

Quality of Life for Hospitalized Patients: The Impact of Disease Perception

Zarishnyak Natalya Vladimirovna^{1#*}, Kulbaisov Amyrzhan Magazhanovich^{2#*} and Vybornova Ekaterina Vladislavovna¹

Abstract

Purpose: Hospitalization is a psychological trauma for a patient that reduces the results of treatment and life quality. Only a few studies evaluated the impact of hospitalization on patients' illness perceptions and on their quality of life.

Methods: The effect of disease perception on quality of life was studied in an observational, cross-sectional study of 66 hospitalized patients with coronary heart disease (Group I), chronic obstructive pulmonary disease (Group II), osteochondrosis (Group III) aged 20 to 80, (in Russia, Orenburg, 2019). To diagnose illness perception we used PQBI Questionnaire (Bekhterev Institute), Quality of life - SF-36 Questionnaire.

To study differences in patient ages the researchers used one-way analysis of variance; Quality Indicators - Pearson's Chi-square test; differences in quality of life indicators - Mann-Whitney U test; factor analysis was used to identify factors affecting the quality of life.

Results: The differences in the types of illness perception in the groups were established (Chi-Square: 44.136, 16df, $p=0,01$). Most patients had maladaptive types of illness perception: Group I had hypochondriac, apathetic type; Group II - neurasthenic, dysphoric, paranoid; Group III - anxious, apathetic. In 15 (22.7%) patients, an illness perception type was not defined. The physical health component in patients of all groups has been reduced; mental health component has shown the average level. As the patients' quality of life, a difference was found in the following indicators - bodily pain (BP), general health status (GH), social functioning (SF).

Factor analysis data: mental health of patients was determined by age (0,91); physical health and physical functioning - by gender (0,92 and 0,81); general health - by the type of illness perception (0,84); social functioning - by a disease (0,82).

Conclusion: The illness perception affects the general health status of hospitalized patients, which determines the current state of health, treatment prospects and disease resistance.

Keywords: Disease perception; Quality of life; Patients; Medical institution

1 Department of Nursing, Orenburg State Medical University, Ministry of Health of the Russian Federation, Russia

2 Pulmonology Department, State Health Institution, Orenburg Regional Clinical Hospital № 2, Russia

Authors contributed equally

*Corresponding authors:

Zarishnyak Natalya Vladimirovna
Kulbaisov Amyrzhan Magazhanovich

✉ wengerenko@mail.ru
kul60@yandex.ru

Tel: +966557277220

Department of Nursing, Orenburg State Medical University, Ministry of Health of the Russian Federation, 460000, Russia
Pulmonology Department, State Health Institution, Orenburg Regional Clinical Hospital № 2, 460000, Orenburg, ul. Nevelskaya 24, Russia

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Introduction

According to WHO data, chronic noncommunicable diseases have become a global pandemic scale phenomenon as well as the main cause of death [1].

The illness perception is one of the most important characteristics in terms of the impact on the patients' chronic condition course [2]. Chronic disease leads to mental and social maladaptation

of the patient [3]. In patients with chronic diseases, the level of perception of their disease affects the state's self-control, medication intake, adherence to the regime and changes the quality of life [4].

The quality of life in chronic diseases includes three broad categories - physical, mental, social functioning and it changes being affected by the disease [5].

The effect of patients' illness perceptions on the quality of life has

been studied in various diseases. So, Yaraghchia et al. [6] found out that there was a correlation between the disease perception and the quality of life in patients with coronary heart disease after coronary artery bypass grafting. The regression model showed that identity, care during the disease, the ability to recognize the disease and emotions that make up the perception of the disease can predict changes in the quality of life [6].

The relationship between disease perception and quality of life (only with physical functioning, Questionnaire SF-36) has been established in patients with chronic obstructive pulmonary disease [7].

All forms of spinal pathology in the ICD-10 are designated as dorsopathies (M40-M54). The main cause of dorsopathy is spinal osteochondrosis – a chronic dystrophic process manifested by damage to the vertebral bodies, ligament-articular apparatus, intervertebral discs [8].

According to Zaitsev et al. [9], a deterioration in the quality of life correlated with pain syndrome severity and such signs as dissatisfaction, tension, anxiety, rigidity, focus on personal feelings, a negative approach to life, and low stress resistance in patients with spinal osteochondrosis. The psychological characteristics and quality of life depended on the gender and location of vertebral pain syndrome.

The presence of a chronic disease in a patient increases the risk of hospitalization. The study found that a chronic disease in the circulatory system or in the respiratory system increases the risk of hospitalization by 8,72 and 3,01 times, respectively [10].

The hospitalization is a psychological trauma for a patient, since they lose the right to determine the nature and sequence of their daily activity, become dependent on medical personnel. All of that often leads to depression and fear, reduces the treatment results and the quality of life of a patient with a chronic disease [11].

Then hospitalization should improve the chronic diseases management, as patients are examined by a new health care team and observed in a controlled environment [12].

Therefore, the aim of our research was to study the influence of disease perception on the quality of life of hospitalized patients of a therapeutic profile.

Research Design and Methods

Research design

The study was conducted at Orenburg Regional Clinical Hospital №2 in January 2019. Patients from the Cardiology, Pulmonology and Neurology Departments, respectively, comprised I, II and III groups, 22 patients each. Voluntary informed consent was obtained from all patients participating in the study. The study is observational, analytical, transverse, the sample is convenient. Patients were interviewed before discharge from the hospital, questionnaires were filled out by the patient in the presence of researchers.

That was an exploratory research aimed to develop the hypothesis that the quality of life of patients being treated in a hospital

depends on the perception of the disease.

Criteria for inclusion of patients in the study: men and women with a chronic disease aged 20 to 70, with a disease experience of at least 10 years.

Group I was represented by patients with coronary heart disease, Group II - with chronic obstructive pulmonary disease, Group III - with osteochondrosis.

Exclusion criteria

Persons under the age of 20 and older than 80, severe concomitant diseases, serious general condition of the patient, acute diseases, the presence of another chronic disease in the patient, the patient's refusal to participate in the study.

In total, 147 patients were treated in 3 hospital departments. 8.1% (12) of the patients were excluded from the study due to their grave condition; 15% (22) of patients - had other diseases; 32% (47) patients refused to participate in the study. 44.9% (66) patients took part in the study.

Patients who refused to participate in the study explained their refusal with several reasons: the study would not help in treatment; they wanted to be left alone, they did not want to communicate with anyone;

Research methods

To identify the types of disease perception in patients with chronic somatic pathology, PQBI (Personality Questionnaire of Bekhterev Institute) was used [13].

The PQBI Questionnaire is designed to diagnose 12 types of disease perception. The TOBOL Questionnaire includes 12 sets of tables: well-being, mood, sleep and waking up from sleep, appetite and attitude to food, attitude to illness, attitude to treatment, attitude to doctors and medical staff, attitude to relatives and friends, attitude to work (study), attitude to others, attitude to loneliness, attitude to the future. Each set contains from 1 to 17 numbered statements, from which the patient is to choose two most suitable for them. The researcher indicated with a circle the numbers of the choices made in the registration sheet. The time for filling was not limited. The type of disease perception that scored the maximum number of points was diagnosed. If the same number of points scored many types of perception of the disease from different blocks, an undifferentiated (unidentified) type of attitude to the disease was diagnosed.

Conditionally adaptive types; intrapsychically and interpsychically maladaptive, undifferentiated (unidentified) types of disease perception were allocated. **Table 1** presents the blocks, types of perception of the disease and their brief description.

To assess the quality of life, the SF-36 International Questionnaire for quality of life was used [14].

The SF-36 Questionnaire consists of 36 detailed questions grouped into 8 main scales: physical functioning (PF); role-physical condition (RP); bodily pain (BP); general health (GH); vitality (VT); social functioning (SF); role-emotional (RE); mental health (MH). All scales are grouped into two main indicators - the

Table 1 Blocks, types of attitude to the disease and their characteristics - PQBI (Personality Questionnaire of Bekhterev Institute).

Blocks of «types of attitude towards the disease»	Types of Attitude to the Disease	Characteristics of types of attitude towards the disease
Conditionally Adaptive Types	Harmonious	An objective assessment of the condition. There is a desire to actively contribute to the treatment success and ease the burdens of caring for their close people.
	Ergopathic	Selective attitude to examination and treatment, conditioned upon the desire to continue to work despite the severity of the illness.
	Anosognosic	Actively rejecting thinking about the disease, its possible consequences, up to the denial of the obvious things.
Intrapsychically maladaptive types	Disturbing	Continuous anxiety and suspiciousness regarding the adverse course of the disease, possible complications, inefficiency and even the danger of treatment.
	Hypochondriac	Focus on subjective feelings, the desire to constantly talk about them to others; exaggeration of the valid and the statement of non-existent diseases and suffering.
	Neurasthenic	Irritation outbreaks, especially with pain, with discomfort, with treatment failures. Intolerance of pain, impatience, inability to wait for relief.
	Melancholic	Dejection with the disease, disbelief in recovery, in possible improvement and effect of treatment.
	Apathetic	Complete indifference to their fate, to the outcome of the disease, to the results of treatment; passive submission to procedures and treatment
Interpsychically maladaptive types	Sensitive	Excessive preoccupation with the possibility of an adverse impression that may produce on others information about his illness. Fear of becoming a burden for close people, due to illness and an unfavorable attitude on their part in this regard.
	Egocentric	«Advantage by illness», putting on display their sufferings and experiences to relatives and those around in order to fully capture their attention; demanding exceptional self-care.
	Paranoid	Confidence that the disease is the result of someone's intent, extreme suspicion of drugs and procedures.
	Dysphoric	Gloomy mood prevails, constant gloomy look; envy and hatred of the healthy, a tendency to blame others for their illness, a requirement for special attention to oneself, suspicion to procedures and treatment.
Undifferentiated (undefined) type	The type of attitude to the disease has not been diagnosed.	Patients characterized by the simultaneous presence of multidirectional psychological reactions to the disease and communication with them requires a special psychological approach.

physical and mental components of health. Scale indicators range from 0 to 100 points, while the higher the value, the higher the well-being is.

The interpretation of test results in points: 0 - 20.0 - low indicator of quality of life; 21.0 - 40.0 - reduced indicator of quality of life; 41.0 - 60.0 - the average indicator of quality of life; 61.0 - 80.0 - increased indicator of quality of life; 81.0 - 100.0 - a high indicator of quality of life [15].

Statistical processing

SPSS-Statistical Package for the Social Sciences (SPSS Inc., Chicago IL, USA), Ms. Excel. The normality of the distribution of variables was checked using the Kolmogorov-Smirnov Test. The following statistical criteria were used: univariate analysis of variance (patients' age, 3 groups); to compare qualitative indicators - Pearson's Chi-Square Test (type of attitude to the disease; demographic and social data); to compare variables with a distribution that differs from the normal one, the Mann-Whitney U test (quality of life); factor analysis. 5% were taken as a critical level of alpha error during statistical calculations.

The Results of the Study

Demographic and social data

Comparison of the groups by age composition showed that there

were no statistically significant differences between the study groups ($F=1,12$, $P=0,33$ - ^a The differences between the groups were checked using the one-way ANOVA test).

Most patients were between 40 and 70 years old (**Figure 1**). In each group, a half were men, the other one – women. The groups were represented by workers, employees, pensioners, disabled and temporarily non-working people. Most pensioners were in groups II and III. There were no differences between the groups according to their social status.

Thus, patients with coronary heart disease all had secondary specialized and higher education; patients with obstructive pulmonary disease - mainly secondary and specialized secondary education; half of patients with osteochondrosis had secondary and the other half had a secondary special and higher education (**Table 2**).

Types of perception of the disease and their distribution in blocks

The types of disease perception of patients from different groups and their distribution by blocks are presented in **Table 3** and **Figure 2**. Chi-Square test showed that there is a relationship between patients with different diseases and types of disease perception (Chi-Square: 44.136, 16df, $p=0,01$), in blocks of various «types of disease perception» (Chi-Square: 14.582,

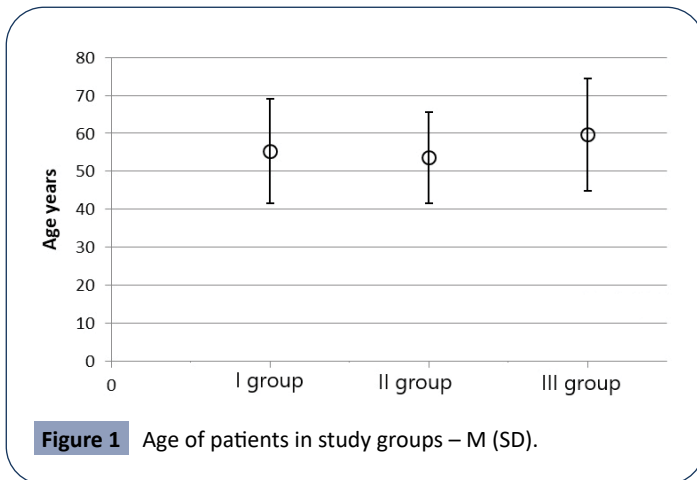


Figure 1 Age of patients in study groups – M (SD).

6df, $p=0.05$; V Kramera = 0,33). The first and third groups were dominated by patients with intrapsychically maladaptive types and undifferentiated (unidentified) types; intrapsychic and interpsychically maladaptive types of perception of the disease. Prevailed in the second group.

The largest number of patients with conditionally adaptive type of disease perception was found in group III.

Intrapsychically maladaptive types of perception of the disease in Group I were mainly represented by patients with hypochondriac and apathetic types, in Group II - by patients with neurasthenic type; in Group III - patients with anxious and apathetic types. Patients with intrapsychic maladaptive types were characterized by obsessive fears, irritable weakness, a pessimistic assessment of their condition and prospects that caused suffering to the

Table 2 Distribution of patients by level of education and social status in study groups.

	Group I N (%)	Group II N (%)	Group III N (%)	Value p
Education				$<0,001^b$ Chi-Square: 21.097, 4df
Secondary-level education		9 (40,90)	12 (54,60)	
Professional (secondary specialized) education	19 (86,40)	9 (40,90)	5 (22,70)	
Higher	3 (13,60)	4 (18,20)	5 (22,70)	
Social position				0.07 ^b
Workers	5 (22,70)	4 (18,20)	4 (18,10)	
Employees	8 (36,50)	5 (22,70)	4 (18,10)	
Pensioners	5 (22,70)	12 (54,60)	8 (36,50)	
Working pensioners	1 (4,50)		2 (9,10)	
Disabled people	3 (13,60)	1 (4,50)	2 (9,10)	
Temporarily jobless			2 (9,10)	

^a Differences between groups were verified using one-way ANOVA Test
^b Differences between groups' proportions were tested by the Chi-Square
^c Differences between groups' proportions were tested by the Mann-Whitney U test

Table 3 Types of attitude to the disease of patients from the studied groups and their distribution in blocks.

Blocks of «types of attitude towards the disease»	Types of attitude to the disease	Group I N (%)	Group II N (%)	Group III N (%)	Value p
Conditionally Adaptive Types	Harmonious			3 (13,7)	0,01 ^b
	Ergopathic	1 (4,50)	1 (4,50)	1 (4,50)	
	Anosognosic				
Intrapsychically maladaptive types	Disturbing	2 (9,10)	1 (4,50)	5 (22,70)	
	Hypochondria	5 (22,75)			
	Neurasthenic	1 (4,50)	5 (22,75)		
	Melancholic				
	Apathetic	4 (18,20)	2 (9,10)	6 (27,30)	
Interpsychically maladaptive types	Sensitive				
	Egocentric				
	Paranoid	2 (9,10)	3 (13,70)	2 (9,10)	
	Dysphoric		7 (31,85)		
Undifferentiated (undefined) type	Diagnosed with more than three types of attitude to the disease from different blocks	7 (31,85)	3 (13,60)	5 (22,70)	

^a Differences between groups were verified using one-way ANOVA Test
^b Differences between groups' proportions were tested by the Chi-Square
^c Differences between groups' proportions were tested by the Mann-Witney U test

patient themself.

The interpsychically maladaptive types of disease perception of patients in Group II were mainly represented by paranoid and dysphoric types. The following features characterized patients with interpsychically maladaptive types of disease perception: they were embarrassed of their disease in front of others, “used” it to achieve certain goals, built a paranoid nature of the concept regarding the causes of their disease and its chronic course, manifested heterogeneous aggressive tendencies, accusing others of their illness.

The largest number of patients with an undifferentiated (unidentified) type of disease perception was identified in Groups I and III. Patients with an undifferentiated (unidentified) type of perception of the disease did not accept responsibility for the disease; had unstable, dependent on the opinions of others ideas about their disease; often used unconventional methods of treatment.

Thus, maladaptive types of disease perception in which there was a violation of adaptation to their disease were diagnosed in most patients.

Quality of life of the patients

No statistically significant difference was found between most indicators of the quality of life of patients of various groups, with the exception of three indicators – bodily pain (BP), general health (GH), which relate to the physical component of health and social functioning (SF) related to the mental health (Table 4).

The physical health component in patients of all groups was rated as reduced; mental component of health - as an average. Role-Physical Functioning (RP) is a person’s physical ability to carry out their professional or homework. This indicator was 0 in patients of all groups.

Bodily Pain (BP) - measures the intensity of the pain syndrome and its effect on the ability to engage in normal activities during the last month: the higher the indicator was, the more pain the patients experienced. Low values of the scale indicate that pain did not significantly limit the physical activity of the subjects. In patients of Group I, the bodily pain showed the highest level and in Group III the lowest one.

The General Health status (GH) scale is the subjective assessment by the respondent of their general state of health in present (the higher the indicator, the better the respondent perceives his overall health). The highest GH score was observed in patients of

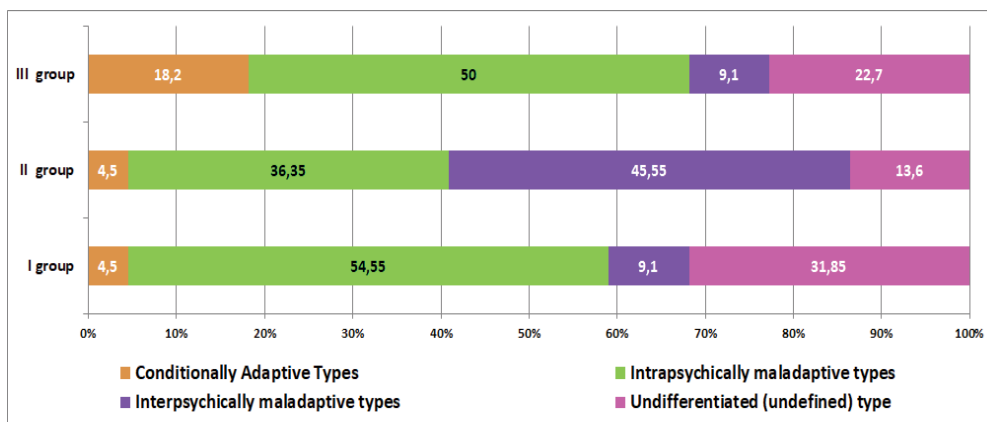


Figure 2 Distribution of types of disease perception of patients From Groups I, II, III in blocks.

Table 4 Quality of life of patients of the studied groups, SF-36 Questionnaire.

SF-36 Points (Median; P ₂₅ – P ₇₅)	Group I N=22	Group II N=22	Group III N=22	P ¹	P ²	P ³
PCS	35,43 (31,41-38,03)	36,25 (29,22-45,10)	37,86 (32,28-42,56)	0,4 ^c	0,5 ^c	0,5 ^c
Physical Functioning (PF)	65,0 (40,0 – 85,9)	45,0 (30,0 – 90,0)	80,0 (46,25 – 90,0)	0,9 ^c	0,9 ^c	0,2 ^c
Role-Physical Functioning (RP)	0 (0 – 50,0)	0 (0 - 68,75)	0 (0 – 43,75)	0,5 ^c	0,4 ^c	0,9 ^c
Bodily pain (BP)	61,0 (41,0 - 100,0)	52,0 (22,0 - 81,50)	31,0 (14,5 - 41,0)	<0,05 ^c	<0,01 ^c	<0,02 ^c
General Health (GH)	30 (25,0 - 53,75)	55 (40,0 - 78,0)	50 (40,0 - 70,0)	<0,001 ^c	<0,008 ^c	0,3 ^c
MCS	48,71 (42,54 – 54,0)	45,16 (38,03 - 54,17)	49,4 (33,49 - 56,36)	0,2 ^c	0,5 ^c	0,8 ^c
Vitality (VT)	40,0 (35,0 - 58,75)	45,0 (30,0 – 65,0)	35,0 (35,0 – 65,0)	0,5 ^c	0,5 ^c	0,9 ^c
Social Functioning (SF)	100,0 (81,25 – 100)	75,0 (31,25 - 96,87)	62,5 (50,0 - 87,5)	0,001 ^c	0,01 ^c	0,9 ^c
Role-Emotional (RE)	100,0 (0 – 100,0)	33,33 (0 – 100,0)	100,0 (33,33 -100,0)	0,4 ^c	0,6 ^c	0,1 ^c
Mental Health (MH)	76,0 (60,0 – 79,0)	68,0 (52,0 – 80,0)	52,0 (45,0 – 84,0)	0,4 ^c	0,1 ^c	0,4 ^c

P¹ – between groups I и II, P² - between groups I и III, P³ – between groups II и III. ^a Differences between groups were verified using one-way ANOVA Test ^b Differences between groups' proportions were tested by the Chi-Square ^c Differences between groups' proportions were tested by the Mann-Witney U test

Table 5 The final factorial solution: analysis of the main components with a Variamax rotation in Groups I, II, III.

Quality of life indicators, SF-36 Questionnaire	Indicators			
	1	2	3	4
Physical Health (PH)	-0,14	0,92	0,11	0,18
Physical Functioning (PF)	0,23	0,81	-0,23	-0,12
Role-Physical Functioning (RP)	0,20	0,55	0,10	0,70
Bodily Pain (BP)	0,42	0,51	0,26	0,17
General Health (GH)	0,20	0,23	0,84	0,18
Mental Health (MH)	0,91	-0,18	0,34	0,27
Vitality (VT)	0,65	0,49	0,26	0,34
Social Functioning (SF)	0,39	0,33	0,50	0,82
Role-Emotional (RE)	0,77	0,15	-0,19	-0,10
Mental Health (MH)	0,78	0,35	0,14	0,21
Explained variance	4,26	2,08	1,77	1,21
Explained variance rate,%	30,46	14,87	12,66	8,68

Table 6 Cronbach alpha for four factors.

Factors	1	2	3	4
	Age	Gender	type of perception of the disease	Diagnosis
Cronbach alpha	0,78	0,48	0,84	0,77

Group II, in contrast to Groups I and III.

Social Functioning (SF) is the emotional and physical ability to communicate with other people. The highest level of this indicator was in patients from Group I, and the lowest - in patients from Group III.

Thus, the quality of life in the three groups revealed differences in only three components - pain intensity (BP), general health (GH), and social functioning (SF).

Factor analysis

Factor analysis revealed four factors that affect the components of quality of life: age, gender, type of perception of the disease, diagnosis.

A factor model was built in which the variables were uniquely classified according to 4 factors. The numbers in this table (factor loads) should be understood as correlation coefficients between variables and factors. The Mental Component Summary (MCS) of patients in all groups was 91% determined by the age of the respondents; the Physical Component Summary (PCS) and physical functioning (PF) - by gender, by 92% and 81%, respectively, general health - by the type of perception of the disease by 84%, social functioning (SF) - by the disease by 82% (Tables 5 and 6).

Discussion

We tried to find out how the perception of the disease affects the quality of life of hospitalized patients, but beforehand we established the types of perception of the disease and determined the quality of life.

In all study groups, patients had maladaptive types of disease perception, i.e. adaptation to the disease was impaired.

In Group I (patients with coronary heart disease), the majority were patients with hypochondriac and apathetic types of perception of the disease; Group II (chronic obstructive pulmonary disease) - patients with neurasthenic, paranoid and dysphoric types and Group III (osteochondrosis) - patients with anxious and apathetic types of disease perception. Only in Group III, in 18.2% of patients did we establish conditionally adaptive types of disease perception (harmonious and ergopathic). Our study failed to diagnose the type of perception of the disease in 15 patients from all groups.

The prevalence of the hypochondriacal and apathetic types of perception of the disease in patients with coronary heart disease is consistent with the data of Lee et al. 2016, which found that the data on the hypochondria scale were significantly increased in these patients and their character began to manifest such traits as sensibility, suspiciousness, pessimism, which leads to the formation of neurovegetative disorders [16].

Our data contrast with those of other researchers [17,18] who observed conditionally adaptive types of disease perception (from 40 to 70%; harmonious, ergopathic, and anosognosic) in most hospitalized patients with coronary heart disease. However, these studies included mainly men and the average duration of the disease was only 3 years. Chronic obstructive pulmonary disease negatively affects brain function and contributes to the development of cognitive impairment [19].

Patients with COPD differ in significant changes in their personality and are characterized by: nervousness, anxiety and irritability [20], emotional lability, demonstrativeness, high sensitivity to environmental influences, fixation on negative emotional experiences, which contributes to their social isolation and further maladaptation [21].

Namely these features were inherent to patients in Group II (chronic obstructive pulmonary disease) with neurasthenic, paranoid and dysphoric types of perception of the disease.

The main personality traits found in patients with osteochondrosis were anxiety, hypochondria, passivity and demonstrativeness. Clinical signs of nonspecific psychoemotional stress were detected in 70% of cases [22].

These data are confirmed in our study: patients with anxious and apathetic types of perception of the disease are characterized by anxiety and suspiciousness, passive submission to procedures and treatment.

There was no statistically significant difference between most indicators of the quality of life of patients of various groups (coronary heart disease, obstructive pulmonary disease), with the exception of three indicators - pain intensity (BP), general health (GH), which relate to the physical component of health and social functioning (SF) related to the mental component of health. The physical component of health in patients of all groups was rated as lowered; mental component of health was rated average.

The life quality indicators for patients with coronary heart disease (Group I) are at the level of international reference values for Russia (PCS - 34,1 ± 6,9; MCS - 43,3 ± 9,6) [23].

Life quality indicators for hospitalized patients with chronic obstructive pulmonary disease [24], osteochondrosis [8] did not significantly differ from data obtained by other researchers.

We found that the perception of the disease affects general health (the physical component of the quality of life, SF-36 Questionnaire). This component of the quality of life evaluates the patients' current state of health, treatment prospects and resistance to the disease: the higher the indicator, the better the health status of the respondent or patient is. The general state of health was assessed in Groups II (chronic obstructive pulmonary disease) and III (osteochondrosis), as an average indicator and in Group I (chronic coronary heart disease), a reduced indicator of quality of life.

Many studies have established the effect of disease perception on quality of life: in patients with coronary heart disease [6], chronic obstructive pulmonary disease [7].

We also found that age, gender, and disease affect the quality of life of patients. The psychological (mental) component of the health of patients in all groups was determined by the age of the respondents in 91% ; the physical component of health and the physical functioning - 92% and 81%, respectively; social functioning was 82% determined by the disease.

Our data confirm the studies of other authors who found that patients with chronic diseases have a significant decrease in the quality of life with age [5,25] and this decrease was also detected in the mental health component [26]. The studies found gender differences in the quality of life of patients with coronary heart disease [27], obstructive pulmonary disease [28].

How can a patient change their perception of a disease and, accordingly, the quality of their life? According to Petrie, Weinman [29] direct psycho-educational interventions can change negative beliefs about the disease and lead to improvements in a number of different health outcomes.

In this case, we can talk about the patient's communication with a clinical psychologist, as well as with nurses and doctors, which is especially important in hospitalization. Such studies have only recently become widespread and need further probation.

The results of our study are of clinical significance: it was found out that the hospitalized patients' perception of their illness

affects their quality of life; a hidden problem was revealed - communication failure between patients and medical personnel, as evidenced by a significant number of patients who refused to participate in the study, patients with an unknown type of disease perception who preferred to receive information about their disease not from medical personnel, but from roommates, magazines, Internet. The data obtained allow us to plan studies of the level of communication competence of medical personnel and the level of patients' satisfaction with medical care.

The limitations of our study are associated with a small convenient sample, due to the significant number of patients who refused to participate in the study.

Conclusions

The disease perception affects the general health status of hospitalized patients (SF-36), which determines the patient's current state of health, treatment prospects and disease resistance. All factors affecting the quality of life of patients can be divided into two groups: non-modifiable (age, gender, disease) and modifiable factors (type of perception of the disease). By changing the patient's perception of the disease it is possible to change the quality of life of hospitalized patients.

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Conflict of Interest

The authors declare that they have no conflicts of interest.

Ethical Approval

The study was reviewed and approved by the ethics committee of the Orenburg State Medical University (OrSMU). All procedures performed were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent

Patients were informed verbally and in writing about the study and gave written informed consent.

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