneself who one is, be in contact with strong aspects of ego, positively think about own activity when interacting with others, and have a high level of self-esteem. However, factors, which lead to the decrease in the implementation of health saving behaviour are closeness, internal instability, a tendency to self-reproach, dissatisfaction with own capabilities, the idea that health promotion causes negative feelings of close people, availability of internal conflicts.

Axiological content and time aspect, as well as the previous social situation of development, have certain significance for health preservation of young people with the status of a disabled child.

Life satisfaction acts as a factor determining a standard of health as an opportunity to realise life plans, and focus on health is fit into the value structure of personal life. A decline in the implementation of health saving behaviour takes place in the context of priorities shift in favour of professional, individual and business values.

The efforts expended to overcome the various obstacles to the implementation of life plans and focus on the future saturated with a variety of goals are resource ones for health preservation. At the same time, external resources are factors causing a decrease in health preservation as well as focusing on disease and non-health hindrances, rejection of own past and excessive subordination to circumstances.

The situation of child development leads to the limitation of the activity of health saving behaviour to a greater extent. Training of a disabling character has the most disease-evoking power. The atmosphere where a personality formed is full of drives for personal and social failure. There is a barrier against difficulties and total control of actions, a constant reminder of failure, inability and childishness. In the future, this is manifested in the form of manipulative or deficit adjustive behaviour. Disallowance of future child success also acts as restrictive parental behaviour that impedes his/her activity and participation in health care. Passive hostility and reluctance to take the responsibility formed in the process of upbringing with a lack of control disrupt the activity in terms of health

care. Upbringing according to the type of social desirability, the satisfied need for early attachment to the mother, on the contrary, contribute to the development of an active position in health care. In the future, it forms a recourse type of attitude.

Comprehension of health saving behaviour among young people, with chronic diseases and disability, is impossible relying exclusively upon the psychological components of health. Below there is a model where the value of health and its psychological determinants act as aspects of both health and disease.

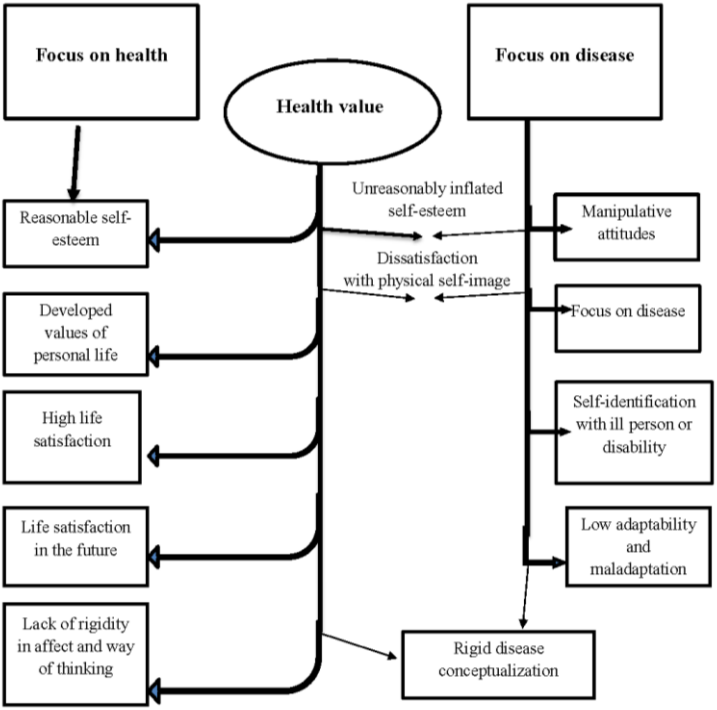

Figure 1. Health value in the structure of motivating focus among young people with the status of a disabled child.

Life activity in the disease is not just a motivator but also a trigger in forming a motivational focus both on health and disease. At the

same time, aspects of identity formation and personal rendering of anxiety according to a rigid way are psychological factors of both health and disease. An unreasonably inflated self-esteem is consistent with manipulative attitudes, and dissatisfaction with physical self-image – with a concentration on the disease.

In the structure of the life perspective of young people whose development was formed in a disability situation (Drozdova & Hramcova, 2018), health preservation and its psychological components can be considered as components of the structures "I am a personality" and "I am a family member". Health value is a vector of the implementation.

Within the framework of the author's model of (and its theoretical substantiation) the socio-psychological factors of development focus of the life perspective of young people with the status of a disabled child, an active attitude towards own health and the implementation of health saving behaviour compose its productive orientation.

Conclusions

Summing up, the following features inherent to young people who have the status of a disabled child can be identified.

Bringing up according to the type of disability mainly forms the manipulative or deficit type of attitude. Social desirability and affective saturation is the resource type of affiliation. Socially excessive interaction alongside conflicting requirements is the supportive type of attitude.

But nevertheless, health saving behaviour is affected by the factors of a social situation of the development: in the youth, they are mainly determined by parent-child upbringing and interaction, and at a young age—by the topical situation of development related to social and economic support.

Insufficient motivation in the context of low anxiety is a predictor of future difficulties in the implementation of behaviour aimed at keeping health and maintaining a healthy lifestyle.

Value-based component of health is formed in the later ontogenesis; for this reason, it is not associated with parental attitudes and upbringing style.

Decrease of activity and participation in the implementation of health saving behaviour among young people, who have been assigned

a disability group due to the social factor and are seeking to prolong its term later, is prognostic unfavourable. These people have an extremely high probability of forming behaviour aimed at deteriorating their condition and preferring economic support to health value.

Thus, the determinants of health-saving behaviour of young people with the status of a disabled child are the lack of guilt and personality accentuation, adequate anxiety transformation, emotional stability, positive emotional-value system, positive attitude to own activities, high level of adaptability, adequate self-esteem, acceptance of self-image, axiological content of health in the structure of values of personal life, a positive assessment of their own efforts, focus on the future, the resource type of attitude formed parental upbringing according to the type of social desirability, satisfied need for in the early attachment to the mother. The level of life satisfaction serves as a marker of health perception.

Summary

Significant relations of an individual with the outside world are the formative aspect and determine the attitude to own health, which is formed in his/her youth days. The quality of these relationships determines the influence of external factors as destabilizing or promoting health protection. A special situation of social development, as well the ambiguity of the influence of others, of young people with chronic disabling pathology are targets for the study of psychological factors focused on the health and disease of these individuals. The *goal of the paper* is to study the psychological determinants of health saving behaviour, its disorders in the structure of the life prospects of young people with the status of a disabled child. It is applied the *methods* of analysis of medical records, empirical and mathematical ones. The author investigates personal complexes, axiological, time aspects, previous social situation of development, and structure of interrelations with limits in the implementation of health saving behaviour. Ninety-five patients aged 18–29 with the status of a disabled child were examined. There are age (youth and early adulthood) and social (status "disabled person" according to medical or social grounds, disability category denial) indicators. *Results*. Persons with minimum disorders of functions and structures

have more pronounced declines in the implementation of health saving behaviour. The value of health is more important for people with disabilities for medical reasons. The value essence of health is associated with adequate self-esteem, personal life values, life satisfaction, and the lack of rigid attitudes. The value of health and its psychological determinants are aspects of both health and disease. It is marked personal determinants of disorders of implementation of health saving behaviour: susceptibility to feelings, difficulties in adapting to others, lack of self-confidence, low sensitivity.

The determinants of health-saving behaviour of young people with the status of a disabled child are the lack of guilt and personality accentuation, adequate anxiety transformation, emotional stability, positive self-attitude and attitude to own activities, developed adaptability, adequate self-esteem, acceptance of self-image , axiological content of health in the structure of values of personal life, a positive assessment of their own efforts, focus on the future, the resource type of attitude formed parental upbringing according to the type of social desirability, satisfied need for in the early attachment to the mother. The level of life satisfaction serves as a marker of health perception.

Health saving behaviour is affected by the factors of a social situation of the development: in the youth, they are mainly determined by parent-child upbringing and interaction, and at a young age – by the topical situation of development related to social and economic support.

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Anna Studzińska
Institute of Psychology
University of Economics and Human Sciences in Warsaw, Poland
a.studzinska@vizja.pl

Workplace sexual harassment and its influence on employees' psychological outcomes—A social perception perspective

Introduction

The current study concerns the issue of social perception of people who have experienced sexual harassment (SH), or rather, who have experienced unwanted sexual attention and sexual coercion. While there exists a multitude of definitions of sexual harassment, the one chosen here is based on empirical research on people who experienced SH.

Research (Fitzgerald et al., 1995; Waldo et al., 1998) shows that the general concept of SH can be divided into several categories, namely, sexual coercion, unwanted sexual attention, and gender harassment. Sexual coercion occurs when a person is being blackmailed into having a sexual relationship with someone in order to gain something (e.g., a promotion, a raise) or so as not to lose something (e.g., a job). Unwanted sexual attention happens when a person is the focus of behaviours of a sexual nature that they do not want, do not expect, and do not appreciate. Finally, gender harassment refers to situations when someone is being treated in a negative way because of their gender (e.g., a woman being told to act more feminine and put on make up, or a man told to „man up" and to be less emotional).

Research on men who experienced SH (Waldo et al., 1998) shows that gender harassment can be further split into three more categories: lewd comments, negative remarks about gender, and enforcement of the gender role. The first two types of SH are the ones which people usually think of when asked about SH. On the other hand, gender harassment, while much more prevalent and (when frequent) causing similar levels of negative outcomes (such as anxiety, depression, or somatic symptoms), is oftentimes omitted when SH is discussed, especially by lay people (Studzinska et al., 2019).

Consequences and Perceptions of Sexual Harassment

Sexual harassment, even in its mildest forms, can cause a plethora of negative effects to people who experience it. A model presented by Fitzgerald et al. (1997) and Fitzgerald et al. (1995) shows a number of factors which influence the occurrence of SH in the workplace, and a number of its consequences. According to their model, SH is preceded by the organizational climate and the job-gender context (i.e., the proportion of men and women in the organization). The consequences include both job related outcomes, such as job satisfaction, organizational withdrawal, organizational commitment, and workgroup productivity, as well as health and well-being consequences, such as a negative impact on mental health, physical health, PTSD symptoms, and life satisfaction. The current study concentrates on the health and well-being-related outcomes and their perception. In their meta-analysis, Willness et al. (2007) showed that SH experiences are linked to psychological and physical health-related variables. The experience of SH impacts mental health (anxiety, depression, sadness, and negative mood), life satisfaction (subjective well-being), and PTSD levels, but also the reported frequency of physical symptoms such as nausea, headaches, shortness of breath, or exhaustion. Other research (Fitzgerald et al., 1997) also shows similar results: SH is linked to distress (anxiety, depression), PTSD, and well-being, which, in turn, influences health (Langhout et al, 2005), as well as psychological distress when perceived as frightening and bothersome (only in men). In the case of military personel, experience of military sexual trauma (which includes sexual harassment) is associated with two to three times greater odds of receiving a mental health diagnosis of PTSD, adjustment disorders, alcohol abuse, anxiety, bipolar disorder, schizophrenia, psychosis, dissociative disorder, eating disorder, or depression (Kimerling et al., 2007).

Thus, SH constitutes a serious issue with grave consequences, both in terms of mental as well as physical health. Moreover, SH happens to both men and women. While most studies show that women experience SH more often than men, depending on the studied samples and types of SH taken into consideration, in some instances men declared even more cases of SH than did women (e.g., Studzinska & Wojciszke, 2019). The current study concerns the issue of social perception of such experiences—depending on the gender of the person who experiences it and the person who commits it.

It is pertinent to examine how the act of sexual harassment is perceived depending on who commits it and on whom. The classic study by Konrad and Gutek (1986) showed that men claimed they would feel flattered (67%) after experiencing different behaviours constituting SH, compared to the majority of women (63%) who reported they would feel insulted. Other studies examined whether certain behaviours are examples of SH depending on who committed them (Frazier et al., 1995; Katz et al., 1996; LaRocca & Kromrey, 1999; Ohse & Stockdale, 2008; Osman, 2004; Runtz & O'Donnell, 2003; Stockdale et al., 2004) and the results usually show that unwanted sexual attention and sexual coercion are considered to be SH, and that SH by men is considered to be SH to a larger extent than SH by women.

Thus, the current study sought to examine how people perceive consequences of SH depending on the gender of the person who experienced it and the gender of the perpetrator.

Study

Participants and Procedure. Two hundred and eleven civil engineering students—83 men and 128 women; mean age of 20.64 (SD = 2.35) participated in the study. They were asked to remain in class after lectures and participate in a paper-and-pencil study on social perception. They were all volunteers and were not remunerated in any way. The study was accepted by a relevant ethics committee.

The participants were first asked to provide their demographic information and fill out a short version of the Attitudes Toward Lesbian and Gay Men Scale (Herek & Capitanio, 1995) in order to control for attitudes towards gay men and lesbians, since in two study conditions, the participants read a same-gender SH scenario. The scale consists of six items, and three scores can be calculated—attitudes towards gay men, towards lesbians, and towards gay men and lesbians. Due to the nature of the current study, only the latter score was calculated, on the basis of the mean total score. A high score on the scale indicates a rather negative attitude towards gay men and lesbians. Cronbach's α for the scale in this study was .851.

Next, the participants were asked to read an excerpt from an article (Szternel, 2010) which described a real-life case of SH. The case involved both unwanted sexual attention and sexual coercion—the employer was not threatening, but rather promising more money and a better position in the company in exchange for sexual favors. The original article presented a case of a male employer harassing a male employee. Three additional versions were created by changing the

gender of the actors and introducing minor changes to the narrative so that it could also fit a male/female, female/male, and female/female SH scenario. The participants were randomly assigned one version of the scenario.

To measure the perceived depression of the SH victim, five items from the Beck Depression Inventory (Beck & Steer, 1984) were used, in a modified form—the participants were not referring to themselves, but rather had to answer how they thought the victim felt. The used items were (end of scale): *s/he is so sad and unhappy that s/he cannot stand it*, *s/he feels irritated all the time*, *s/he lost all interest in other people*, *s/he believes that s/he looks ugly*, *s/he has lost interest in sex completely*. The choice of those five items was dictated by previous research (Studzinska, 2015, Study 1). The items are scored on a scale from 0 to 3, and the mean is then calculated to create the score of *perceived depression*; the higher the score, the higher the perceived depression. Cronbach's α for this measure was .761.

To measure perceived somatic symptoms of the SH victim, four items from the Hopkins Symptom Checklist (HSC, Derogatis et al., 1974) were used: *s/he has headaches*; *s/he has difficulty falling asleep or staying asleep*; *s/he has poor appetite*; *s/he feels tense or keyed up*. The items are scored on a scale from 1 (*not at all*) to 5 (*extremely*) and the answers are averaged to obtain a *perceived somatic symptoms* score. Cronbach's α for this measure was .825.

To measure the perceptions of the situation by the SH victim, the participants were asked to evaluate how the victim could have perceived the situation. They were presented with a list of 12 adjectives on bipolar dimensions, for example, scary/not scary, not irritating/irritating, and were asked to evaluate them on a 7-point scale. The overall score of *perceived negative appraisal of the situation* was calculated by averaging the answers. Cronbach's α for this measure was .875.

Finally, to measure the perceived emotional state of the victim, the participants were asked to evaluate, on a 7-point scale, the degree to which the victim could have experienced various emotions (e.g., disgust, anger, guilt, sadness). The overall score of *perceived negative emotions* was calculated by averaging the answers. Cronbach's α for this measure was .856.

The participants were also asked to evaluate on a 7-point scale to what extent the described behaviour constituted SH and how responsible was the victim was the situation.

Other measures, especially related to the perpetrator, were also used, but are not discussed here as they are outside of the scope of the current study.

Results

The means and standard deviations, as well as Pearson's *r* correlation coefficients between the scales are presented in Table 1.

Table 1

Descriptive Statistics and Correlations

	Perceived depression	Perceived somatic symptoms	Perceived negative appraisal of the situation	Perceived negative emotions	Was this SH?	Mean (*SD*)
Perceived depression	-					2.45 (0.67)
Perceived somatic symptoms	**.603****	-				3.42 (0.90)
Perceived negative appraisal of the situation	**.316****	**.462****	-			5.61 (1.08)
Perceived negative emotions	**.269****	**.457****	**.465****	-		5.19 (1.02)
Was this SH?	.104	.299*	**.519****	**.327****	-	6.53 (1.01)
Responsibility	−.070	−.110	**−.213****	**−.143***	**−.215****	3.18 (1.76)

Note. Significant correlations in bold. Perceived depression: scores of 0 to 3; Perceived somatic symptoms: scores of 1 to 5; Perceived negative appraisal of the situation, Perceived negative emotions, Was this SH?, and Responsibility: scores of 1 to 7.

** p < .005, ** p < .001*

As can be seen, the people who experienced SH were perceived to experience a significant number of depressive symptoms (*M* = 2.45; where 3 was the maximum score). For the other variables, the mean score was always above the scale's middle point, suggesting that a

person who experienced SH was also perceived to experience somatic symptoms and have a negative appraisal of the SH situation. The described situation was seen as SH by the participants (M = 6.53; on a 7-point scale) and the victim was not seen as responsible for this situation (M = 3.18; on a 1–7-point scale).

Moreover, perceived depression, somatic symptoms, negative perception, and negative emotion scores correlated significantly with each other. Perceived negative appraisal and negative emotions correlated positively with the degree to which the participants saw the situation as SH (i.e., the more the situation was perceived as SH, the more perceived negative emotions and the more the situation was assumed to be perceived by the victim as negative). The degree of assumed responsibility of the victim was correlated negatively with the victim's assumed negative appraisal of the situation, negative emotions of the victim, and the perception of the event as SH (i.e., the more the event was seen as SH, the less the victim was seen as responsible; the more the victim was seen to perceive the event negatively and the more negative emotions s/he was assumed to have experienced, the less s/he was seen as responsible).

In order to analyse the differences in evaluation of the outcome variables depending on the gender of the victim and the perpetrator, I conducted a 2 × 2 (Victim gender × Perpetrator gender) analysis of covariance (ANCOVA) with participant gender and attitudes towards gay men and lesbians as covariates. For perceived somatic symptoms and depression, there were no significant differences (all ps > .05). For the perceived negative appraisal of the situation, there was a significant main effect of perpetrator gender, $F(1, 201) = 14.05$, $p < .001$, $d = 0.56$ ($M_{male\_perpetrator} = 5.91$, $SD = 0.97$; $M_{female\_perpetrator} = 5.32$, $SD = 1.11$), of perceived negative emotions, $F(1, 202) = 8.37$, $p = .004$, $d = 0.43$ ($M_{male\_perpetrator} = 5.41$, $SD = 0.98$; $M_{female\_perpetrator} = 4.97$, $SD = 1.02$), of the perception of behaviour as SH, $F(1, 203) = 8.73$, $p = .004$, $d = 0.45$ ($M_{male\_perpetrator} = 6.76$, $SD = 0.64$; $M_{female\_perpetrator} = 6.31$, $SD = 1.24$), and of victim responsibility, $F(1, 203) = 4{,}75$, $p = .03$, $d = 0.26$ ($M_{male\_perpetrator} = 3.41$, $SD = 1.67$; $M_{female\_perpetrator} = 2.95$, $SD = 1.82$).

Next, it was tested whether the perpetrator's gender influenced the perception of the event as SH, and thus, the perception of the victim's condition. To this end, a series of regression analyses was conducted

using the bootstrapping macro (Hayes, 2013) testing Model number 4, with 20000 bootstrap samples.

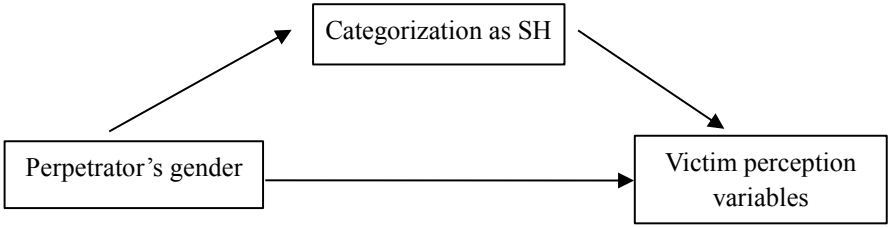
The tested models included perpetrator gender as the predictor (men = 0, women = 1) and the perception of the event as SH as the mediator, as well as the following covariates: participant's gender, victim's gender, and attitudes towards gay men and lesbians. The tested mediation model is presented in Figure 1.

An indirect relationship was found between the perpetrator's gender and perceived somatic symptoms, $B = -.08$, $SE = 0.04$, 95% CI [−.1764, −.0208]; categorization as SH was predicted by perpetrator gender, $B = -.38$, $SE = .13$, and, in turn, led to the perception of more somatic symptoms in the victim, $B = .23$, $SE = 0.05$; perpetrator gender and perceived negative appraisal of the situation $B = -.18$, $SE = 0.06$, 95% CI [−.3327, −.0617]; categorization as SH was predicted by perpetrator gender $B = -.38$, $SE = 0.13$, and, in turn, led to the perception of the situation as more negative, $B = .49$, SE = 0.06; perpetrator gender, and perceived negative emotions $B = -.10$, $SE = 0.05$, 95% CI [−.2276, −.0207], categorization as SH was predicted by perpetrator gender $B = -.38$, $SE = 0.13$, and, in turn, led to perception of more negative emotions experienced by the victim, $B = .27$, $SE = 0.06$. There was no indirect relationship between perpetrator gender and perceived depressive symptoms, $B = .00$, $SE = 0.01$, 95% CI [−.0411, .0275].

Overall, these results suggest that when the perpetrator was male, the event was seen as SH to a larger extent and thus, the victim was perceived to experience more somatic symptoms, have a more negative appraisal of the situation, and experience more negative emotions.

Summary and Discussion

The presented study provides new information regarding the process of evaluation of SH and its victims' suffering. First of all, the participants recognized the described behaviours as SH. This is not surprising, as sexual coercion is the stereotypical SH, while other types of SH (especially gender harassment) are less often recognized (Studzinska et al., 2019). Secondly, the victims were perceived to suffer as a result of SH and to appraise the SH situation in a negative



Covariates: participant's gender, victim's gender, attitudes towards gay men and lesbians. The mediation model is significant for the following outcome variables: perceived somatic symptoms, perceived negative appraisal of the situation and perceived negative emotions.

Figure 1. The tested mediation model.

light—they were evaluated as experiencing depressive and somatic symptoms and negative emotions, as well as having a negative appraisal of the SH situation.

Of note is also the difference in perception of the outcome variables depending on the gender of the perpetrator. The results showing the influence of gender of the perpetrator rather than the victim are interesting and contrary to the idea that the gender of the victim is of utmost importance. The results of the current study indicate that when the perpetrator is a man, the perceived negative appraisal of the situation by the victim and the victim's perceived negative emotions are higher than when the perpetrator is a woman. The behaviour in question is also seen as constituting SH to a larger extent when the perpetrator is a man. Finally, the victim is seen as more responsible for being sexually harassed when the perpetrator is a man, compared to when the perpetrator is a woman. The question remains why there were no differences for the other two victim-related variables—perceived depression and perceived somatic symptoms. It is possible that the scales used, which were extracted from diagnostic tools, were too specific, or that it was harder for the participants to answer reliably.

As suggested previously (Studzinska et al., 2019), there seems to be an important relationship between the categorization of certain behaviours as SH and the evaluation of SH-related outcome variables, such as the victim's perceived stress (Studzinska et al., 2019). As the

authors note: „the underlying process seems to be that once they see a behaviour as harassing they see it as causing more stress to the victim" (p. 28). Similarly, in the current study, it seems that SH behaviours in themselves were not as important as was the perception of them as harassing (or not), and it was this perception that drove the evaluation.

The model presented above (Studzinska et al., 2019) concentrates on the perception of the perpetrator rather than the victim. It shows that categorization of a behaviour as SH increases the perception of stress in the victim, which, in turn, negatively influences the perceived morality of the perpetrator. The actual SH evaluation process is likely even more complex and the results of the current study can be easily incorporated into the previous model. The results suggest that the perpetrator's gender influences the categorization of their behaviours as SH, which influences the victim's perceived outcomes, which then influence the perception of the perpetrator. Thus, it might seem that the gender of the perpetrator influences how they are perceived, but in fact, the underlying mechanism shows that the evaluation depends on the categorization of a behaviour as SH and, subsequently, on the perception of the victim's appraisal of the situation and the victim's emotions.

Seeing the importance of the categorization of a behaviour as SH, it is possible that educating people about what constitutes SH would help them notice the suffering of SH victims regardless of their gender. This is especially important in cases of the milder forms of SH (such as gender harassment), which people do not consider to be harmful, contrary to evidence from empirical research. As can be noted from the presented results – this does not seem to be an issue in the case of sexual coercion.

In the post-#metoo world, it is crucial to understand what drives the evaluation of those who commit SH and of those who experience it, and the current study contributes to this end. Certainly more work is needed to better understand the exact mechanisms, but once they are uncovered, this knowledge might serve to create interventions.

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Contacts:
Head Office of the Center for Ukrainian and European Scientific Cooperation:
88017, Uzhhorod, 7, Malovnycha Str., Office 2
+38 (099) 733 42 54
info@cuesc.org.ua

www.cuesc.org.ua