Number of bodily symptoms predicts outcome more accurately than health anxiety in patients attending neurology, cardiology, and gastroenterology clinics

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Abstract

Background: In consecutive new outpatients, we aimed to assess whether somatization and health anxiety predicted health care use and quality of life 6 months later in all patients or in those without demonstrable abnormalities. **Method:** On the first clinic visit, participants completed the Illness Perception Questionnaire (IPQ), the Health Anxiety Questionnaire (HAQ), and the Hospital Anxiety and Depression Scale (HADS). Outcome was assessed as: (a) the number of medical consultations over the subsequent 6 months, extracted from medical records, and (b) Short-Form Health Survey 36 (SF36) physical component score 6 months after index clinic visit. **Results:** A total of 295 patients were recruited (77% response rate), and medical consultation data were available for 275. The number of bodily symptoms was associated with both outcomes in linear fashion ($P<.001$), and this was independent of anxiety and depression. Similar associations were found in people with or without symptoms due to demonstrable structural abnormalities. Health anxiety was associated only with health-related quality of life in patients with symptoms explained by demonstrable abnormalities. **Conclusion:** The number of bodily symptoms and degree of health anxiety have different patterns of association with outcome, and these need to be considered in revising the diagnoses of somatization and hypochondriasis.

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Introduction

One of the criticisms of DSM-IV somatoform disorders is the lack of evidence to support their existence as independent diagnoses [1]. Researchers outside of specialist clinics appear to have abandoned the DSM-IV diagnosis of somatization disorder in favor of more practical definitions, such as abridged somatization or multisomatoform disorder [2–4]. Both are based on the number of bothersome unexplained somatic symptoms. Similarly, the DSM criteria for a diagnosis of hypochondriasis are too restrictive for use in primary care or population-based samples, so researchers have evolved several ways of measuring hypochondriasis [5–9]. This has led to widely differing estimates of the prevalence of hypochondriasis [3].

Previous research has aimed to define the threshold above which the number of bodily symptoms is closely associated with increased disability and health care costs. Most early studies included only somatoform symptoms, defined as bodily symptoms that are medically unexplained, are disabling, and/or lead to medical help seeking [4,10]. It is not surprising, therefore, that numerous such symptoms are associated with disability and health care use. Two studies suggested that the relationship between the number of bodily symptoms, health care use, and disability holds for all bodily symptoms whether or not they are explained by demonstrable abnormalities [11,12]. Other researchers have

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combined the number of bodily symptoms with dimensions of hypochondriasis (disease fear, disease conviction, and bodily preoccupation) and found that primary care patients scoring in the top 14% of this combined measure had increased health care use [7].

An alternative view regards the number of bodily symptoms and health anxiety as continua without any clear "cutoff" point indicating a specific psychiatric diagnosis. If this is the case, there may be a linear association between the number of somatic symptoms and degree of health anxiety, and external validating measures such as health care use and degree of impaired function [12]. Similarly, the association between the number of bodily symptoms or health anxiety and postulated associated features (such as female sex predominance, adverse childhood experiences, and depression) can be tested appropriately. These relationships can be tested in patients who have symptoms explained by demonstrable pathological abnormalities and medically unexplained symptoms. We have previously analyzed data from 129 of the patients included in the present study, showing a significant association between adverse childhood experiences and the number of bodily symptoms [13]. The number of bodily symptoms mediated the association between adverse childhood experiences and frequent health care use; this relationship was strongest in patients with medically unexplained symptoms [13].

The aim of this study was to test the following hypotheses in new patients at medical clinics:

Hypothesis 1. Both the number of bodily symptoms and the degree of health anxiety are associated, in linear fashion, with subsequent health care use and degree of impaired function.

Hypothesis 2. These relationships will be true only for patients with medically unexplained symptoms.

Hypothesis 3. Any association between the number of body symptoms and outcome is mediated by depression and anxiety.

Method

We performed this study in the neurology, gastroenterology, and cardiology outpatient departments of two large hospitals in the UK. These clinics receive referrals from primary care and from other hospital outpatient clinics (i.e., secondary and tertiary referrals). We approached new patients at these clinics if they were aged 18–75 years, physically and mentally able to complete questionnaires, and clearly symptomatic; we excluded asymptomatic patients (e.g., those with hypertension or heart murmur detected on routine screening) because our questionnaires referred to current symptoms. This is a secondary analysis of data that were collected for a study of the association between childhood adversity and health care use [13].

All participants completed the following self-administered questionnaires. The Hospital Anxiety and Depression Scale (HADS) is suitable for medical patients as it avoids physical items (e.g., weight loss and pain) that might be caused by physical illness and is a valid and reliable tool in clinical populations [14,15]. In this paper, we quote the total (anxiety plus depression) score. The Illness Perception Questionnaire (IPQ) assesses a person's beliefs about his/her illness. This study included only the Identity scale—a list of 12 bodily symptoms that a respondent may attribute to the current disorder [16]. The Health Anxiety Questionnaire (HAQ) focuses specifically on concerns about health, with questions covering health worry and preoccupation,

Table 1

Main outcome variables: the SF36 physical component score on follow-up and the number of consultations during follow-up 6 months, by sociodemographic features of patients and symptom type

	SF36 physical component score on follow-up [mean (S.D.)]	P	Number of medical consultations 6 months after index visit [median (IQR)]	P
Sex				
Male	39.8 (11.8)	.90	4 (2–6)	.003
Female	39.6 (13.1)		5.5 (3–8)	
Marital status				
Single	42.5 (10.8)	.17	5 (2–7)	.025
Married	39.5 (13.0)		4 (2–7)	
Widowed/separated/divorced	37.3 (12.9)		6 (3–8)	
Socioeconomic status				
High	(13.2)	.83	4 (2–6)	.002
Low	39.5 (12.4)		5 (3–8)	
Ethnic group				
White Caucasian	39.2 (12.6)	.17	5 (2–7)	.86
Other	43.0 (11.6)		4.5 (2–8)	
Symptoms				
Explained by abnormality	(12.5)	.036	5 (3–7)	.48
Unexplained	42.1 (12.3)		5 (3–7)	
Spearman's correlation coefficient				
Mean age (years)	−0.24	.001	0.13	.032