General Hospital Psychiatry 35 (2013) 297–303

Contents lists available at SciVerse ScienceDirect

General Hospital Psychiatry

journal homepage: http://www.ghpjournal.com

Psychological and behavioral variables associated with the somatic symptom severity of general hospital outpatients in China

Rainer Schaefert, M.D. [a], Claudia Höner, M.D. [b], Florian Salm, M.D. [b], Michael Wirsching, M.D. [b], Rainer Leonhart, Ph.D. [c], Jianzhong Yang, M.D. [d], Jing Wei, M.D. [e], Wei Lu, M.D. [f], Astrid Larisch, Ph.D, M.P.H. [g], Kurt Fritzsche, M.D. [b,*]

[a] Department of General Internal Medicine and Psychosomatics, University Medical Center, Heidelberg, Germany
[b] Department of Psychosomatic Medicine and Psychotherapy, University Medical Center Freiburg, Germany Hauptstraße 8, D-79104 Freiburg, Germany
[c] Department of Social Psychology and Methodology, University of Freiburg, Germany
[d] Department of Psychiatry, Red Cross Hospital of Yunnan Province, Kunming, China
[e] Department of Psychological Medicine, Union Hospital, Beijing, China
[f] Department of Traditional Chinese Medicine, Shi Ji Tan Hospital, Beijing, China
[g] Department of Psychosomatic Medicine and Psychotherapy, Justus Liebig University, Giessen, Germany

ARTICLE INFO

Article history:
Received 24 May 2012
Revised 26 September 2012
Accepted 1 November 2012

Keywords:
Somatic symptom disorder
Somatic symptom severity
PHQ-15
Psychological and behavioral characteristics
Somatoform disorders

ABSTRACT

Objective: In high-income countries, the number and severity of somatic symptoms — irrespective of etiology — are associated with adverse psychobehavioral and functional characteristics. This study aimed to assess these key features among Chinese general hospital outpatients with high levels of somatic symptoms.
Methods: This multicenter, cross-sectional study evaluated four outpatient departments of internal medicine and Traditional Chinese Medicine in Beijing and Kunming and enrolled a total of 281 consecutive patients. The patients answered questionnaires concerning somatic symptom severity [Patient Health Questionnaire (PHQ-15)], illness perception (Brief Illness Perception Questionnaire), illness behavior (Scale for the Assessment of Illness Behavior), emotional distress (Hospital Anxiety and Depression Scale) and health-related quality of life (12-Item Short Form Health Survey). Subsamples reporting high scores of somatic symptom severity (PHQ-15 ≥10, SOM+) versus low scores (PHQ-15 <10, SOM−) were compared.
Results: Twenty-eight percent (79/281) of all outpatients showed high somatic symptom severity. The strongest correlations between high somatic symptom severity and psychobehavioral variables were found for high emotional distress, female gender, living alone, low physical quality of life and high dysfunctional illness behavior. The proportion of the explained variance was 36.1%.
Conclusion: In Chinese outpatients, high somatic symptom severity is frequent and associated with psychobehavioral characteristics. With the PHQ-15 cutoff of 10, SOM+ patients could be differentiated from SOM− patients using these characteristics.

1. Introduction

Somatic symptoms are common in everyday life and, not surprisingly, are the leading cause of outpatient medical visits [1]. Interestingly, there is little difference in outcome between patients with medically explained and unexplained somatic symptoms [2,3], which suggests that the patient's suffering is authentic, regardless of whether it can be medically explained. It has become increasingly clear that somatic symptoms may be initiated, exacerbated or maintained by combinations of biological, psychological and social factors [4,5]. Studies in high-income Western countries have found that a high number of somatic symptoms are associated with increased psychological distress, functional impairment, disability and health care utilization as well as reduced quality of life [5–7]. Moreover, dysfunctional illness perceptions guiding inappropriate illness behavior seem to play a moderating role [8–11]. High somatic symptom severity remains a challenge to clinicians with respect to diagnosis as well as treatment. Several studies have shown a correlation between somatic symptom severity and the diagnosis of a somatoform disorder [12,13]. To revise the highly criticized concepts of "somatoform disorders" and "medically unexplained symptoms" using the background outlined above, a *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-V) working group has proposed "Somatic Symptom Disorder" (SSD) as a new category [14,15]. The major changes in the SSD concept include the omission of the central criterion that the symptoms be medically unexplained and the introduction of positive psychobehavioral criteria in addition to somatic symptoms.

* Corresponding author. Tel.: +498761/27068710; fax: +49761 27068850.
E-mail address: kurt.fritzsche@uniklinik-freiburg.de (K. Fritzsche).

0163-8343/$ – see front matter © 2013 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.genhosppsych.2012.11.001

1.1. Cultural aspects

In China, studies of patients with high somatic symptom severity are very limited [16–19]. The discussion is shaped by a strong tendency to Chinese psychiatry, not taking into account somatic symptom presentation and somatization as a separate dimension of psychopathology but to primarily subordinate it to depression and anxiety [18,20–22]. This tendency was strongly influenced by the first study on somatization in China [16] that found a strong correlation of somatic symptom presentation with depression and anxiety. This study also impinged the transformation process of neurasthenia ("*shenjing shuairuo*") to depression [23,24]. Meanwhile, it has become clear that symptom presentations are heavily influenced by culture and are associated with patterns of illness behavior [25,26].

Health care systems are a manifestation of societies' concepts of illness and health care and shape patients' illness behavior. The Chinese health care system comprises two institutionally separate areas: Western medicine and Traditional Chinese Medicine (TCM). Certain qualities and advantages are attributed to Chinese and Western medicine, respectively. For example, while patients value the reputation of the hospital in Western medicine, the reputation of the individual practitioner is the deciding factor in TCM [27]. In addition, every major hospital in China has its own department of TCM. In China, there is no system of individualized health care in general practices as in Western countries, but most patients are seen in the outpatient clinics of the large government-owned hospitals [28]. In internal medicine, there is usually no appointment system, and each patient is seen by one physician for a relatively short period of time; at the next clinic visit, mostly another physician will see the patient. In TCM, there usually are an appointment system and more long-term physician responsibility for certain patients.

1.2. Aims of the study

The aim of this study was to evaluate psychobehavioral features among Chinese general hospital outpatients with high somatic symptom severity. Our specific research aims were as follows: (a) understanding how Chinese outpatients with high somatic symptom severity (SOM+) differ from patients with low somatic symptom severity (SOM−) regarding illness perception, illness behavior, emotional distress, quality of life and number of doctor visits; (b) evaluating which of these differences may serve as the strongest predictor variables of high somatic symptom severity; and (c) quantifying the performance of the identified model.

2. Methods

2.1. Study design, setting and subjects

We performed a multicenter, cross-sectional study at four large Chinese outpatient departments, two of which were in Beijing and two were in Kunming (the capital and largest city in the Yunnan Province in Southwest China). In Beijing, patients were recruited from the outpatient department of internal medicine at the Union Hospital and from the TCM clinic of the Shi Ji Tan Hospital. In Kunming, patients were recruited from the outpatient department of internal medicine and the TCM clinic of the Red Cross Hospital. The study center at the University Medical Centre Freiburg stored all of the data, regularly monitored all project sites and analyzed the data. The study was approved by the ethics committee of the University Medical Center Freiburg. The data were collected by two research assistants (C.H. and F.S.) between August 1 and October 10, 2009. On randomly assigned screening days, all patients entering their respective outpatient departments were informed of the study via an informational handout and were asked to participate. Subsequently, written informed consent was obtained from all participants. The exclusion criteria included having a language barrier and possessing limited writing skills. Participating patients answered the questionnaires by themselves in the waiting room and then returned them to the research assistants. Patients spent an average of 15 min filling out the questionnaires and received a financial allowance of 10 Yuan (approximately 1.10 €) for their participation.

2.2. Assessment instruments

2.2.1. Patient Health Questionnaire (PHQ-15), a 15-item somatic symptom severity scale [6,29]

The PHQ-15 includes the 15 most prevalent somatic symptoms or symptom clusters that account for more than 90% of the symptoms seen in primary care [6]. The patients are asked to rate how much they have been bothered by each symptom during the previous 4 weeks on a 3-point Likert scale as 0 ("*not bothered at all*"), 1 ("*bothered a little/a few days*") or 2 ("*bothered a lot/more than half the days*"). To determine symptom frequencies, the PHQ-15 scalings were dichotomized to "*bothered by the symptom*" — yes (PHQ-15 scalings 1 or 2) or no (PHQ-15 scaling 0). The total PHQ-15 score ranges from 0 to 30 and represents the grading of somatic symptom severity from minimal (0–4), mild (5–9), moderate (10–14) to severe (15–30). When used to predict the diagnosis of a somatoform disorder, a cutoff of 10 points on the PHQ-15 was previously identified as optimal, as this score results in a sensitivity of 80.2% and specificity of 58.5% [13]. A recent study from Hong Kong [30] showed that the Chinese PHQ-15 exhibits satisfactory reliability and preliminary evidence of validity in a general population. The Chinese PHQ-15 exhibited good internal consistency (Cronbach's α=.79) and stable 1-month test–retest reliability comparable to Western studies [31].

2.2.2. The Brief Illness Perception Questionnaire (Brief-IPQ) [32]

The Brief-IPQ is an eight-item measure that was designed to provide a rapid assessment of a patient's cognitive and emotional representations of illness. Each item assesses one dimension of illness perception: consequences ("*How much does your illness affect your life?*"), timeline ("*How long do you think your illness will continue?*"), personal control ("*How much control do you feel you have over your illness?*"), treatment control ("*How much do you think any treatment can help your illness?*"), identity ("*How much do you experience symptoms from your illness?*"), illness concern ("*How concerned are you about your illness?*"), understanding ("*How well do you feel you understand your illness?*") and emotional response ("*How much does your illness affect you emotionally?*"). All items are scored on 11-point Likert scales ranging from 0 ("*strongly disagree*") to 10 ("*strongly agree*"). The Brief-IPQ total score ranges between 0 and 80 points, with high scores representing a more threatening and negative illness perception. The Brief-IPQ has good test–retest reliability and concurrent validity with related measures [32]. The revised version of the IPQ has been shown to be a reliable and valid instrument for the measurement of illness perceptions in Chinese patients with hypertension [33]. Internal consistency was supported by adequate Cronbach's alpha values (ranging from .67 to .87) and composite reliability (.57 to .88).

2.2.3. Scale for the Assessment of Illness Behavior (SAIB)

The SAIB is a measure of various illness behaviors and consists of 26 items on the following 5 subscales: (a) diagnosis verification (5 items, e.g., "*I have a specialist confirm a diagnosis given by my GP*"), (b) expression of symptoms (6 items, e.g., "*Everybody can see when I am suffering*"), (c) medication/treatment (5 items, e.g., "*I always have the most important medicines at home*"), (d) illness consequences (5 items, e.g., "*I am not able to concentrate on my work when suffering from physical complaints*") and (e) body scanning (4 items, e.g., "*I pay a lot of attention to the different processes going on within my body*"). The SAIB items are scored on 4-point Likert scales, which are scored from