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The association between somatization and disability in primary care patients

G. van der Leeuw [a,b,*], M.J. Gerrits [c,d], B. Terluin [d], M.E. Numans [e], C.M. van der Feltz-Cornelis [f,g], H.E. van der Horst [d], B.W.J.H. Penninx [c], H.W.J. van Marwijk [d,h,**]

[a] Faculty of Medicine of the University of Utrecht, Utrecht, The Netherlands
[b] College of Nursing and Health Sciences, University of Massachusetts Boston, Boston, MA, USA
[c] Department of Psychiatry, EMGO Institute for Health and Care Research, VU University Medical Center and Academic Outpatient Clinic for Affective Disorders, GGZ in Geest, Amsterdam, The Netherlands
[d] Department of General Practice and Elderly Care Medicine, EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, The Netherlands
[e] Department Public Health and Primary Care, Leiden University Medical Center, The Netherlands
[f] Tranzo Department, Faculty of Social Sciences of the University of Tilburg, Tilburg, The Netherlands
[g] Topclinical Center for Body, Mind and Health, Tilburg, The Netherlands
[h] Centre for Primary Care, Institute of Population Health, University of Manchester, United Kingdom

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ABSTRACT

Background: Patient encounters for medically unexplained physical symptoms are common in primary health care. Somatization ('experiencing and reporting unexplained somatic symptoms') may indicate concurrent or future disability but this may also partly be caused by psychiatric disorders. The aim of this study was to examine the cross-sectional and longitudinal association between somatization and disability in primary care patients with and without anxiety or depressive disorder.

Methods: Data were obtained from 1545 primary care patients, participating in the longitudinal Netherlands Study of Depression and Anxiety (NESDA). Somatization was assessed using the somatization scale of the Four-Dimensional Symptom Questionnaire (4DSQ). Disability was determined by the WHO Disability Assessment Schedule 2.0 (WHO-DAS II). The relationships between somatization and both the total and subdomain scores of the WHO-DAS II were measured cross-sectionally and longitudinally after one year of follow-up using linear regression analysis. We examined whether anxiety or depressive disorder exerted a modifying effect on the somatization-disability association.

Results: Cross-sectionally and longitudinally, somatization was significantly associated with disability. Somatization accounted cross-sectionally for 41.8% of the variance in WHO-DAS disability and, longitudinally, for 31.7% of the variance in disability after one year of follow-up. The unique contribution of somatization to disability decreased to 16.7% cross-sectionally and 15.7% longitudinally, when anxiety and/or depressive disorder was added to the model.

Conclusion: Somatization contributes to the presence of disability in primary care patients, even when the effects of baseline demographic and health characteristics and anxiety or depressive disorder are taken into account.

Introduction

In primary care patients, somatization is a common problem. A substantial amount of patient encounters in primary care concern medically unexplained physical symptoms, leading to frequent consultations and high overall health care costs [1]. Part of the patients with MUS fulfill the criteria for somatization, or a somatoform disorder. Several definitions and operationalizations of somatization have been proposed, frequently including 'the expression of psychological illness through physical symptoms' [2] as well as 'repeated medical help-seeking for multiple medical symptoms without organic disease' [3]. The presence of medically unexplained physical symptoms is a key feature of somatoform disorders [4]. In a systematic review about the prevalence and disability burden of mental and neurological disorders in the European Union, a 12-month prevalence of somatoform disorders of 6.3% was found [5]. Other studies reported a prevalence of undifferentiated somatoform disorders varying from 8.6% up to 25.6% in primary care patients [6–9]. Somatoform disorders include somatization disorder and undifferentiated somatoform disorders [4].

* Correspondence to: G. van der Leeuw, Faculty of Medicine of the University of Utrecht, Utrecht, The Netherlands.
** Correspondence to: H.W.J. van Marwijk, Centre for Primary Care, Institute of Population Health, University of Manchester, Williamson Building, Oxford Road, Manchester M13 9PL, United Kingdom.
E-mail addresses: Guusje.leeuw@umb.edu (G. van der Leeuw), harm.vanmarwijk@manchester.ac.uk (H.W.J. van Marwijk).

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Somatization has been found to be related to disability in several cross-sectional studies [10–12]. The World Health Organization describes disability as 'any restriction or lack of capacity to perform an activity in a manner or within a range considered normal for a human being' [13]. The presence of five or more medically unexplained symptoms is associated with greater social disability compared to five symptoms with a medical explanation [14]. Patients with long-lasting somatization have more disability and higher sick leave than non-somatizers [12]. Up to 30% do not recover or even get worse, indicating a poor prognosis for a substantial group [15]. High levels of somatic symptom severity contribute to reduced health-related functioning [16,17], even after adjustment for psychiatric and medical co-morbidity [1,18].

The link with anxiety and depression has been mentioned often and the term cosyndromality has been suggested for the concurrent occurrence of somatic, anxiety and depressive symptoms [19]. In primary care, somatizing patients often have comorbid anxiety or depressive disorders [20]. Three quarters of somatizing patients for whom psychiatric consultation was requested by a general practitioner (GP) in a consultation trial, turned out to have undetected depression or anxiety disorder [21]. De Waal and colleagues found that 50% of the primary care patients with an anxiety and/or depressive disorder also had a comorbid somatoform disorder [22]. This suggests that this combination of symptoms and syndromes poses a clinical challenge for the GP.

However, most of this research was cross-sectional and it has rarely been explored if somatization in itself leads to long-term disability, or whether concurrent ill mental health, especially anxiety and depressive disorder, is responsible for the somatization–disability connection. Previous studies that investigated the association between somatization and disability in primary care patients identified psychiatric morbidity as a potential confounder of this relationship [18], but no studies were performed with a longitudinal design. However, if such an association would exist, this could have far-reaching clinical consequences. Perhaps patients who are somatizing with comorbid psychiatric disorders show more disability compared to people with only somatization or psychiatric disorder. That would indicate that they should at least receive treatment both for the psychiatric problems and for the somatic symptoms.

The aim of our study was, therefore, to investigate the effect of somatization on disability in primary care patients, both cross-sectionally, and during longer follow-up. We addressed the following research questions: 1) Is somatization cross-sectionally and/or longitudinally associated with disability over the course of a year in primary care patients?; and 2) if that is the case, is this association the same in patients with and without depressive or anxiety disorder (i.e., is the association modified by depressive or anxiety disorder)?

Methods

Design

We carried out an observational study with both cross-sectional and longitudinal analyses after one year of follow-up in primary care patients.

Participants and procedure

Data were obtained from the Netherlands Study of Depression and Anxiety (NESDA), a multicenter cohort study including a representative sample of participants aged 18 through 65 years old. Participants were recruited from the general population, primary care and secondary mental health care. Multidimensional information was collected through interviews, self-report questionnaires and various tests. A detailed description of the objectives and methods of the NESDA study has been published elsewhere [23].

For the current study, we selected the subsample of primary care patients being a stratified sample of consecutive primary care attendees. Participants who did not complete the questionnaires used in this study or who had too many missing values (see below) were excluded.

For the longitudinal analyses, the same sample was used as for the cross-sectional analyses with the exclusion of the participants who had too many missing values, and therefore could not be imputed, on the WHODAS at one year of follow-up.

Measures

Somatization

Somatization was measured with the 16-item Somatization scale of the Four-Dimensional Symptom Questionnaire (4DSQ), as it is a valid questionnaire to measure somatization in the primary care setting [24]. The questionnaire is designed to assess common psychological symptoms in primary care. It contains a continuous scale with a range from 0 to 32. Experiencing many symptoms from different organ systems (e.g. dizziness and upset stomach and palpitations and muscular aches) implies somatization [25]. In patients presenting with (medically unexplained) physical symptoms, scores on the 4DSQ-somatization scale are significantly associated with general practitioners' suspicions of psychosocial factors playing a role in the presentation of these symptoms. [24] The 4DSQ-somatization questionnaire was used as a continuous scale (range 0–32).

Disability

Disability was measured using the self-report World Health Organization Disability Assessment Schedule 2.0 (WHO-DAS II) [26]. This instrument was created in 1998 and can be used as a common, international, and interdisciplinary instrument to measure disability. The scale contains 36 items on functioning and disability, covering six domains of functioning during the last 30 days: 1. Understanding and communicating with the world (cognition); 2. Moving and getting around (mobility); 3. Hygiene, dressing, eating, and staying alone (self-care); 4. Getting along with people (interpersonal interactions); 5. Work, leisure, domestic responsibilities (life activities); 6. Joining in community activities (participation in society) [26]. There is a fair correlation between the domains of the WHO-DAS scales and similar domains in other equivalent instruments, such as the SF-12, SF-36, the WHO Quality of life scale and the London Handicap Scale [27].

Scores were calculated for the separate domains and all domains combined. Subsequently, the scores were transformed into scores on a scale from 0 to 100, where higher scores reflect greater disability.

Depressive and anxiety disorder

Baseline diagnoses of anxiety and depressive disorder were based on the Composite International Diagnostic Interview (CIDI, version 2.1), according to the DSM-IV criteria. The CIDI is a robust diagnostic tool with good reliability and validity [28]. We used current disorders (i.e., occurring within the past month). Depressive disorders included Major Depressive Disorder and Dysthymia, and anxiety disorders included Generalized Anxiety Disorder, Panic Disorder with Agoraphobia, Panic Disorder without Agoraphobia, Social Phobia and/or Agoraphobia. For the analyses we defined depression–anxiety status as a nominal variable with 4 categories: no anxiety or depressive disorder, anxiety disorder only, depressive disorder only, and comorbid anxiety with depressive disorder.

Background variables

Based on the literature, the following independent variables were considered as potential confounders of the relationship between somatization and disability: gender, age, marital status, education level, the number of chronic somatic diseases and depressive and anxiety disorders.