

Somatisation disorder in primary care

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Background Somatisation is a common and frustrating clinical problem in primary care.

Method Using structural diagnoses and functional measures, we examined the prevalence and associated features of somatisation disorder defined by three current nosologies and an abridged construct in subjects using primary care services.

Results Somatisation disorder, diagnosed according to the standard criteria, was found to have a very low prevalence (range 0.06–0.5%), while more than one-fifth of the sample (22%) met the criteria for the abridged diagnosis. There was poor agreement between succeeding versions of the DSM system for identifying cases of somatisation disorder, each system ending up with rather disparate sets of individuals as well as variable levels of psychopathology and disability.

Conclusions According to these data, standard somatisation disorder diagnoses add little to the prediction of disability/psychopathology beyond the contributions of an abridged construct of somatisation.

Patients presenting with physical symptoms that remain medically unexplained are a common and frustrating occurrence in primary care settings (Smith *et al*, 1990). Systems for classifying these 'functional' somatic syndromes remain unsatisfactory, each speciality coining labels that fit a narrow view of phenomena but fail to transcend speciality boundaries, thus making clinical communication difficult.

EVOLUTION OF DIAGNOSTIC CRITERIA

While the European criteria for somatisation (Goldberg & Bridges, 1988) requires that patients with unexplained symptoms also meet criteria for a psychiatric disorder, the North American criteria do not clearly define this point, and in the presence of comorbid conditions, somatisation tends to be relegated to a secondary level.

Naturalistic studies in North America validated an extreme form of the syndrome designated as hysteria, Briquet syndrome and more recently, somatisation disorder (Purtell *et al*, 1951; Feighner *et al*, 1972; Goodwin & Guze, 1996). Somatisation disorder is a chronic, disabling syndrome that, while presenting a physical facade, is associated with significant psychopathology. People with this condition tend to seek care in general medicine or speciality medical settings in lieu of mental health services (Escobar *et al*, 1987; Swartz *et al*, 1990). According to previous studies, somatisation disorder was a rare diagnosis in the general population (Swartz *et al*, 1990) but seemed more frequent in primary care settings (Escobar *et al*, 1989a; Katon *et al*, 1991; Gureje *et al*, 1997).

The evolution of the somatisation disorder diagnosis in North America shows that the thresholds for designing a case are arbitrarily set in succeeding nomenclatures, either inflating or deflating the criteria

according to committee recommendations that are not always data based. For example, in the original criteria of the Washington University group (Feighner *et al*, 1972), 25 symptoms from a list of 59 possible symptoms (including depressive and psychotic items) were required in addition to attitudinal features (dramatic, vague or complicated medical history). DSM-III (American Psychiatric Association, 1980) made of the somatisation disorder diagnosis a simple count of somatic symptoms setting the threshold at 14 symptoms for males and 16 for females out of a list of 37 symptoms. DSM-III-R (American Psychiatric Association, 1987) further decreased the symptom count to 13, a flat threshold for both genders. DSM-IV (American Psychiatric Association, 1994) continued the downward trend decreasing the overall number of symptoms to eight, but requiring that symptoms come from four designated organ systems. However, what seem slight changes in the criteria may have profound repercussions on who ends up being designated as having somatisation disorder.

Our clinical and research observations (Escobar *et al*, 1987) had suggested that somatisation was part of a continuum of high levels of medically unexplained symptoms with somatisation disorder placed at the extreme of the severity spectrum. Using the medically unexplained symptom as the unit of the system, we propose an abridged construct of somatisation and demonstrate that lowering the threshold to four and six symptoms increases the detection level 100-fold while maintaining a good degree of prognostication (use of services, disability, coexistent psychopathology; Escobar *et al*, 1987). The abridged concept has been particularly useful for studying somatisation in primary care settings (Katon *et al*, 1991; Sullivan *et al*, 1993; Smith *et al*, 1995; Gureje *et al*, 1997; Escobar, 1997).

Given the frequent changes in the criteria and taking advantage of current diagnostic instruments' ability to elicit the criteria for the various diagnoses, we set out to examine the prevalence, equivalence, correlates and predictive value of somatisation disorder diagnosed according to three standard systems (DSM-III-R, DSM-IV, ICD-10; World Health Organization, 1992) and those of an abridged construct of somatisation in a large sample of primary care service users.

METHOD

New, consecutive out-patients seeking medical services at a community-based, university-affiliated clinic in southern California were approached for study participation by a research assistant while checking in for services. Eligibility for participation in the study was determined through a brief screening process that identified ethnic background and immigration status in order to recruit subjects from any of the groups of interest (US-born Latino and US-born White people as well as immigrants from Mexico and Central America) in about equal numbers. Fifty per cent of those approached ($n=1456$) agreed to participate in the research interview that took place in temporal proximity with their clinical examination by a physician, following completion of informed consent procedures. No significant demographic differences were found between those who opted for participation compared with those who did not, except for level of education (participants had on the average one more year of education than non-participants).

Measures

Assessment of psychopathology was made with the Composite International Diagnostic Interview (CIDI; Robins *et al.*, 1988). Diagnoses assessed in this study were somatisation disorder, hypochondriasis, generalised anxiety, panic, simple phobia, dysthymia and major depression, including melancholic subtype. In addition the physical functioning dimension of the RAND Short Form Health Survey (SF-36; Brook *et al.*, 1979) was used as a measure of disability. All instruments were translated, pre-tested and adapted for use in the Latino population. Bilingual (Spanish/English) research interviewers were trained in the use of the CIDI, adhering to the official CIDI training guidelines as carried out at the US training site located in the Department of Psychiatry, at Washington University in St Louis.

CIDI somatisation disorders section

The CIDI has 41 items that elicit somatisation symptoms. Forty of these items scrutinise specific physical symptoms and the remaining one, inquires about being 'sickly most of the lifetime'. These symptoms can be grouped into eight organ/body clusters, namely pseudoneurologic,

gastro-intestinal, musculo-skeletal, genito-urinary, female-reproductive, cardio-respiratory, headache and other pain, and skin symptoms.

The structure of the CIDI allows the scoring of symptoms as being present if they met severity criteria and remained medically unexplained after detailed probing.

DSM-IV somatisation disorder

For diagnosing somatisation disorder, DSM-IV criteria require the presence of at least eight medically unexplained physical symptoms starting before the age of 30 years. A further requirement is that symptoms should come from at least four different symptom groups (four pain, two gastrointestinal, one pseudoneurologic and one sexual symptom). All of these can be derived from responses to CIDI items covering those body areas. However, the sexual symptoms elicited in CIDI's physical disorders section are limited to three, and these apply only to females. Owing to this shortcoming, we estimated the prevalence of DSM-IV somatisation disorder diagnosis with and without the one sexual symptom.

DSM-III-R somatisation disorder

To make this diagnosis, it is required that at least 13 medically unexplained symptoms from any of the groups listed above be scored as meeting criteria at some point during the person's life and that they started prior to age 30 years.

ICD-10 somatisation disorder

The ICD-10, had two separate versions, a descriptive version for clinical use, and an operational version that outlined specific criteria for research (World Health Organization, 1990). In the case of somatisation disorder, the ICD-10 research criteria requires a history of medically unexplained symptoms (six or more) attributable to at least two of four designated organ systems (pain, gastro-intestinal, cardio-respiratory, genito-urinary). In addition, the subject must seek three or more consultations or medical investigations and refuses to accept the opinion of the physician that there is no physical disease. The latter can be elicited by responses to a few additional items included in CIDI's physical symptoms section. While no specific age of onset is required by ICD-10, a requirement is that symptoms/complaints must have lasted at least two years.

Abridged somatisation

This requires the presence of four or more physical symptoms for males and six or more symptoms for females that reach certain severity levels and remain medically unexplained, out of the 40 specific somatisation symptoms included in the CIDI. There is no age of onset requirement for this syndrome.

STATISTICAL ANALYSES

The major goals of these analyses were to seek correlates and risk or protective factors for somatisation disorder. Most of the statistical analyses reported in this paper involve the cross-tabulation of somatisation diagnoses with demographic variables (e.g. gender, ethnicity) and psychiatric diagnostic variables (e.g. presence or absence of major depression, panic disorder, etc.). The Fisher's exact test is used to examine statistical significance in these analyses, *t*-tests are used to relate somatisation diagnoses to continuous variables such as age and level of education.

RESULTS

Of the 1456 subjects, 55% were females, 49% were immigrants (from Mexico and Central America) and their ages ranged between 18 and 66 years. One of the 1456 subjects had incomplete data and was dropped from all further analyses reported in this paper.

Prevalence and correlates of somatisation disorder

DSM-IV

When we enforce the requirement for at least one sexual symptom and take age of onset of each symptom into account (symptoms present before age 30 years), only two subjects (0.1%) meet the full DSM-IV somatisation disorder criteria. If the sexual symptom is excluded, this number increases to eight (0.5%).

DSM-III-R

Four subjects (0.2%) met the somatisation criteria when only the 32 original DSM-III-R somatic symptoms included in the CIDI are considered. When all 40 CIDI symptoms are considered, the number of subjects meeting the criteria goes up to nine (0.6%). Eliminating the age of onset requirement results in slight increases in

the prevalence rates for DSM-IV and DSM-III-R to 1.2 and 1%, respectively.

ICD-10

Only one subject (0.06%) met the full ICD-10 somatisation disorder criteria as defined by the World Health Organization's Diagnostic Criteria for Research.

Abridged somatisation

Three hundred and five subjects (22%) met the criteria for abridged somatisation.

Somatisation disorder: equivalence between DSM-IV and DSM-III-R

The data indicates that there was very poor agreement between the two DSM sets of criteria in diagnosing somatisation disorder. Thus, only about one-fifth (2/9) of cases identified by DSM-III-R also met the DSM-IV criteria, while conversely, only one-quarter (2/8) of those identified by DSM-IV also met the DSM-III-R criteria.

Somatisation: demographic correlates

Subjects with lower educational levels were more likely than those with higher levels to meet the somatisation disorder and abridged somatisation criteria ($t(1448)=1.95$, $P=0.05$). Females were also more likely to meet both the full and abridged criteria, but the difference was not significant in the case of the full DSM-IV somatisation disorder diagnosis when excluding the requirement for the one sexual symptom ($P < 0.08$ Fisher's exact test). Age was not significantly related to somatisation disorder diagnosis (mean age=36.8 years for those with the DSM-IV diagnosis and 36.4 for those without the diagnosis). While immigrant subjects from Central America had a significantly higher prevalence of abridged somatisation than that of the other groups, this difference disappeared when we controlled for demographic variables (data not shown).

Somatisation with other psychiatric disorders

Table 1 shows the prevalence of other psychiatric diagnoses among subjects with somatisation disorder, abridged somatisation and no somatisation. Note from the table that major depression is the most prevalent diagnosis in the clinical groups, followed by hypochondriasis and generalised anxiety disorder. As can be seen in the

Table 1 Somatisation disorder, abridged somatisation and other diagnoses (percentage with diagnosis)

Composite International Diagnostic Interview diagnosis	DSM-IV (n=8)	DSM-III-R (n=7)	Abridged (n=320)	None (n=1135)
Major depression	63	67	38	14
Generalised anxiety	13	44	10	3
Dysthymia	0	11	8	3
Melancholia	25	56	13	3
Hypochondriasis	38	11	15	2

table, the prevalence of hypochondriasis was much higher in the case of subjects with DSM-IV somatisation disorder compared to those with the DSM-III-R diagnosis, while generalised anxiety disorder and melancholic syndromes appeared to be more frequent among subjects with the DSM-III-R somatisation disorder diagnosis.

Somatisation disorder diagnoses and symptoms of anxiety and depression

Table 2 shows the mean number of lifetime depression and anxiety symptoms reported

by subjects who met criteria for DSM-III-R, DSM-IV and abridged somatisation disorder compared to those subjects who were below the somatisation threshold. As can be seen in the table, both sets of symptoms were significantly higher for all somatisation disorder groups compared with the group who did not suffer somatisation ($P < 0.01$). However, while all somatisation diagnoses were associated to similar levels of depression symptoms, subjects with DSM-III-R somatisation disorders had a significantly higher mean number of anxiety symptoms than any other group ($P < 0.01$). Obviously, the

Table 2 DSM-IV somatisation disorder, DSM-III-R somatisation disorder abridged somatisation and symptoms of depression and anxiety

Diagnosis	Number with diagnosis	Depression symptoms (s.d.)	Anxiety symptoms (s.d.)
DSM-III-R somatisation	7	4.8 (4.1)	6.4** (6.0)
DSM-IV somatisation disorder only ¹	8	4.5 (3.2)	2.0 (5.6)
Abridged somatisation disorder only	305	3.1 (3.0)	2.6 (5.2)
No somatisation	1136	1.5* (2.4)	0.6 (2.4)

*Significantly different ($P < 0.01$) from all three somatisation groups.

**Significantly different ($P > 0.01$) from all other groups.

1. Subjects with both DSM-IV and DSM-III-R somatisation disorder are counted under DSM-IV.

Table 3 DSM-III-R somatisation disorder, DSM-IV somatisation disorder, abridged somatisation and disability

Diagnosis	n with diagnosis	SF-36 scores (s.d.)
DSM-III-R somatisation disorder	7	63.8 (18.4)
DSM-IV somatisation disorder ¹	8	77.5 (23.2)
Abridged somatisation in disorder only	305	75.5 (19.6)
No somatisation	1136	84.2 (18.7)

1. Subjects who meet criteria for both DSM-IV and DSM-III-R were placed under DSM-IV somatisation disorder only. All somatisation diagnoses were significantly different ($P < 0.01$) from no somatisation. There were no significant differences among the three somatisation diagnoses. SF-36, RAND Short Form Health Survey.

small numbers of subjects who met the somatisation disorder criteria limit the scope of these observations.

DSM-IV somatisation disorders

Table 3 shows total scores on the physical functioning dimension of the SF-36 for the various somatisation diagnoses. A comparison of somatisation diagnoses using ANOVA and Duncan's multiple range test shows that while subjects identified with each of the diagnostic sets are significantly more disabled than those without the diagnosis, there are no significant differences in levels of disability between somatising groups. Indeed, subjects meeting criteria for abridged somatisation had an almost identical disability score to subjects meeting criteria for DSM-IV somatisation disorder (mean physical functioning scores of 76% and 77% respectively).

DISCUSSION

Prevalence of somatisation disorder

We conclude on the basis of these observations, that notwithstanding the changes in diagnostic criteria, somatisation disorder remains a rare entity in primary care, thus failing to capture a sizable portion of service users presenting with unexplained physical symptoms. Of the standard somatisation disorder diagnoses, the one elicited using ICD-10's operational criteria was by far the least frequent, followed by DSM-IV and DSM-III-R, while abridged somatisation was a very frequent occurrence. Of the DSM diagnoses, DSM-III-R seems to augur higher levels of disability and psychopathology than DSM-IV.

Comparison with other studies

The prevalence rates of somatisation disorder found in this study are lower than the rates previously reported in primary care settings. However, since those studies used different diagnostic instruments, it is difficult to make any comparisons. Yutzi *et al* (1995) studying clinical samples as part of the DSM-IV trials also observed that the frequency of the ICD-10 diagnosis was much lower than that of both DSM-IV and DSM-III-R, and that such diagnosis agreed poorly with the original Washington University criteria (Feighner *et al*, 1972). A more appropriate study for comparison with our present study is a recent inter-

CLINICAL IMPLICATIONS

- Subjects with high levels of unexplained physical symptoms represent a frequent and disabling clinical condition.
- The broader concept of abridged somatisation has proven useful for primary care studies.
- Collaboration between specialities seems essential to improve the recognition and management of these syndromes.

LIMITATIONS

- Reliance on self-report.
- It is possible that the precise characterisation of DSM-IV somatisation disorder may have been affected by the absence of items assessing sexual symptoms in males.
- There was only a relatively modest response rate (50%).

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national collaboration coordinated by WHO that used the CIDI to make psychiatric diagnoses on a large primary care sample in 14 countries (Gureje *et al*, 1997). This study focused on the ICD-10 diagnosis and found a prevalence rate of somatisation disorder of 2.8%, a figure far higher than ours. However, it seems that Gureje *et al* used the ICD-10's descriptive category (two years of multiple/variable physical symptoms, refusal to accept reassurance that there is no physical illness and impairment due to symptoms) instead of the more restrictive operational criteria for making the somatisation disorder diagnosis. These investigators also examined our abridged construct of somatisation and found a prevalence of abridged somatisation of 20%, a rate very similar to ours (22%), and having similar levels of associated psychopathology (40% with coexistent depression/anxiety diagnoses) thus confirming the utility of this construct (Gureje *et al*, 1997).

DSM-somatisation disorder diagnosis

During the DSM-IV trials, Yutzi *et al* (1995) provided reassurance about equivalence between the DSM-IV and DSM-III-R diagnoses of somatisation disorder, and indicated there was also good concordance between DSM-IV somatisation disorder and the more traditional somatisation disorder sets used in the early St Louis studies. While results from the Yutzi *et al* study may have been taken to suggest that besides having a similar prevalence rate, both DSM diagnoses identified the same subjects, it does not appear that the degree of overlap between the two diagnoses was systematically examined. Our data shows that in spite of similar prevalence rates, somatisation disorder cases identified by the two diagnostic systems are largely different both in terms of individual identities and dimensions of psychopathology. Thus, what seemed slight changes in the

nomenclature appear to have dramatic implications for various outcomes. These differences between diagnostic sets can be critical and should be carefully examined in future studies.

Value of a substantially broader concept

Our research and that of others has confirmed the usefulness of a broader or abridged concept of somatisation, also called the 'somatic syndrome' (Escobar *et al*, 1989b; Swartz *et al*, 1990). This syndrome identifies individuals presenting with high levels of unexplained physical symptoms who use services avidly, who have significant depression/anxiety comorbidity and report high indexes of disability. The syndrome can be elicited unobtrusively, and dissected further into more specific subgroups (Escobar, 1997), one-third with a pure-somatic presentation, the remainder with associated psychopathology, primarily depression and anxiety disorders. However, even in the case of comorbid syndromes, the high levels of unexplained symptoms appear to confer unique qualities to the syndrome (e.g. higher levels of disability), that go beyond those of the single diagnoses.

By decreasing the number of required symptoms to six, ICD-10 research criteria approximated our abridged diagnosis. DSM-IV continued this trend towards abridgement by decreasing the total number of symptoms to eight, from 13 in DSM-III-R. However, the additional requirements (that symptoms come from designated organ/body systems, as well as added clinical features) made these systems as

restrictive as any of their predecessors. Rief *et al* (1996) have recently proposed an abridged DSM-IV criteria that they dubbed Somatic Symptom 3/5 (SSI 3/5), following the tradition of our abridged DSM-III-R criteria (SSI 4/6; Escobar *et al*, 1989b), that similarly to our abridged construct also showed higher prevalence rates without apparently affecting the predictive value and correlates of the standard diagnosis.

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