

What are we afraid of when we fear for our health? The symptom context of hypochondriacal complaints

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Summary

Aim. To identify the set of symptoms most frequently co-occurring with hypochondriacal complaints in patients with neurotic or personality disorders.

Method. Nonparametric Spearman rank correlations between the variables of symptom checklist “O” describing hypochondriacal symptoms and other symptoms were analyzed. To increase the reliability of the results, the analyses were performed independently in two groups: 3,929 patients before admission to a day hospital in the years 1980–2002 (group A) and 3,190 patients before admission in the years 2004–2015 (group B).

Results. For selected groups of patients, lists of correlation coefficients were obtained showing the most important (strongest) and statistically significant associations between five hypochondriacal symptoms and somatization symptoms coming from the muscular system, breathlessness, symptoms coming from the cardiovascular system, anxiety symptoms, and compulsive thoughts without specific content.

Conclusions. The multidimensional nature of hypochondriacal complaints and their association with somatization symptoms similar to infection or inflammation were confirmed. Apart from the fears about patient’s own health, fears about close relatives are also an important symptom, to which clinical attention should be paid.

Key words: hypochondriasis, health anxiety, somatoform disorders

Introduction

Fears related to health status, threat of becoming ill, uncertainty about the competence of diagnostic and treatment staff, and focus on body functions are symptoms that cause both significant distress to those experiencing them and a potential increase in the use of healthcare services. Health anxiety of clinical severity is reported to affect up to 13% of the general adult population [1]. Additionally, an increase in the prevalence

of health anxiety disorders can be predicted based on the phenomenon of so-called cyberchondria (seeking information about medical diagnoses on the Internet) [2, 3].

At the same time, both the DSM-5 and the ICD-11 classifications changed the understanding of what had traditionally been known as somatization disorders toward an emphasis on the role of patients' distress over bodily symptoms (regardless of their cause), experiencing anxiety and paying excessive attention to these symptoms. The DSM-5 introduced the category of Somatic Symptom and related disorders, which includes, among others, Somatic symptom disorder (SSD), Conversion disorder (functional neurological symptom disorder) and Illness anxiety disorders (hypochondriasis).

In order for a Somatic symptom disorder to be diagnosed, at least one distressing somatic symptom or one which disables daily functioning must be present (this may be pain), accompanied by persistent thoughts of the severity of the symptom(s), or anxiety about the symptoms or health condition, or excessive time and energy devoted to the symptoms or health concerns. The symptoms do not have to be present all the time, but the belief that they persist remains for a minimum of six months. If this time is shorter, the classification suggests a diagnosis of Other specified somatic symptom and related disorder.

The diagnosis of Conversion disorder refers to at least one symptom from the spectrum of voluntary movements or sensing (e.g., weakness, paralysis, dysphagia, seizures and convulsions, partial anesthesia, sensory disturbances) that cannot be better explained by referring to another general medical condition or psychiatric disorder; at the same time, the symptom and neurological or general medical diagnosis are not consistent. The symptom duration range is less than or more than six months (acute episode and persistent state, respectively).

The criteria for *Illness anxiety disorder (hypochondriasis)* assume that somatic symptoms are absent or of low severity. If factors related to the general medical condition are present or at risk of becoming present, the patient's concentration on thoughts about the illness is clearly inadequately high. There is persistent (at least six months) health concern and vigilance, excessive health-related behaviors, or conversely, avoidance of medical examinations and hospitalizations. If symptoms are present for less than six months or if there are no excessive health-related behaviors, the diagnosis of *Other specified somatic symptom and related disorder* should be made. A noteworthy assumption is made by the DSM-5 authors that the symptoms of a hypochondriacal disorder cannot be explained better in terms of other mental disorders, among which *Obsessive-compulsive disorder* is listed [4] –this assumption reflects a different understanding of the basic nature of these two disorders, unlike under the viewpoint proposed in the ICD-11.

The most recent version of the WHO classification for conditions in which somatic symptoms are at the foreground lists under the chapter *Disorders of bodily distress*

or *bodily experience*, among others, *Bodily distress disorders* (BDD) [5]. The criteria for diagnosis are similar to those proposed by the APA classification: the presence of bodily symptoms associated with subjective suffering, excessive attention directed toward them – the attention is assessed as excessive even when the symptoms are related to other existing health problems, with clinical examination and reassurance not reducing the patient's focus on symptoms. Symptoms persist at least several months, being present on most days, are usually multiple and may change; there also may be a single symptom – most commonly pain or fatigue [6].

As mentioned, the ICD-11 offers a different perspective on hypochondriacal disorder, placing it in a new chapter of *Obsessive-compulsive or related disorders* (OCRD). The ICD-11 developers justify this change by the presence of unwanted thoughts and related repetitive behaviors (both common to the disorders included in this chapter), as well as data on their more frequent than expected familial prevalence, genetic risk factors, related neurochemical abnormalities and underlying neurocircuitry anomalies, comorbidity, and, for some, similarities in response to analogous pharmacological or psychological treatments [e.g., 7].

In addition to the well-known issues of catastrophic interpretations of one or more bodily sensations or symptoms, including those that are physiological and common, both DSM-5 and ICD-11 emphasize the role of engaging oneself in repetitive and excessive health control behaviors or, conversely, avoidance behaviors [7–9].

The rationale and implications of the changes in the criteria for diagnoses introduced in the DSM-5 and ICD-11 are the subject of numerous discussions pointing out the merits of the proposed solutions, areas that require further research and clinical implications [cf. 10–14]. Their detailed description exceeds the scope of this paper, but it seems that from the perspective of clinical practice, several issues are worth noting. In view of potential difficulties associated with differential diagnostics, the awareness of the nature of somatic symptoms most frequently associated with health anxiety could sensitize diagnosticians (and therapists) to the fact that these symptoms require special attention. Another important issue is the picture of hypochondriacal disorders from the perspective of their inclusion in the spectrum of obsessive-compulsive disorders (according to ICD-11). Therefore, a question arises as to which symptoms from the spectrum of obsessions and compulsions should be taken into account – those related to health only, or also others, given also their symbolic meaning? Finally, can other anxiety symptoms also be associated with health-related, somatic and obsessive-compulsive symptoms?

Aim

The aim of this study was to analyze the picture of associations between hypochondriacal complaints and other symptoms included in the neurotic symptom checklist “O”, reported by patients with a diagnosis of neurotic, behavioral or personality disorders

(F4–F6 according to ICD-10), qualified for treatment with psychotherapy in a day hospital. It was decided to verify the following preliminary assumptions:

1. Symptoms with content related to health anxiety, fear of illness and focus on bodily functions will be correlated.
2. Hypochondriacal symptoms will be associated with somatic symptoms in the form of “typical” somatic complaints, such as cardiovascular pain, gastroenterological complaints or neurological disorders (e.g., headaches, sensory disorders).
3. Hypochondriacal symptoms will be associated with diffuse somatic symptoms that are less clear and potentially more amenable to catastrophic interpretation.
4. Hypochondriacal symptoms will be associated with compulsive thoughts and behaviors.

Material and method

The study was based on analyses of medical records. The analyses were carried out independently in two groups to increase the reliability of the results. The object of analysis was data acquired from two groups of patients qualified by a psychiatrist for treatment in a day hospital who completed the neurotic symptom checklist “O”: 3,929 people (group A, years: 1980–2002) and 3,190 people (group B, years: 2004–2015). Demographic data and information about the global severity of neurotic symptoms in patients from both groups are presented in Table 1.

The obtained data include patients with diagnoses of neurotic, stress-related and somatoform disorders (F4 according to ICD-10), behavioral disorders (F5 according to ICD-10), and personality disorders (F6 according to ICD-10). The passage of time made it necessary to approximate the initial diagnoses of patients, especially less recent ones, in terms of the current ICD-10 classification. These diagnoses were assigned to some of the patients hospitalized before the introduction of ICD-10, based on the equivalence analysis of symptom complexes described and, in some cases, on the basis of archival medical histories. This made it possible to use diagnoses that are less specific (e.g., F42) or their combined groups (e.g., F40 and F41, Table 2). The diagnoses thus made serve in this study as a general description of the study groups, while the object of analysis is the co-occurrence of patient-reported symptoms – regardless of a specific diagnosis.

Qualification for treatment consisted in each case of at least two psychiatric examinations, an interview and psychological examination, including a battery of test examinations. This made it possible to exclude other mental disorders (e.g., affective, addiction-related and psychotic disorders). Physical complaints reported by patients were subjected to differential analysis by psychiatrists – it was assessed whether a given symptom was of somatization-like nature or could be the result of somatic diseases. In case of diagnostic doubts, it was possible to carry out additional specialist consultation (e.g., EEG or endocrinological examination) [15].

Table 1. Demographic data and global severity of neurotic symptoms in the study subgroups

	GROUP A (n = 3,929)		GROUP B (n = 3,190)	
	Female (n = 2,582)	Male (n = 1,347)	Female (n = 2,218)	Male (n = 972)
Sex				
Age (years)				
Mean \pm SD (median)	33 \pm 9 (33)	32 \pm 9 (28)	30 \pm 9 (28)	30 \pm 8 (28)
University degree	34%	32%	40%	41%
Employed	59%	70%	70%	74%
Marriage/relationship	69%	68%	52%	48%
Global Symptom Levels (OWK)#				
Mean \pm SD (median)	394 \pm 152 (387)	349 \pm 151 (336)	366 \pm 153 (360)	333 \pm 151 (320)

Cut-off point for females is 200 points, while for males 165 points.

Table 2. Diagnoses according to ICD-10

	GROUP A (n = 3,929)		GROUP B (n = 3,190)	
	Female (n = 2,582)	Male (n = 1,347)	Female (n = 2,218)	Male (n = 972)
F44/45 Dissociative or somatoform disorders	29%	25%	10%	13%
F60 Specific personality disorders	23%	29%	31%	34%
F40/F41 Anxiety disorders	17%	16%	37%	32%
F48 Neurasthenia	7%	14%	1%	3%
F34 Dysthymia	7%	5%	2%	2%
F50 Eating disorders	5%	0%	5%	0%
F42 Obsessive-compulsive disorders	2%	2%	3%	7%
F43 Reaction to severe stress, and adjustment disorder	1%	2%	9%	7%
Other/incomplete data	9%	7%	2%	2%

The symptom checklist “O” is a self-report tool which enables obtaining information about the presence and severity (on the scale from “0” – “no symptom”, to “c” – “symptom present and very bothersome”) of 135 neurotic symptoms experienced within the last 7 days prior to the examination. It is one of the few original Polish diagnostic tools developed on the basis of the criterion approach, with the use of colloquial language, characterized by satisfactory psychometric properties [16].

Nonparametric Mann-Whitney *U* tests were utilized to compare the distributions. The significance of the difference between the percentages was estimated using a test

for two stratum weights (percentages). Nonparametric rank correlations (Spearman's coefficient) were calculated using a licensed statistical package STATISTICA PL 13 (StatSoft).

Information obtained from routine diagnostic tests was used with the consent of the patients, and all data were stored and processed in an anonymous form. The analyses were carried out with the consent of the Bioethics Committee.

Five variables of the symptom checklist "O" were selected for the analyses:

- "Discovering all kinds of serious diseases in oneself";
- "Performing ritualistic actions to try to avoid disease";
- "Persistent concerns over body functions – for example, heart-beats, pulse, digestion, and so on";
- "Fears about one's own health and about contracting serious diseases";
- "Feelings of having serious diseases that threaten your life".

These variables refer to a(n): (a) affective ("fears"), (b) cognitive ("belief"), (c) behavioral ("performing actions") dimensions of health anxiety.

Results

The first stage of analyses included calculation of the following percentages: (1) reporting (regardless of the severity) the occurrence of selected symptoms and (2) reporting these symptoms as very bothersome. The results are shown in Table 3.

Table 3. Prevalence and severity of hypochondriacal ailments in the study groups

VARIABLE		GROUP A				GROUP B			
		Female	%	Male	%	Female	%	Male	%
		2,582	66%	1,347	34%	2,218	70%	972	30%
Discovering all kinds of serious diseases in oneself	Occurrence	1,550	60%*	866	64%*	1,217	55%	554	57%
	Very bothersome	506	20%	247	18%	330	15%	169	17%
Performing ritualistic actions to try to avoid disease	Occurrence	1,245	48%	674	50%	929	42%*	457	47%*
	Very bothersome	307	12%	130	10%	209	9%	97	10%
Persistent concerns over body functions – for example, heart-beats, pulse, digestion, and so on	Occurrence	1,323	51%***	768	57%***	1,008	45%	456	47%
	Very bothersome	461	18%	250	19%	325	15%	145	15%

table continued on the next page

Fears about one's own health and about contracting serious diseases	Occurrence	1,652	64%	898	67%	1,316	59%	588	60%
	Very bothersome	692	27%*	322	24%*	471	21%	220	23%
Feelings of having serious diseases that threaten your life	Occurrence	1,181	46%***	740	55%***	873	39%*	420	43%*
	Very bothersome	443	17%	217	16%	286	13%	145	15%

* $p < 0.05$; *** $p < 0.005$

In both groups, the most common symptom (regardless of severity) was fear about contracting serious diseases, reported by as many as 64% of females and 67% of males in group A and 59% females and 60% of males in group B. Patients were least likely to report the symptom of feelings of having serious diseases that threaten their lives (46% of females in group A, 39% of females and 43% of males in group B, but 55% of males in group A, with 50% reporting exaggeration aimed at avoiding disease).

Statistically significant differences were found in the prevalence of four out of five selected symptoms, with higher percentages found in the male group in each case. In group A, males were more likely than females to report in the symptom checklist the occurrence (regardless of severity) of the following symptoms: discovering all kinds of serious diseases in oneself, persistent concerns over body functions and feelings of having serious, life-threatening diseases. In group B, the symptom of performing ritualistic actions to try to avoid disease and of feelings of having serious, life-threatening diseases were more frequent in males. In both groups, there were no statistically significant differences between sexes in the prevalence of fears about contracting serious diseases, nor in the evaluation of the selected symptoms as extremely bothersome.

Due to an exploratory nature of the study and large amount of data, a decision was made to perform the subsequent analyses without breaking down the patients by gender and with regard only to the occurrence of selected symptoms and their correlation with the remaining symptoms of the symptom checklist "O".

Tables 4–8 present ten highest correlations of selected hypochondriacal symptoms with the remaining symptoms from the symptom checklist "O" (wording of variables was abbreviated). If there were more than 10 symptoms with the same correlation coefficient value, they were all included in the tables. Next to the values of correlation coefficients, the order of these values is displayed in parentheses {}, starting from the highest. Bold indicates correlation values ≥ 0.4 . All correlations were significant at the $p < 0.05$ level.

Table 4. **Fears about one's own health and about contracting serious diseases**

Item of the symptom checklist "O"	Group A n = 3,929	Group B n = 3,190
Feelings of having serious diseases	{1} 0.68	{1} 0.73
Discovering all kinds of serious diseases in oneself	{2} 0.62	{2} 0.70
Persistent concerns over body functions (pulse, digestion, etc.)	{3} 0.54	{3} 0.52
Exaggeration aimed at avoiding disease	{4} 0.38	{4} 0.41
Undefined wandering pains	{5} 0.37	{5} 0.40
Muscle pains, e.g., in the back, etc.	{6} 0.33	-
Breathlessness, dyspnea	{7} 0.32	{8} 0.35
Feelings of being threatened	{8} 0.32	{7} 0.35
Fears about close relatives	{9} 0.32	{6} 0.39
Trembling of muscles	{10} 0.29	-
Fear whenever staying alone, e.g., in an empty apartment	{10} 0.29	{9} 0.33
Fear whenever in a train, bus, etc.	-	{10} 0.33

In the case of fears about one's own health and about contracting serious diseases in both groups (A and B), attention is drawn to the set of the first five variables that correlate with them, which include other variables relating to hypochondriacal symptoms and one symptom from the somatization group – undefined wandering pains. Among the remaining six symptoms in group A, there were three somatization symptoms: two related to muscle ailments and dyspnea, and three related to anxiety, including fears about close relatives. In group B, the two somatization symptoms related to muscle ailments were not found among the ten symptoms most strongly correlated with fears about one's own health; however, there was a symptom from an agoraphobic spectrum – fear whenever in a vehicle.

Table 5. **Discovering all kinds of serious diseases in oneself**

Item of the symptom checklist "O"	Group A n = 3,929	Group B n = 3,190
Feelings of having serious diseases	{1} 0.63	{2} 0.7
Fears about contracting serious diseases	{2} 0.62	{1} 0.7
Persistent concerns over body functions (pulse, digestion, etc.)	{3} 0.52	{3} 0.54
Undefined wandering pains	{4} 0.42	{4} 0.43
Exaggeration aimed at avoiding disease	{5} 0.37	{5} 0.41
Muscle pains, e.g., in the back, etc.	{6} 0.35	-
Breathlessness, dyspnea	{7} 0.33	{8} 0.36

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Persistent feelings of fear	{8} 0.31	{9} 0.35
Bothersome thoughts, words and/or fantasies	{9} 0.31	-
Tachycardia	{10} 0.31	{6} 0.37
Fear whenever staying alone, e.g., in an empty apartment	{10} 0.31	-
Attacks of panic	-	{10} 0.35
Feelings of being threatened	-	{7} 0.36

A similar regularity was observed in the symptom of discovering all kinds of serious diseases in oneself; in both groups A and B, among the first five variables most highly correlated with this symptom were the remaining variables related to hypochondriacal symptoms and undefined wandering pains. In both groups, among the ten symptoms most strongly correlated with the symptom in question, there were also two somatization symptoms – dyspnea and tachycardia, and the symptom of persistent feelings of fear. A symptom with a similar content, i.e., feelings of being threatened, occurred only in group B, similarly to attacks of panic. Only in group A was there a correlation between the symptom of “discovering all kinds of serious diseases in oneself” and the symptom from the obsessive-compulsive spectrum, i.e., bothersome thoughts, words and/or fantasies, as well as fear whenever staying alone.

Table 6. **Performing ritualistic actions to try to avoid disease**

Item of the symptom checklist “O”	Group A n = 3,929	Group B n = 3,190
Persistent concerns over body functions (pulse, digestion, etc.)	{1} 0.41	{1} 0.42
Feelings of having serious diseases	{2} 0.38	{4} 0.39
Fears about contracting serious diseases	{3} 0.38	{2} 0.41
Discovering all kinds of serious diseases in oneself	{4} 0.37	{3} 0.41
Attacks of panic	{5} 0.29	{5} 0.32
Undefined wandering pains	{6} 0.28	{8} 0.29
Muscle tension	{7} 0.27	-
Bothersome thoughts, words and/or fantasies	{8} 0.26	{10} 0.28
Breathlessness, dyspnea	{9} 0.26	-
Feelings of being threatened	{10} 0.26	{6} 0.31
Fear whenever staying alone, e.g., in an empty apartment	{10} 0.26	-
Intense, persistent, generalized fear	-	{7} 0.29
Persistent feelings of fear	-	{10} 0.28
Fear whenever in a vehicle – train, bus, etc.	-	{9} 0.29

Other variables describing hypochondriacal symptoms again most highly correlated with the symptom of exaggeration aimed at avoiding disease, and the symptom of panic attacks was ranked fifth in both analyzed groups.

In both groups, the symptom of performing ritualistic actions to try to avoid disease was correlated with one obsessive symptom (bothersome thoughts, words and/or fantasies), as well as with undefined wandering pains and feelings of being threatened.

Table 7. Persistent concerns over body functions – for example, heart-beats, pulse, digestion, and so on

Item of the symptom checklist "O"	Group A n = 3,929	Group B n = 3,190
Feelings of having serious diseases	{1} 0.54	{1} 0.54
Fears about contracting serious diseases	{2} 0.54	{3} 0.52
Discovering all kinds of serious diseases in oneself	{3} 0.52	{2} 0.54
Undefined wandering pains	{4} 0.42	{7} 0.40
Exaggeration aimed at avoiding disease	{5} 0.41	{6} 0.42
Tachycardia	{6} 0.38	{4} 0.45
Heart pain	{7} 0.36	{9} 0.38
Breathlessness, dyspnea	{8} 0.36	{5} 0.43
Muscle pains, e.g., in the back	{9} 0.34	-
Feelings of chill or heat	{10} 0.34	-
Fear whenever in a vehicle – train, bus, etc.	-	{8} 0.40
Trembling of muscles	-	{10} 0.36

In both groups, three variables related to hypochondriacal symptoms correlated the strongest with the symptom of persistent concerns over body functions; the fourth, exaggeration aimed at avoiding disease, in group A was fifth, behind undefined wandering pains, while in group B it was sixth in terms of correlation coefficient magnitude, behind the symptoms of tachycardia and dyspnea.

In both groups, correlations of the hypochondriacal variable in question were also found with the three somatization symptoms: tachycardia, heart pain and breathlessness, dyspnea.

Table 8. Feelings of having serious diseases that threaten your life

Item of the symptom checklist "O"	Group A n = 3,929	Group B n = 3,190
Fears about contracting serious diseases	{1} 0.68	{1} 0.73
Discovering all kinds of serious diseases in oneself	{2} 0.63	{2} 0.70
Persistent concerns over body functions (pulse, digestion, etc.)	{3} 0.54	{3} 0.54

table continued on the next page

Undefined wandering pains	{4} 0.41	{4} 0.44
Exaggeration aimed at avoiding disease	{5} 0.38	{5} 0.39
Muscle pains, e.g., in the back	{6} 0.33	{10} 0.34
Breathlessness, dyspnea	{7} 0.31	{6} 0.38
Heart pain	{8} 0.29	-
Fears about close relatives	{9} 0.29	{8} 0.35
Fear whenever in a vehicle – train, bus, etc.	{10} 0.29	{9} 0.34
Feelings of being threatened	-	{7} 0.36

In the case of symptom of the belief that one has serious, life-threatening diseases, it was again found that in both groups, alongside hypochondriacal symptoms, the symptom of undefined wandering pains was among the first five variables in terms of the magnitude of the correlation coefficient. In both groups, the presence of a correlation of the belief that one has serious, life-threatening diseases with the following somatization symptoms was found: muscle pains (e.g., in the back) and breathlessness, dyspnea, as well as fears about close relatives and fear whenever in a vehicle.

Discussion

The aim of this study was to determine the context of health-related anxiety symptoms reported by patients diagnosed with a neurotic or personality disorder. The results indicate that, in a statistically significant manner, the selected hypochondriacal symptoms correlated predominantly with each other, at levels ranging from weak to, more often, moderate and quite strong (from $r = 0.37$ to $r = 0.73$ in both groups combined), which confirms their association but not their identity (variable formulations). This result also supports the assumption of multidimensionality of the health anxiety phenomenon. The picture obtained from the empirical data is therefore consistent with the first assumption of this study.

Among somatic symptoms, the following were found in the range of the strongest ten correlations in the study groups: undefined wandering pains, muscle pain, muscle trembling, muscle tension, dyspnea, tachycardia, heart pain. Only in connection with the symptom of persistent concerns over body functions (pulse, digestion, etc.), the symptom of feelings of chill or heat turned out to be correlated. The symptom worthy of special attention is undefined wandering pains, often found in the first five strongest correlations in the examined groups, and related symptoms, i.e., muscle trembling and tension. Feeling of breathlessness, dyspnea was also found to be a symptom frequently correlated with hypochondriacal complaints in the study groups.

The obtained results indicate that the symptoms of health anxiety in the study groups were less associated with complaints from specific body systems (cardiac,

gastrointestinal) than with “diffuse”, less clear symptoms of pain and discomfort coming from the muscles and respiratory system, possibly associated with symptoms of inflammatory nature.

Rief et al. [17] investigating the presence of somatization and hypochondriacal symptoms in a general population in Germany (2,050 individuals aged 14–92 years) showed that the most common symptoms reported by the respondents were: back pain, joint pain, limb pain, headaches, flatulence, food intolerances, stomach pain, palpitations, decreased sexual desire (ten most common symptoms out of 53 measured by the SOMS – Screening for Somatoform Symptoms – were selected). The authors showed that 10% of subjects completing the SOMS questionnaire also reported health anxiety, and these individuals had a longer duration of somatic symptoms. The association between somatic and hypochondriacal symptoms (also measured by the Whiteley Index) was not verified in this study. However, these results indicate, similarly to those obtained in the current study, the importance of pain symptoms.

It is also worth referring here to the work of Eliassen et al. [18], who, on the basis of a study using an online questionnaire, demonstrated in a large group of 36,163 people from the Danish general population, aged 25–79, the possibility of distinguishing 10 somatic symptom profiles, including a profile characterized by a presence of symptoms related to: (a) muscles (back pain, leg/hip/knee pain, neck pain, shoulder pain), (b) muscles and gastrointestinal symptoms (abdominal pain, indigestion, nausea), and (c) muscles, gastrointestinal and general symptoms (headache, fatigue, lethargy). In this study, participants also assessed their health status, with a significant number of people in the above-mentioned profiles rating it as poor: 47%, 87% and 73%, respectively. Although this study had a different objective and did not deal with hypochondriacal symptoms, it also seems to indicate the importance of “muscle” symptoms for self-rated health.

It is puzzling that in our study, among the variables most highly correlated with hypochondriacal symptoms, no variable relating to gastrointestinal symptoms (e.g., diarrhea, constipation) was found, despite the widely recognized association between gastrointestinal dysfunction and symptoms of anxiety and depression [19–21]. This may be because patients already qualified for psychotherapy treatment presumably perceive some of their gastrointestinal symptoms as the result of tension/anxiety or nervousness (e.g., diarrhea, abdominal pain), resulting in a better “understanding” of these symptoms, and thus less tendency to associate their presence with somatic health concerns. The results also revealed no significant correlations of the study variables with symptoms of neurological nature, such as balance disorders or headache. Of relevance also in this case may be the characteristics of the examined groups of patients, i.e., those qualified for treatment, and the fact that disturbing complaints indicating a possible neurological background are verified at the initial stages of qualification or even earlier – by the patients themselves seeking help from other specialists. However,

such verification, linked to the provision of health information to patients, does not, of course, fully rule out the possibility of health anxieties persisting.

Among obsessive symptoms, the symptom of compulsive thoughts, words and/or fantasies was found to be correlated with the symptoms of discovering in oneself all kinds of serious diseases and performing ritualistic actions to try to avoid disease. However, these correlations were weak ($r = 0.26-0.31$), which seems to indicate that obsessiveness is less important than the somatization symptoms mentioned above in the picture of associations of hypochondriacal symptoms. It should be emphasized that the variable “performing ritualistic actions to try to avoid disease” itself refers to compulsion-like behaviors. Furthermore, inferring here solely on the basis of a variable stated from the self-report symptom checklist is limited due to the lack of information about the content of “obsessive thoughts and fantasies”. In a study by Reuman et al. [22], it was found, among others, that symptoms of health anxiety were associated with obsessional thoughts relating to hurting/being hurt (harm obsessions).

Among other symptoms, the following anxiety symptoms were most highly correlated with the selected hypochondriacal symptoms in the study groups: feelings of being threatened, fear whenever in a vehicle, fears about close relatives, fear whenever staying alone, panic attacks, intense, persistent, generalized fear, and persistent feelings of fear. This is consistent with previous observations of high co-occurrence and overlap of worry symptoms in hypochondriasis and generalized anxiety disorder, or in overinterpretation of somatic sensations as threatening in hypochondriasis and panic anxiety, relating to arguments for classifying hypochondriasis as an anxiety disorder [e.g., 23].

As it seems, an important unexpected finding in this study is the presence of fears about close relatives, indicating, according to the authors, a broader influence and importance of anxiety about one’s own health.

Interesting, but beyond the scope of this study, are the differences observed in the analyzed groups, among others, higher percentages of “somatization/conversion” diagnoses in group A and partial intergroup differences in the symptoms that correlate highest with hypochondriacal variables, and differences in the female and male groups.

The results indicate clinical implications. First, an emphasize should be placed on the importance of somatization symptoms associated with diffuse muscle ailments, with which hypochondriacal symptoms relate more pronouncedly than with “typical” symptoms of an illness in the common sense, such as for instance heart pain associated with heart attack. Second, dyspnea appeared to be another “bodily” symptom worth paying attention to during diagnosis and therapy. In psychiatry, this symptom is most often associated as co-occurring with panic attacks, whereas it may also be relevant as part of other disorders, in this case hypochondriasis. Third, it is important to note a possible co-occurrence of obsessive-compulsive symptoms in patients reporting health anxiety. When diagnosing and especially planning treatment for patients with

hypochondriacal complaints, it is also worth taking into account the factor of fears about close relatives, which may, on the basis of feedback, reinforce and sustain anxiety about their own health.

The limitations of this study include the fact that the examined patients came from a single center, the time of diagnosis was distant in the case of patient group from the years 1980–2002 and some of the diagnoses may have been determined in an approximate manner – although it should be emphasized that the association of selected symptoms was not studied in relation to the detailed clinical diagnosis. A strength of the study is the large size of the analyzed groups.

Conclusions

1. Hypochondriacal complaints were most often accompanied by other hypochondriacal complaints, somatoform symptoms, occasional symptoms from the spectrum of compulsions, as well as anxiety symptoms from the spectrum of phobia, generalized anxiety and panic.
2. Among symptoms of somatization-like nature, hypochondriacal symptoms were most often accompanied by ailments coming from the muscular system and dyspnea.
3. Fears about close relatives, co-occurring with hypochondriacal symptoms are an important phenomenon which should be accounted for in diagnostics and treatment planning.
4. The sets of most frequent – most strongly correlated symptoms were highly similar in large patient groups from different year spans, which confirms the reliability of the observed regularities.

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