



Interpersonal correlates of the tendency to seek help in the situation of indebtedness in healthy people and in patients with impaired mobility, related to chronic disorders of the locomotor system – Pilot study

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Abstract

Introduction. The way of functioning in everyday life and the style of coping with the challenges encountered, including the situations of financial difficulties, are shaped by various adaptation mechanisms conditioned by the state of psychophysical health, as well as social and cultural factors. They are related to the intrapsychic features, among which the personality plays a key role.

Materials and method. The research sample consisted of 2 groups – 50 patients with mobility impairment resulting from chronic pathologies of the locomotor system hospitalized in the Department of General and Neuro Rehabilitation, Institute of Rural Health in Lublin, and 50 healthy people. The research was carried out using the NEO-FFI Personality Inventory, Perceived Stress Scale, Self-Esteem Scale, General Self-Efficacy Scale, Impulsiveness Inventory and the APSZ Questionnaire.

Results. In the group of patients with impaired mobility resulting from chronic pathologies of the locomotor system, the leading correlate of the tendency to seek help in the situation of indebtedness was extraversion. In the healthy group, the leading correlates of the tendency to undertake this type of activity were the intensity of perceived stress, neuroticism, self-esteem, self-efficacy and empathy.

Conclusions. In the group of patients with impaired mobility resulting from chronic diseases of the locomotor system, extraversion was the factor conducive to seeking help in the situation of indebtedness. In the group of healthy people, self-esteem, self-efficacy and empathy were the factors conducive to taking such actions, whereas intensity of perceived stress and neuroticism were the risk factors.

Key words

debt, intrapersonal functioning, seeking help, mobility impairment, chronic disorders of the locomotor system, healthy persons

INTRODUCTION

Degenerative joint disease (osteoarthritis) is the most common cause of age-related motor restrictions. Osteoarthritis is an invasive disease conditioned by a natural, individually varied degeneration and loss of the amount of articular cartilage. Over time, the cartilage loss leads to changes in the neighbouring bone area and peri-articular structures, such as articular ligaments and muscles [1–3]. At the same time, osteoarthritis is closely related to the mechanical wear of joints, overloads in everyday life and work, obesity and metabolic disorders, such as diabetes. Systemic metabolic diseases often accelerate damage to the entire joint structure and periarticular tissues. The course of disability associated

with osteoarthritis varies individually and depends on genetic factors, lifestyle and work environment. The disease initially causes low-grade pain; however, after many years it leads to chronic suffering, disability and social and professional exclusion. Patients with osteoarthritis have clearly limited daily activity, which leads to further muscle weakness, weakness of joint structures and, as a result, acceleration of disability [4, 5].

Physical limitations cause changes in mental functioning resulting from chronic pain and disability [6]. Another important reason for mobility disability concerning slightly younger people, is a spinal pain. As in the case of arthrosis of peripheral joints, in the pathology of spinal pain syndrome and its destruction, the genetically determined phenomenon of the weakening of structures, mainly intervertebral discs and intervertebral joints, is important. Overloading plays an even more important role in this case than in arthrosis of peripheral joints. In the initial phase of the disease, a

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significant role is played by chronic psychological stress as a factor triggering increased paraspinal muscle tone. The lumbosacral spine pain syndrome is a health problem with very high prevalence [7–9].

Epidemiological statistics conducted in the United States indicate that about 75–85% of the population feel or suffer from such ailments, and the annual incidence is about 15–20% [8]. Andersson's research indicates that spinal pain syndrome was the most common reason for reducing the performance of people aged 45 years, and the second most frequent reason for doctor visits. European statistics show that 10% – 15% of the reasons for absence at work constitute back pain in the lumbar spine [8]. Due to absenteeism at work and paid benefits, this is one of the serious economic and health problems. It is also estimated that about 60–80% of Europeans at the age of 30 suffer from back pain syndrome, while in people over 55, this dysfunction affects up to 98% of the European population [10]. The Fourth European Survey on Working Conditions research shows that Poland is the second largest EU country in terms of the number of professionally active people reporting recurrent pain in the spine, which at the same time allows the problem to be considered significant, and prompts the undertaking of research aimed at identifying intrapersonal risk factors, and supporting the quality of coping with the economic sphere of people experiencing this type of health problems [11].

The style of coping with requirements and expectations and the way of functioning in the situation when financial difficulties occur is determined by many social and cultural mechanisms. At their base, there are always some psychological mechanisms, among which the personality plays a crucial role. However, defining the term personality must be conditioned in theoretical assumptions, and no specific personality definition can be used in a universal way. Therefore, it should be assumed that a person's personality consists of a set of descriptive terms that characterize a person in terms of central dimensions within the applied theory [12].

This study is based on a five-factor personality model (the so-called Big Five), distinguishing the following factors: openness, agreeableness, conscientiousness, extraversion and neuroticism. The validity of this concept has been confirmed in many lexical [14] and psychometric studies [13].

Personality traits determine relatively constant patterns of perception of situation, its cognitive appraisal and emotional response, and manifest themselves especially in difficult situations [15, 16]. Great importance is attached here to neuroticism and extraversion, which condition the predisposition to experience negative or positive emotions [17, 18]. It is assumed that neuroticism is conducive to experiencing anxiety, irritation and anger in a difficult situation, which leads to the exaggeration of difficulties, and perceiving them in terms of loss or danger [19]. Extraversion, on the other hand, is connected with experiencing positive emotions, an optimistic assessment of the future and a tendency to perceive difficulties as tasks to be challenged. It is also related to the ability to replace difficult or unrealistic goals with new and realistic ones, as well as the ability to seek social support [16]. Similarly, agreeableness, which is characterized by trust and a tendency to cooperate, facilitates the search for social support and influences the experience of positive emotions in social situations. It is also assumed that conscientiousness

is a determinant of a locus of control in problem situations. On the other hand, people with a high level of openness show greater readiness to undertake non-standard activities in stressful situations, which may help in overcoming them, but on the other hand, they are characterized by a tendency to take risky actions (e.g. use psychoactive substances) [20]. Among the personality characteristics that affect coping with a difficult situation, emotional stability, coherence, self-esteem, sense of effectiveness and life optimism, are also mentioned [21, 22].

It should also be noticed that according to the socio-cognitive theory, human behaviour is guided by expectations concerning the situation, the result of the action and self-efficacy. It is assumed that the stronger the beliefs about the sense of self-efficacy, the higher the goals people set, and the stronger their commitment to the intended action, even in the face of difficulties. Often, it is the self-efficacy that determines the choices a person makes, and affects perseverance in action aimed at achieving a specific goal [23].

OBJECTIVE

The aim of the study was to determine the intrapersonal correlates of the tendency to seek help in the situation of indebtedness in healthy people, and in patients with impaired mobility on the basis of chronic diseases of the musculoskeletal system.

Research problem and hypothesis. With regard to the stated objective of the research, the focus was on answering the question: What are the intrapersonal correlates of the tendency to seek help in a situation of indebtedness depending on health condition?

In response to the research problem posed, it was assumed that the selected intrapsychic features are connected with the tendency to seek help in a situation of indebtedness, and the moderator of the existing relationships is the condition of health (patients with mobility impairment on the basis of chronic musculoskeletal diseases vs. healthy people).

MATERIALS AND METHOD

The research sample was collected on the basis of intentional choice. It consists of 2 groups – 50 patients with mobility impairment resulting from chronic pathologies of the locomotor system, hospitalized in the Department of General and Neuro-Rehabilitation in the Institute of Rural Health in Lublin, and 50 healthy people who declared that they had not been diagnosed with any psycho-somatic diseases, and who met the criteria of a healthy person included in the definition of the World Health Organization (WHO), that is, they manifested complete well-being at the physical, mental and social level [24]. Patients with impaired mobility resulting from chronic musculoskeletal disorders - diagnosed with Barthel Scale, needed other people's help while performing daily activities. (*Min.* = 65.00; *Max* = 80.00; *M* = 75.00; *SD* = 10.00). The main disease causing the state of physical disability was long-term, advanced multi-joint osteoarthritis affecting spine joints. On the background of internal medicine, the majority of the examined persons suffered from such diseases as hypertension, ischemic heart

disease, chronic arrhythmias, chronic heart failure I-II in the NYHA scale, insulin-dependent and non-insulin dependent diabetes, and transient cerebral circulatory disorders.

Detailed characteristics of the subjects are presented in Table 1. The average age of patients was 61.27 years ($SD = 16.00$), and of healthy people – 59.95 ($SD = 9.93$). Both the clinical group and the healthy population were homogenous due to gender. Both hospitalized persons ($M = 1.12$, $SD = 0.38$) and healthy subjects ($M = 1.33$, $SD = 0.54$), on average, had one child. Each group was dominated by married people who had completed secondary education and came from rural areas. The respondents declared that they did not smoke cigarettes and that alcoholic beverages were consumed occasionally.

Table 1. Socio-demographic characteristic of the researched groups

Variables		Goup			
		patients		healthy people	
		N	%	N	%
Gender	Female	25	50.0	25	50.0
	Male	25	50.0	25	50.0
Marital status	Single	6	12.0	10	20.0
	Married	28	56.0	39	78.0
	Divorced	5	10.0	1	2.0
	Widowed	11	22.0	0	0.0
Education	Elementary	10	20.4	1	2.0
	Vocational	11	22.4	2	4.0
	Secondary	17	34.7	31	62.0
	Higher	11	22.4	16	32.0
Place of residence	Village	19	38.8	21	42.0
	City up to 100 thousand residents	16	32.7	15	30.0
	city over 100 thousand residents	14	28.6	14	28.0

Source: own research results.

The research was carried out using the Barthel Scale by F.I. Mahoney and D. Barthel [25], the NEO-FFI Personality Inventory by P.T. Costa, R.R. McCrae, in the Polish adaptation of B. Zawadzki, J. Strelau, P. Szczepaniak and M. Śliwińska [26], Perceived Stress Scale – PSS-10 (authors: S. Cohen, T. Kamarck & R. Mermelstein; adaptation: Z. Juczyński, N. Ogińska-Bulik [27], SES M. Rosenberg Self-Esteem Scale in the Polish adaptation by I. Dzwonkowska, K. Lachowicz-Tabaczek and M. Laguna [28], General Self-Efficacy Scale (GSES) by Schwarzer, M. Jerusalem and Z. Juczyński [29], Impulsiveness Inventory (IVE) by H. J. Eysenck and S.B.G. Eysenck in the Polish adaptation by A. Jaworowska [30], and the Psychosocial Aspects of Debt Questionnaire (APSZ).

The Barthel Scale is a tool designed to assess the patient's level of fitness and independence, as well as the level of care demand that is associated with them. The questionnaire includes 10 everyday activities: eating meals; moving from bed to chair and back, sitting down; maintaining personal hygiene; use of the toilet; moving on flat surfaces; climbing and going down stairs; dressing and undressing, and controlling physiological activities. The potential range of the assessment ranges from 0–100 points, with a score from 0–20 points indicates total reliance, 21–80 points mean that to a certain extent the patient requires the care of other people,

and results from 81–100 points suggests that the subject can function alone using only a small amount of help. A score of 0–40 indicates the need to qualify the patient for long-term care, because of requiring constant help [25].

The NEO-FFI inventory is the only tool in Poland allowing for the assessment of personality features according to a 5-factor personality model. The tool is based on the theoretical model by P. Costa and R. McCrae of the so-called Big Five, which assumes that 5 major dimensions can be distinguished in the human personality: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. The inventory consists of 60 items and is intended for men and women over 15 years of age [26].

The PSS-10 scale was created by S. Coen, T. Kamarck and R. Mermelstein in 1983. This tool enables assessment of the intensity of stress associated with life situation over the past month. The scale consists of 10 questions regarding various subjective feelings related to personal problems and events, behaviours and coping methods. The tool is intended for research purposes and can also be used in psychological practice – in screening, prophylactic purposes, as well as in the assessment of the effectiveness of therapeutic interactions. The PSS-10 questionnaire can be used in individual and group research [27].

The SES scale is the most commonly used tool for self-esteem measurement and can be used in studies of adolescents and adults. The theoretical basis of the questionnaire is the definition of self-esteem according to M. Rosenberg, who understands it as a positive or negative attitude towards the self, and thus a kind of global self-assessment. SES consists of 10 statements. Subject answers on a 4-point scale depending on the degree to which he or she agrees with the statements. [28].

The GSE Scale was created by R. Schwartzer and M. Jerusalem in 1992 to measure the general belief of a person about the effectiveness of dealing with difficult situations and obstacles. The questionnaire consists of 10 questions that form one scale. The GSES questionnaire can be administered individually or in groups, and healthy as well as sick adults can fill in the questionnaire [29].

The IVE questionnaire was constructed to assess 3 personality traits: impulsiveness, venturesomeness, and empathy. It consists of 54 questions to be answered with Yes or No. It can be administered in research as well as in individual diagnosis [30].

The APSZ survey was constructed for the needs of the presented research and concerns various social situations related to incurring financial liabilities. It consists of 17 questions concerning subjects' current financial situation, current or past financial obligations, a self-description of the so-called economy, conviction about having basic knowledge concerning financial management and reliability in repayment of ones' financial obligations. When answering the 8 questions, the subjects choose the correct answer, and in nine items they give answers on the 5-point Likert scale.

The research was carried out in 2018 after having obtained the consent of the Bioethical Commission of the Witold Chodźki Institute of Rural Medicine in Lublin. The research was voluntary, individual and anonymous. It was conducted in accordance with the Declaration of Helsinki of 2013.

The subjects were informed about the purpose and course of the research, the confidentiality of the collected data and they consented in writing to participate in the research.

Statistical calculations were performed using the IBM SPSS 24 software. The characteristics of the researched sample were based on the calculation of the percentage distribution of the qualitative data frequency, and descriptive statistics of quantitative variables. The predictive analytics was performed using stepwise regression. In the study, the boundary point of committing type I error was 0.05.

RESULTS

Results of the performed predictive analysis in the group of patients with impaired mobility resulting from chronic diseases of the locomotor system are presented in Table 2. In the group of patients with mobility impairment due to the chronic locomotor system disease, a model was constructed consisting of one step, in which one predictor explaining 38% (R^2 adjusted = 0.38) variance of the variable tendency to seek help in the case of indebtedness was introduced.

Table 2. Intrapersonal correlates of the tendency to seek help in the situation of indebtedness in the group of patients with impaired mobility resulting from chronic diseases of the locomotor system

Model	Measures of model fit			Regression weights for predictors				
	R^2 adjusted	F	p	B	SE	β	t	P
Step 1								
Extraversion	0.38	30.99	0.001	0.07	0.01	0.62	5.57	0.001

Source: own research results

The constructed model fits the data, $F(1,49) = 30.99$; $p = 0.001$ and indicates that the leading predictor of the analyzed variable is extraversion ($\beta = 0.62$; $p = 0.001$). The relationship between the introduced predictor and the explained variable is directly proportional, which means that in the group of patients with impaired mobility resulting from chronic diseases of the locomotor system, the main determinant of the tendency to seek help in the situation of indebtedness is vital optimism, cordiality, willingness to look for new experiences, and leading an active lifestyle.

Results of the prediction analysis carried out in the healthy group are presented in Table 3. In the healthy group, the calculations performed allowed development of a model consisting of 5 steps in which 5 predictors explaining 27% of the variance of the variable tendency to seek help in case of debt were introduced. In the first step, the intensity of stress was introduced as an explanatory variable. The model turned out to fit the data and explained 7.0% (R^2 adjusted=0.07) of the variance of the dependent variable $F(1,49) = 7.74$; $p = 0.007$. In the second step, neuroticism was introduced to the model. It fitted the data well and explained 10.0% (R^2 adjusted=0.10) of the explanatory variable, $F(2,48) = 6.27$; $p = 0.003$. In the third step, self-esteem was introduced to the model. It fitted the data well and explained 18.0% (R^2 adjusted=0.18) of the explanatory variable $F(3,47) = 7.45$; $p = 0.001$. In the fourth step, the model was supplemented with self-efficacy. It fitted the data well and explained 22.0% (R^2 adjusted=0.22) of the explanatory variable $F(4,46) = 7.38$; $p = 0.001$. In the fifth step, empathy was introduced to the model. It also fitted the data well and explained 27.0% (R^2 adjusted=0.27) of the explanatory variable, $F(5,45) = 7.73$; $p = 0.001$.

The developed model revealed that in the healthy group, significant predictors of the tendency to seek help in the

Table 3. Intrapersonal correlates of the tendency to seek help in the situation of indebtedness in the group of healthy people

Model	Measures of model fit			Regression weights for predictors				
	R^2 adjusted	F	p	B	SE	β	t	p
Step 1								
Stress	0.07	7.74	0.007	-0.06	0.02	-0.28	2.78	0.007
Step 2								
Stress	0.10	6.27	0.03	-0.08	0.02	-0.41	3.52	0.001
Neuroticism				-0.05	0.02	-0.25	2.12	0.037
Step 3								
Stress	0.18	7.45	0.001	-0.07	0.02	-0.37	3.28	0.001
Neuroticism				-0.08	0.03	-0.41	3.28	0.001
Self-esteem				0.09	0.03	0.34	2.95	0.04
Step 4								
Stress	0.22	7.38	0.001	-0.09	0.02	-0.46	4.01	0.001
Neuroticism				-0.08	0.02	-0.40	3.33	0.001
Self-esteem				0.13	0.03	0.45	3.73	0.001
Self-efficacy				0.08	0.03	0.29	2.43	0.017
Step 5								
Stress	0.27	7.73	0.001	-0.08	0.02	-0.39	3.43	0.001
Neuroticism				-0.09	0.02	-0.46	3.87	0.001
Self-esteem				0.14	0.03	0.50	4.28	0.001
Self-efficacy				0.09	0.03	0.34	2.95	0.004
Empathy				0.09	0.03	0.27	2.66	0.009

Source: own research results

situation of debt were the intensity of perceived stress, $\beta = -0.39$; $p = 0.001$, neuroticism, $\beta = -0.46$; $p = 0.001$, self-esteem, $\beta = 0.50$; $p = 0.001$, self-efficacy, $\beta = 0.34$; $p = 0.001$ and empathy, $\beta = 0.27$; $p = 0.001$.

The relationships between the intensity of experienced stress and neuroticism and the explained variable were inversely proportional, while the relationship between self-esteem, self-efficacy and empathy and the dependent variable – positive, which indicates that in the group of healthy people with the increase in the level of perceived tension and emotional hyper-reactivity, the tendency to seek help in a situation of debt was decreasing. On the other hand, as the self-esteem, the belief in the possibility of achieving the goal and empathy increased together with the tendency to seek help in the event of financial difficulties.

DISCUSSION

Statistical analyzes indicated extraversion as the leading, positively correlated indicator of readiness to search for help in getting out of indebtedness in people suffering from chronic musculoskeletal disorders. Extraversion, apart from an optimistic approach to the future, willingness to take up activity, was an important factor in helping the adaptation of the individual to new life situations. For the studied clinical group, the high level of extraversion, was simultaneously an important factor protecting them in financial problems associated with earlier indebtedness [31, 32, 33].

In the control group, healthy people characterized by higher level of anxiety, irritability, emotional lability, excessive criticism in assessing their own behaviors, belonged

to the group who tried to solve financial problems on their own, irrespective of the effectiveness of the actions taken [32, 33, 34, 35].

An important observation resulting from the obtained results is the fact that the factors that protect this group of people are: high level of self-esteem, self-efficacy and empathy. Therefore, the belief in one's own worth, abilities, self-confidence, and the ability to take actions that bring the planned effect – in the case of experiencing financial difficulties also favour the perception of others as a source of help, and constitute an important factor in solving problems. Undoubtedly, a higher level of empathy plays a crucial role here – indicating the ability to adopt a point of view and understanding of others, looking at a given situation from another person's perspective, which at this moment could be helpful in solving financial problems [36, 37, 38].

The practical indication resulting from the conducted study is the need to pay attention to people suffering from diseases of the motor system, experiencing financial difficulties and characterized by psychological introversion. This personality trait itself indicates the withdrawal from interpersonal relations, lack of self-confidence in social situations, and unwillingness to undertake activities. However, when looking for an effective solution to financial problems, most often related to debt, high costs incurred in connection with treatment or rehabilitation, the introvert will be more reluctant to ask for help from others. As long as it may mean caution before entering into risky obligations, it may act as a specific protective factor. Nevertheless, extending the duration of the indebtedness and remaining alone with unsolved problems can cause growing financial and health problems, both somatic and mental [39, 40, 41, 42, 43].

Although the hypothesis has been confirmed in relation to selected personality traits, it should be mentioned that the test results cannot be generalized. Dependencies (and their absence) were checked on a small group of people. To what extent the results could represent a larger population should be the subject of further research.

CONCLUSIONS

1. The analyzes carried out showed that the particular dimensions of intrapersonal functioning are related to the tendency to seek help in the situation of indebtedness, and the state of health is the moderator of the existing relationships.
2. In the group of patients with impaired mobility linked to chronic pathologies of the locomotor system, extroversion is a factor conducive to seeking help in the case of indebtedness.
3. In the group of healthy people, the factors that favour the search for help in the situation of indebtedness are self-esteem, self-efficacy and empathy, while the factors that weaken the motivation to undertake such activities are the intensification of perceived stress and neuroticism.
4. The results obtained indicate the need to take into account the specificity of the health situation of participants in psycho-preventive programmes aimed at supporting people who experience difficulties in dealing with the repayment of their financial obligations.

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