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Psychological Distress and Quality of Life in Patients with Chronic Somatic Diseases in Family Medicine

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ABSTRACT

Background: The aim of this research was to examine psychological distress and quality of life in patients with chronic somatic diseases in family medicine practices. Additional objectives included determining whether the severity of the illness and sociodemographic characteristics influence these aspects, and whether psychological distress in patients with chronic somatic diseases is recognized and treated in the work of family medicine physicians.

Methods: The investigation was conducted on a sample of adult patients from the family medicine practice, forming a study group of 160 participants. The control group consisted of 74 individuals from the general population. The Symptom Checklist-90 (SCL-90) questionnaire was used to assess psychological distress, while the World Health Organization Quality of Life brief version (WHOQOL-BREF) questionnaire was utilized to measure quality of life.

Main findings: Psychological symptoms of somatization and the total number of present psychological symptoms were significantly higher in the study group compared to the control one. In the quality-of-life category, the study group scored significantly lower in the domains of physical health, mental health, social functioning and the overall test score.

Principal conclusion: Patients in family medicine with chronic somatic diseases experience greater psychological distress and poorer quality of life compared to the general population. In addition to the severity of somatic illness and the number of somatic conditions, psychological distress and quality of life are also influenced by age, marital status, number of children, education and employment status. Psychological distress in patients with chronic somatic diseases is rarely recognized in family medicine practices and even less frequently treated.

Key words: chronic somatic diseases, psychological distress, quality of life.

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INTRODUCTION

In 21st-century medicine, comorbidity or multimorbidity is one of the greatest challenges in scientific research and medical nosology, as well as in everyday clinical practice and treatment. The simultaneous occurrence or presence of two or more diseases, which is what comorbidity essentially represents, is now generally the rule rather than the exception, especially in older age, where it is difficult to find a person who does not have at least two physical and/or mental disorders or diseases. Unfortunately, treatment of one disease often leads to the emergence or worsening of another, sometimes resulting in fatal outcomes or premature death. Furthermore, modern medicine is highly specialized and fragmented into various subdisciplines. However, in real life, comorbidity does not recognize such divisions, and there is an increasing need for full attention to all diseases that a patient has (1). One area that is particularly neglected is the comorbidity between mental and physical disorders (2). Individuals with chronic somatic diseases are relatively more exposed to the risk of psychological issues than physically healthy ones. Psychological distress can manifest in many different ways, from the need to exert extra effort to cope with necessary adjustments, and emotional symptoms such as sadness or anxiety that naturally accompany fear, to clear mental disorders.

The severity of illness and the loss of psychological resources appear to exacerbate psychological distress in patients with chronic somatic diseases. Therefore, in clinical practice, health and illness need to be viewed at several different levels. Wilson and Cleary distinguish between the physical level, functional status, health perception and symptoms, which together define overall quality of life (1). At all these levels, chronic somatic illness can have consequences for mental health. These can vary in quality and intensity. Psychological distress in patients with chronic somatic diseases may exist as a psychiatric illness in itself or may be a psychological reaction to the primary or secondary consequences of the somatic illness, which act as prolonged stressors (2).

The way in which social and psychological factors "get under the skin" to influence biological processes is crucial for understanding the complexity of the relationship between mental health and chronic somatic diseases. Stressful life events and depression can lead to the activation of the hypothalamic-pituitary-adrenal (HPA) axis and complex hormonal interactions in the pathogenesis of metabolic disorders. For example, following a life-threatening event such as acute coronary syndrome or the symptoms and potential complications of type 2 diabetes, associated worry and anxiety can impair functioning, recovery and/or coping ability, as well as the overall burden of self-control, which may trigger and worsen depressive symptoms. These complex hormonal interactions can lead to a wide range of metabolic as well as cardiovascular abnormalities, in addition to poor mental and physical health (3).

Associated psychological disorders and somatic diseases may be attributed to biological, psychological or social consequences of the primary disorder and can directly or indirectly increase the risk of developing another (4). According to one theory, the depression observed in chronic somatic diseases may be due to psychological mechanisms related to the patient's as well as the societal perception of the illness. Given the established connection between irrational beliefs and psychiatric symptoms, depression in patients with chronic somatic diseases may result from the formation of irrational beliefs about the illness itself, laying the foundation for the later development of depressive disorders (5). Another theory relates to the etiological connection between somatic and psychiatric illnesses, for example, in cerebrovascular diseases, where there is permanent damage to brain tissue (6).

The prevalence of comorbidity has surged and continues to rise for several reasons, primarily due to increased life expectancy following

advancements in medicine and socioeconomic development. However, environmental factors (such as air pollution), lifestyle changes and rapid urbanization, as well as medical ones, including iatrogenic diseases and the fragmentation of medical services, also play important roles, often resulting in late recognition and treatment of comorbid diseases (7). Anderson et al. reported that in the general population, 50% of individuals over 65 years old have at least three chronic conditions, and 20% have at least five (8). The aim of this study was to examine psychological distress and quality of life in patients with chronic somatic diseases in the family medicine outpatient clinic of Health Center (HC) Mostar.

PARTICIPANTS AND METHODS

Participants

The study group consisted of patients receiving treatment at the Family Medicine Service of HC Mostar, specifically in the family medicine outpatient clinics. The participants were included in the order of their appointments, with a minimum of 150 respondents. All patients who presented themselves in order and met the inclusion criteria were informed about the purpose and methods of the research. The control group comprised respondents from the general population with 70 participants. They were recruited using random sampling by randomly selecting four quarters, where adult residents in residential buildings with even-numbered addresses were contacted. All respondents were asked to participate and were informed about the purpose and methods of the evaluation. Participants who agreed to participate and signed the consent form received pre-prepared tests to complete independently, with assistance from the researchers as needed. They could also take the tests home and return them to the family medicine clinic by arrangement. The investigation included individuals who met the entry criteria and signed the consent form to participate.

Methods

Data on patients were collected using three questionnaires: a general demographic questionnaire, the short version of the Symptom Checklist-90 (SCL-90) – Brief Symptom Inventory (BSI) and the World Health Organization Quality of Life brief version (WHOQOL-BREF) questionnaire.

The short version of the SCL-90-Revised (Brief Symptom Inventory – BSI, Derogatis et al. 1983) is a self-report scale used to determine the presence of general psychiatric symptoms. It consists of 53 items representing listed symptoms and results in three global indicators of distress and scores on nine subscales: somatization and obsessive-compulsive problems, as well as interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. Each item is rated on a five-point scale ("not at all," "a little," "moderately," "quite a bit" and "very much"), scored from 0 to 4 (9).

The WHOQOL-BREF contains 26 items that measure quality of life in the following domains: physical and psychological health, as well as social relationships and environment (living conditions). The WHOQOL-BREF is a shorter version of the original instrument and is more practical for use in research studies or clinical trials (10).

Statistical analysis

The results of the statistical analysis are expressed as absolute and relative frequencies. The significance of differences was tested using the chi-square test (or Fisher's exact test in the absence of expected frequencies) and the Student's t-test. The results of the statistical tests were interpreted at a significance level of 0.05. If p-values could not be expressed to three decimal places, they were reported as $p < 0.001$. IBM SPSS Statistics 21 for Windows (version 26.0, SPSS Inc, Chicago, Illinois, USA) and Microsoft Excel (Office 2013 version, Microsoft Corporation, Redmond, WA, USA) were used for the statistical analysis of the obtained data.

RESULTS

Significantly more respondents in the patient group had chronic illnesses. The majority of those with chronic illnesses were married, had completed at least primary school and were receiving somatic therapy; all differences were statistically significant (Table 1).

Participants with chronic illnesses were older, had more children and made more visits to family medicine; all differences were statistically significant (Table 2).

Participants with chronic illnesses had significantly higher levels of somatization and achieved significantly higher scores on the Positive Symptom Total (PST) scale. There were no statistically significant differences in the other variables shown (Table 3).

Participants with chronic illnesses had significantly lower scores in physical health, psychological health, social functioning and the overall test result. There were no statistically significant differences in the environment domain between groups (Table 4).

Table 1. Differences in sociodemographic variables between groups

	Chronic illness				χ^2	p
	No		Yes			
	n	%	n	%		
Group					8.479	**0.004**
Patients	37	50.0	113	70.6		
General population	37	50.0	47	29.4		
Marriage					6.992	**0.047***
Married	50	67.6	128	80.0		
Unmarried	23	31.1	26	16.3		
Divorced	0	0.0	1	0.6		
Widower	1	1.4	5	3.1		
Education					7.700	**0.039**
Primary school	2	2.7	11	6.9		
Secondary school	42	56.8	106	66.3		
Higher school	2	2.7	0	0.0		
College	28	37.8	43	26.9		
Employment					22.063	**<0.001***
Employed	48	64.9	73	45.6		
Unemployed	17	23.0	26	16.3		
Occasional work	3	4.1	5	3.1		
Retired	4	5.4	48	30.0		
Retired with disability	2	2.7	8	5.0		
Medications					128.425	**<0.001***
No	74	100.0	44	27.5		
Somatic therapy	0	0.0	110	68.8		
Psychopharmacotherapy	0	0.0	3	1.9		
Somato-psychopharmacotherapy	0	0.0	3	1.9		

*Fisher's exact test

Table 2. Differences in sociodemographic variables between groups

	Chronic illness				t	p
	No		Yes			
	$\bar{X}$	SD	$\bar{X}$	SD		
Age	39.69	12.614	55.17	14.685	7.828	**<0.001**
Children	1.62	1.496	2.18	1.307	2.766	**0.007**
Visits to family medicine	2.43	1.460	5.74	3.397	5.647	**<0.001**

Table 3. Differences in psychological symptoms between groups

	Chronic illness				t	p
	No		Yes			
	$\bar{X}$	SD	$\bar{X}$	SD		
Aggressiveness	0.497	0.642	0.558	0.606	0.693	0.489
Somatization	0.477	0.598	0.702	0.680	2.556	**0.012**
Obsessive-compulsive symptoms	0.635	0.714	0.811	0.699	1.782	0.076
Interpersonal sensitivity	0.551	0.755	0.573	0.686	0.229	0.819
Depression	0.376	0.681	0.440	0.569	0.745	0.457
Anxiety	0.450	0.663	0.614	0.691	1.700	0.090
Phobias	0.376	0.615	0.434	0.591	0.690	0.491
Paranoia	0.692	0.590	0.736	0.685	0.481	0.631
Psychoticism	0.278	0.574	0.389	0.567	1.380	0.169
GSI	0.482	0.578	0.593	0.543	1.418	0.158
PST	16.297	12.775	20.525	14.627	2.246	**0.026**
PSDI	1.410	0.479	1.417	0.471	0.103	0.918

*Global Severity Index (GSI) – average intensity of all symptoms; PST – Positive Symptom Total; Positive Symptom Distress Index (PSDI) – average intensity of present symptoms

Table 4. Differences in quality of life between groups

	Chronic illness				t	p
	No		Yes			
	$\bar{X}$	SD	$\bar{X}$	SD		
Physical health	16.788	2.061	14.911	2.768	5.203	**<0.001**
Psychological health	16.505	2.206	15.525	2.175	3.189	**0.002**
Social functioning	16.829	2.533	14.908	3.013	4.759	**<0.001**
Environment	15.784	2.201	15.378	2.096	1.355	0.177
Overall	16.730	2.576	14.963	2.774	4.632	**<0.001**

DISCUSSION

The results of this study indicate that patients with chronic somatic diseases experience greater psychological distress and lower quality of life compared to the general population. Specifically, it was found that patients with chronic illnesses exhibit a statistically significant higher total number of psychological and somatization symptoms compared to the general population, and lower quality of life in all domains (physical and mental health and social functioning), except for the environmental domain. The findings of this paper are consistent with the results of numerous other works, which also confirmed that chronic somatic diseases are almost invariably accompanied by significant psychological distress and frequent comorbid psychiatric disorders (2). For example, Verhaak

et al. observed that patients with chronic somatic diseases are more likely to develop mental disorders than the general population, and that the negative characteristics of disease progression (progressive or episodic) and the stressful consequences (limited physical functioning, pain, changes in physical appearance) contribute to the risk of mental health issues (11). Similarly, Kessler et al. discovered in their investigation that mental disorders are at least twice as common in individuals with somatic disorders compared to those without (12).

It is worth noting that in this study, due to the method of sample collection, 29.4% of participants in the experimental group did not report any chronic somatic diseases, while in the control group, as many as 50% reported one or more somatic diseases.

In terms of the frequency of specific somatic diseases in family medicine practices, the majority of patients present with arterial hypertension (36%), followed by gastrointestinal diseases (12.7%) and thyroid diseases (12%), then diabetes mellitus (10.6%), heart diseases (9.3%), asthma and chronic bronchitis (8.7%) and degenerative bone diseases (7.1%), as well as other rarer conditions, including malignancies (2.7%). The majority of patients who visit family medicine practices, 42.3%, suffer from one somatic disease, 14.6% from two and 13.3% from three or more.

In the experimental group, the majority of patients use pharmacotherapy (68.8%) compared to the control group (50.0%). Of the patients in the experimental group who take medications, 27.1% take one medication, and 19.0% take two, while 22.7% take three or more. In our study, the majority of participants have arterial hypertension, and investigations on the association between arterial hypertension and psychological distress support our findings. Hamer et al. conducted an evaluation and found that participants who are aware of their hypertension have a higher risk of psychological distress (13). On the other hand, the results also show that most participants do not have severe somatic illnesses. Pain and physical limitations, as well as the progressive or episodic course of the disease, contribute significantly to psychological distress (1). It appears that the most significant impact on mental distress among chronically ill individuals is the social effect of their functional limitations (11).

Psychological issues are more common in specific forms of somatic disorders, such as the terminal stage of renal failure. The reasons for psychological difficulties in such patients are multifaceted (14). The results of an investigation by Klarić et al. show that patients undergoing chronic hemodialysis have a high prevalence of comorbid depression (51.8%) and that depression is significantly more common in these patients compared to those with chronic diseases treated in family medicine (41.5%) and especially compared to the general population (9.8%) (15). There is also a strong association between depression and diabetes (16). In the experimental group, diabetes ranks fourth in prevalence (10.6%), compared to arterial hypertension, which is three times more common. Additionally, studies have revealed a positive correlation between the severity of somatization disease and the severity of psychological distress, meaning the more severe the illness, the more likely the patient is to experience both physical and psychological symptoms (17). Malignant diseases are generally considered severe, but in our research, only occurred in 1.2% of patients were reported. These works partly explain why anxiety and depression were not statistically significant in the experimental group.

The impact of disease on quality of life is multidimensional. Significant events and/or severe conditions, such as illness or disability, can lead to a considerable reduction in self-perceived quality of life. Illness not only affects quality of life in terms of physical symptoms and limits functioning, but there are also indirect effects, such as changes in work capacity, potential isolation, increased dependence on others, poor habits and so on. All of this often leads to changes in an

individual's mental state, namely psychological distress (18).

Given that our research shows that participants from family medicine clinics have more somatic illnesses, and tend to be older, unemployed or retired (including some retired due to disability), it is not surprising that these participants have a significantly lower quality of life compared to participants from the general population. This finding is consistent with other studies that also point out that, in addition to somatic and psychiatric disorders, other variables affect quality of life (11).

For example, Baumeister et al. in their review article found that chronic somatic diseases (cardiovascular, respiratory, musculoskeletal, gastrointestinal, malignant and other types) and comorbid psychiatric disorders are negatively associated with quality of life (19). Some studies mention differences in the quality of life of chronically ill patients, while others do not find such variances. This inconsistency in findings can be partly attributed to the different methodologies and measurement instruments used, but some authors suggest that the psychological consequences of illness and how the illness is perceived are precisely what lead to these variations (18).

This study also has some limitations. First and foremost, the sample size is small. Since the participants in the experimental group were recruited in the order of their visits to the family medicine clinic, 29.4% did not have any verified chronic somatic disease. These participants usually presented with acute viral infections or for routine systematic check-ups. The control group participants were randomly selected from residential neighborhoods, and among them, 50% reported some form of chronic somatic disease. Moreover, the sample of the experimental and control groups was not balanced in terms of sociodemographic variables, which certainly affects psychological distress and quality of life.

CONCLUSION

Patients in family medicine with chronic somatic diseases experience greater psychological distress and lower quality of life compared to participants from the general population. In addition to the severity of the somatic disease and the number of somatic conditions, some sociodemographic characteristics such as age, marital status, number of children, education and employment status also influence the psychological distress and quality of life of these patients. Psychological distress and psychiatric comorbidities in patients with chronic somatic diseases are rarely addressed and treated in family medicine practices. Since psychological distress affects the course of somatic diseases and the quality of life of patients, family physicians should certainly pay more attention to psychological distress and psychiatric comorbidities in patients with chronic somatic illnesses.

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CONFLICT OF INTEREST

Author LP declares that there is no conflict of interest; author MK declares that there is no conflict of interest.

AUTHORS' CONTRIBUTIONS

MK: contribution to study conception and design, literature review, supervision, interpretation of data, critical revision of the paper; LP: acquisition of data, contribution to study conception and design, literature review, writing of the paper.

ETHICAL BACKGROUND

Institutional review board statement: The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Ethics Committee of HC Mostar (Reg. No. 1112/22, Mostar, May 23, 2022).

Informed consent statement: Informed consent was obtained from all subjects involved in the study.

Data availability statement: We deny any restrictions on the availability of data, materials and associated protocols.

Derived data supporting the findings of this study are available from the corresponding author on request.

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