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Chapter

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*Management strategies by
the internist for patients with
functional somatic symptoms as
compared to patients with internal
disorders*

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Submitted

Abstract

Objective: Multidisciplinary treatment strategies are generally advocated for the management of patients with functional somatic symptoms (FSS). The objective of this study was to assess mental health care use and management strategies given by specialists in internal medicine for patients with FSS referred to an outpatient clinic for internal medicine compared to patients with explained somatic symptoms (ESS).

Methods: A consecutive case series study of 325 patients referred to the outpatient clinic for internal medicine of the University Medical Center Groningen between 21-12-2005 and 11-05-2006. Based on the final diagnosis of the internist patients were classified as having a FSS (n=180) or ESS (n=145). Both patient groups were compared regarding the management strategies proposed in the return letter to the general practitioner as well as mental healthcare consumption two year prior to referral up to seven years thereafter by linking patients to the Psychiatric Case Registry of the Northern Netherlands (PCRNN).

Results: FSS (n=180) was more often diagnosed than ESS (n=145). Based on the return letter to the GP, internists more often proposed education and less often medication and lifestyle advices to patients with FSS compared to patients with ESS. GP's hardly mentioned psychiatric comorbidity in the referral letters, and only a small minority (6.1%) of patients with FSS were referred to mental health care by internists. Remarkably, case registry data showed almost no difference in mental health care contacts between both patient groups.

Conclusion: Potential substantive management strategies and potentially relevant referrals for patients with FSS were hardly advocated. The high proportion of patients with FSS and overall psychiatric comorbidity rate for patients with either FSS or ESS argue for better collaboration between health care sectors and echelons, as advocated by so-called integrated care and 'network medicine' models.

Introduction

In specialized health care settings, like an outpatient clinic for internal medicine, between 25 and 65% of the patients present with symptoms which remain unexplained by an objectively defined medical disease¹⁻³. Patients with these so-called functional somatic symptoms (FSS) are not only suffering from their ailments, but also from not knowing what's going on in their bodies. FSS do affect quality of life of people to the same extent as chronic well-defined medical disorders⁴ and indirect medical costs due to sick leave and reduced employment rates are like those of patients with explained somatic symptoms (ESS)⁵. Direct medical costs of patients with FSS, however, approximately double those of patients with ESS⁶.

Although the etiology of FSS is unclear, consensus exists that biological, psychological and social factors interact in the development of FSS⁷⁻⁹. While many studies have focused on identification of predisposing and precipitating factors, more recent studies suggest that perpetuating factors may have a central role in the etiology of FSS⁹. Nonetheless, diagnosis and management of FSS can both be facilitated by a multidisciplinary approach in which medical and psychotherapeutic interventions are integrated¹⁰. Such a multidisciplinary approach may also be relevant for treatment of comorbid psychiatric disorders. This is relevant as FSS are accompanied by high rates of anxiety and depression¹¹ and personality dysfunction has been hypothesized to be the clinically salient underlying problem¹².

Despite the recommendation of a multidisciplinary approach integrating somatic and mental health care for patients with FSS, the role general internists take within the professional network and multidisciplinary strategies for patients with FSS is rather unexplored. More specifically, to what extent referral to an internal medicine department is part of a multidisciplinary strategy as well as vice versa, to what extent internists advise and stimulate (parallel) treatment in a mental health care setting is unknown.

The present study was set up to assess the internist management strategies for patients with FSS in comparison to patients with ESS. In addition, the use of mental health care before and after referral was examined for both patient groups, to assess whether a consultation of the internist stimulates an increase in mental health care use for patients with FSS, again compared to patients with ESS.

Methods

Study design and population

A consecutive sample of 470 patients referred to our outpatient clinic for internal medicine of the University Medical Center Groningen by their general practitioner (GP) between 21-12-2005 and 11-05-2006, as described previously¹⁻³. Patients were classified as either having FSS or ESS based on the internists' return letters written to the GP after the conclusion of their regular diagnostic work. Being a secondary analysis of this sample, all GPs and internists were unaware of the study objectives.

We excluded 155 patients in the following order, i.e. 35 patients referred for reasons other than somatic symptoms (such as abnormal findings or questions regarding family history), 29 patients with missing data on the final diagnosis, 38 patients for whom the internist described FSS as a final diagnosis but explicitly indicated that they did not to exclude a somatic cause for the symptoms, 19 patients with diagnoses outside the field of internal medicine, and 24 no-shows, which left a final study population of 325 patients.

The entire study population was linked with the Psychiatric Case Registry of the Northern Netherlands (PCRNN) by a trusted third party. Patients' privacy was ensured as the new database describes only fully anonymized patient characteristics. We included PCRNN data from two year prior to referral up to seven years follow-up. Follow-up was restricted at 2013 when a new, market related mental healthcare system was introduced threatening the completeness of the PCRNN case registry. Up till 2013, around 80% of the secondary mental healthcare consumption and psychiatric diagnoses in the public sector in the northern region of the Netherlands was covered by the PCRNN. As almost all patients referred to our outpatient clinic reside in this region, the dataset covers roughly the same population¹³.

Data extraction

Medical records - Medical records were used to classify symptoms in either FSS or ESS as well as to extract the management strategies, age and sex. The diagnosis of FSS or ESS was based on the return letter of the general internist to the GP, as extracted independently by two higher grade medical students. To ensure that all diagnoses were categorized in duplicate, a third medical student independently scored all diagnoses again. In cases of disagreement, a psychiatrist specialized in somatoform disorders (JG) made the final decision¹. The management strategies set by the internist were extracted from the same return letters. Based on the authors' experience as clinicians, and the literature manage-

ment strategies were classified as 1) medication, 2) watchful waiting, 3) lifestyle advice, 4) education, 5) other advices, and finally 6) no advices at all. Additional medical investigations by the internist were not added as a management strategy, because they were part of the diagnostic work up of the internist. Of note, return letters could have more than one management strategy. In addition, referrals to other (medical and non-medical) professionals^{14,15} were assessed regarding our interest in the multidisciplinary approach. Referrals were subcategorized into 1) mental health care, 2) explicit return of care to the GP (often accompanied by advised substantive strategies), 3) follow up by general internist, 4) consultation of other somatic specialist, 5) referral to paramedical professionals (such as a physiotherapist or dietician), and finally 6) no referral. In case of no referral, the GP will be responsible for care of these patients. Therefore, this latter category was labelled “Implicit return of care to the GP”.

Mental health care – Mental health care data were extracted from the GP referral letters as well as the PCRNN linkage. First, we extracted the presence of psychiatric comorbidity from the GP referral letters, which was defined as either history of a psychiatric diagnosis or a current pharmacological treatment for psychiatric problems. Secondly, from the PCRNN we extracted the psychiatric diagnosis according to DSM-IV criteria as well as mental health care consumption. Psychiatric disorders were classified as having either a mood disorder, an anxiety disorder, a somatoform disorder, an adjustment disorder, substance abuse or dependence, schizophrenia or other psychotic disorder, personality disorders, psychosocial or family problem, and/or other psychiatric disorders.

Mental health care consumption was extracted from two years before referral up to seven years thereafter. This latter period was a priori divided in three periods, i.e. one year after referral, within one through three years after referral and within three up to seven years after referral. In addition, cases present in the PCRNN were categorized according to complexity, i.e. having only one psychiatric diagnosis versus having more than one psychiatric diagnosis.

Statistical analyses

Demographic characteristics, management strategies, mental health contacts and psychiatric diagnoses were compared between patients with FSS and patients with ESS and tested by Chi2-tests in case of categorical variables and Students t-tests in case of (normally distributed) continuous variables. All analyses were performed using SPSS 24 and considered statistically significant at the 5% level.

Results

Population characteristics and mental health care use

Of the 325 included patients, 180 (55.4%) patients were classified as having an FSS and 145 (44.6%) as having an ESS. The proportion of women did not differ between patients with FSS (63.9 %) and patients with ESS (64.4%). Patients with FSS were significantly younger than patients with ESS (mean (SD) age = 43.1 (16.3) versus 53.1 (19.6) years; $t=4.9$ $df=279$, $p<.001$).

Management strategies general internist

Table 1 presents all proposed management strategies by the internist. Numbers do not add to 100% as more than one management strategy per patient could be reported. Compared to patients with ESS, patients with FSS received significantly more often education about their symptoms and significantly less often medication or lifestyle advice by the internist.

Table 1 Reported management strategies in return letter of general internist.

Management strategies*	Patients with FSS (N=180)	Patients with ESS (N=145)	Statistics
<i>Substantive strategies, n (%):</i>			
Watchful waiting	26 (14.4)	15 (10.3)	Chi ² =1.2, df=1, p=.269
Medication	37 (20.6)	71 (49.0)	Chi ² =29.2, df=1, p<.001
Lifestyle advice	25 (13.9)	33 (22.8)	Chi ² =4.3, df=1, p=.038
Education	42 (23.3)	15 (10.3)	Chi ² =9.4, df=1, p=.002
Other advice	9 (5.0)	5 (3.4)	Chi ² =0.5, df=1, p=.493
No treatment advice	69 (38.3)	43 (29.7)	Chi ² =2.7, df=1, p=.102
<i>Referral to other professionals, n (%):</i>			
Mental health care	11 (6.1)	1 (0.7)	Chi ² =6.6, df=1, p=.010
Explicit return of care to the GP	39 (21.7)	27 (18.6)	Chi ² =0.5, df=1, p=.497
Follow up by the internist	34 (18.9)	60 (41.4)	Chi ² =19.8, df=1, p<.001
Other somatic medical specialist	19 (10.6)	45 (31.0)	Chi ² =21.3, df=1, p<.001
Paramedical specialist	7 (3.9)	3 (2.1)	Chi ² =0.9, df=1, p=.345
No referral (implicit return to the GP)	87 (48.3)	35 (24.1)	Chi ² =20.1, df=1, p<.001
* More than one treatment or referral option could be reported.			
Abbreviations: FSS, Functional Somatic Symptoms; ESS, Explained Somatic symptoms			

Regarding the referral strategies, patients with FSS were significantly more often referred to mental health care compared to patients with ESS, albeit the actual referral rate was rather low (6.1%). Furthermore, patients with FSS were significantly less often followed-up

by the internist or referred to another somatic specialist. Interestingly, almost half of the patients with FSS were not referred at all (in other words, the internist did not specifically ask the GP to continue care for these specific symptoms). The same referral strategy only applied to a quarter of the patients with ESS.

Psychiatric treatment and comorbidity

The GP's referral letter disclosed the presence of psychiatric comorbidity in 39/179 (21.8%) patients with FSS and in 7/144 (4.9 %) patients with ESS (Chi²=18.7, df=1, p<.001; for two patients this data was missing). Psychiatric comorbidity was rarely explicitly mentioned and merely inferred from the use of psychotropic drugs.

Overall, 92/325 (28.3%) patients had had contact with one of the specialised public mental health care organisations covered by the PCRNN between two years before referral until seven years thereafter. Of these patients, 62/180 (34.4%) patients had FSS and 30/145 (20.7%) ESS (Chi²=7.5, df=1, p=.006). Mental health care use in the two years prior to referral did not significantly differ between patients with FSS and ESS. As shown in table 2, the proportion of patients with FSS receiving mental health care in the years before, during and after the consultation remained relatively stable (range 11.1 – 14.4%), whereas among patients with ESS we observed a drop from 11.0 to 5.5% in the first year after referral and a return to 11.0% more than three years after referral.

Table 2 Mental health care contacts before and after referral to the general internist according to the psychiatric case register (PCRNN).

Mental health care contacts	Patients with FSS (N=180)	Patients with ESS (N=145)	Statistics
<i>Any contact by time window:</i>			
Within two years before referral, n (%)	23 (12.8)	16 (11.0)	Chi ² =0.2, df=1, p=.631
Within one year after referral, n (%)	26 (14.4)	8 (5.5)	Chi ² =6.8, df=1, p=.009
Within 1-3 years after referral, n (%)	24 (13.3)	13 (9.0)	Chi ² =1.5, df=1, p=.218
More than three years after referral, n (%)	20 (11.1)	16 (11.0)	Chi ² <0.1, df=1, p=.983
<i>New contacts after referral:</i>			
New first contact after referral, n (%)	20 (11.1)	8 (5.5)	Chi ² =3.2, df=1, p=.074

Abbreviations: FSS, Functional Somatic Symptoms; ESS, Explained Somatic symptoms.

First new contacts within mental health care after the date of the GP referral letter did not significantly differ between patients with FSS and ESS. Of the 11 patients with FSS referred for mental health care (see table 1), six were registered in the PCRNN after referral whereas five of them were already known in the mental health care system according to the PCRNN.

For 65 of 92 retrieved patients in the PCRNN, a psychiatric diagnosis was disclosed. As shown in table 3, the most common psychiatric diagnoses for patients were affective disorders, being either a mood, anxiety and/or adjustment disorder. The most common psychiatric disorders present in patients with ESS were personality disorders and “other” psychiatric disorders. The proportion of patients with multiple psychiatric disorders did not differ between patients with FSS and ESS (12/43 (27.9%) versus 9/22 (40.9%); $\chi^2=1.1$, $df=1$, $p=.289$).

Table 3 Diagnoses (DSM-IV) of patients known within the psychiatric case register (PCRNN)

Diagnoses (DSM-IV), n (%)	Patients with FSS (n=43)	Patients with ESS (n=22)
Mood disorder	10 (23.3)	5 (22.7)
Anxiety or dissociative disorder	14 (32.6)	1 (4.5)
Somatoform disorder	2 (4.7)	1 (4.5)
Adjustment disorder	9 (20.9)	5 (22.7)
Substance abuse or dependence	2 (4.7)	2 (9.1)
Schizophrenia or other psychotic disorders	1 (2.3)	0 (0.0)
Personality disorders	8 (18.6)	7 (31.8)
Psychosocial or family problems	8 (18.6)	2 (9.1)
Other psychiatric disorders	7 (16.3)	9 (40.9)

** More than one diagnosis could be reported.
Abbreviations: FSS, Functional Somatic Symptoms; ESS, Explained Somatic symptoms*

Discussion

In a consecutive sample of 470 patients referred by the GP to an outpatient clinic for internal medicine, we found that FSS is more often diagnosed than ESS. According to their return letter to the GP, internists propose different management strategies for patients with FSS compared to patients with ESS. Roughly one in five patients with FSS receives medication or education by the internist, as well as one in five were followed-up by the internist or explicitly returned to the GP for further treatment. Nonetheless, about 4 in 10 patients did not receive any treatment advice and about 1 in 2 patients were not referred for further care at all. Only a small proportion of patients with FSS (11/180) was referred to mental health care services of whom only one was a new patient according to the PCRNN. Interestingly, medical health care consumption of patients diagnosed with FSS did not

differ from that of patients with ESS, except for the first year after referral in which a drop in mental health care consumption was found for patients with ESS.

Strengths and limitations

To the best of our knowledge this is the first study to investigate the proposed management strategies for patients with FSS by internists. A strength of this study is the use of naturalistic data directly from electronic medical records of a consecutive case series of patients referred to a general outpatient clinical for internal medicine without any selection within a specific period. Linking these data to the PCRNN that covers nearly the whole catchment area of our hospital and registers around 80% of the secondary mental healthcare consumption gives a representative view on the use of specialised mental health care of patients with either FSS or ESS. Using naturalistic data brings ecological validity to the research as it is free from various kinds of bias such as selection, recall or participant bias. This study has also limitations. First, we have no complete information on how many patients have received psychiatric treatment in primary care. Even more remarkable is the underreporting of psychiatric co-morbidity by the GPs in their referral letters, especially for patients diagnosed with ESS. A likely explanation for the underreporting of psychiatric comorbidity in the referral letters might be that GPs do not want to disturb patients (as patients can read their referral letter) and/or influence the general internists in their diagnostic process. It is possible that psychiatric information in the GP referral letter may unintentionally push the internist towards a diagnosis of FSS. Second, the reported management strategies don't have to correspond completely with the strategies mentioned in the conversation with the patient. Besides, they are written down in a summary.

Comparison to the literature

Several explanations can be put forward for why internists confined themselves mainly to diagnostics in case of patients with FSS. One explanation may be that internists comply with the request of the GP to rule out any somatic explanation. GPs sometimes choose for a referral to an internist as part of a "following various paths approach"; for reassurance or as a negotiating asset for a referral to mental health services¹⁶. However, only in 15% of the 470 referral letters, GPs requested explicitly for ruling out somatic diseases. Remarkably, this request was less often found in referral letters of patients with FSS compared to those of patients with ESS. Another explanation may be the internist's attitude towards patients with FSS. A recent study conducted in the same hospital as our study described the internists' dilemmas in the interaction with patients with FSS. The internists described their

behaviour towards patients with FSS as more distancing and controlling with a tendency to draw on their medical expertise¹⁷. This was also reflected in our study by the management strategies they wrote in the return letters, with as most frequent strategies no referral or explicitly returning to care of the GP and offering no treatment at all. Albeit education was only proposed for a quarter of the patients with FSS, this proportion was significantly more compared to patients with ESS. As internists are specialised in ESS, we would expect that they provide more education about the diagnosis within their own speciality. Perhaps education for ESS is so obviously for them that they do not always mention this in their return letter to the GP. However, they might feel that education is the only strategy they have to offer patients with FSS and therefore explicitly mention this option in their return letter. A missed opportunity as current treatment guidelines generally advocate multidisciplinary or integrated care¹⁰ and patients with FSS should also be supported in their illness by somatic specialists. For example, lifestyle advice is less often provided by internists to patients with FSS than to patients with ESS and referral to mental health care or referral to psychosomatic physiotherapy is rarely advocated.

Interestingly, we found no difference in the use of secondary mental health services in the two years before referral between patients with FSS and patients with ESS. There is a widespread notion that FSS is associated with psychopathology. When compared with healthy individuals, patients with FSS show indeed higher levels of mental health problems¹⁸. Recent research shows that not only in a community setting, but also in the general population patients with ESS score equally or almost equally high for depression and anxiety as FSS patients^{19,20}. In line with this research is the lack of difference in mental health care use between both patient groups prior to and during follow-up in our study. Having physical symptoms in general seems to be associated with psychiatric co-morbidity¹⁹. Therefore, the relationship between FSS and psychopathology may be less exclusive than assumed and may be merely a product of selective attention. The drop of ESS patients in the mental health care services during the first year of the referral might be due to focus of patient's attention on the management of their medical disorder.

Implications for practice and future research

Because more than the half of the patients in the outpatient clinic of general internal medicine suffer from FSS, and these patients form in number the “core business” of general internists, future studies should explore which management and interaction strategies have the potential to improve care for patients with FSS in internal medicine. Further, internists should not only be alert to psychopathology of patients with FSS, but also of patients with ESS. Because patients with FSS and patients with ESS differ less than expected, effective strategies for FSS in internal medicine can enhance satisfaction and outcomes of the medical consultation for all patients and internists. These findings collectively argue for ‘so-called’ network medicine, as recently advocated by the Royal Dutch Medical Association in order to stimulate collaboration between health care sectors and echelons to better meet patient needs²⁰.

