

Somatic Symptoms and Depression

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Patients with psychiatric illness frequently visit their medical physicians with somatic complaints or amplification of complaints about chronic medical illness, yet few of these patients meet Diagnostic and Statistical Manual of Mental Disorders—Third Edition (DSM-III) criteria for a somatoform disorder. In a sample of 197 medical patients interviewed with the Diagnostic Interview Schedule, only 7.1% met DSM-III criteria for somatization disorder, but nearly one third of these patients met criteria for an abridged notion of somatization. Patients with current and lifetime major depression had significantly higher mean totals of positive somatic symptoms compared with controls who had no psychiatric disorder. Nearly one half of these patients with one or more depressive episodes in the course of their lifetime met the abridged criteria for somatization. This association of major depression with somatization is quite similar to findings from the Epidemiologic Catchment Area study suggesting that major depression, not the somatoform disorders, may be associated with most of the somatization seen in medical clinics.

The use of the Diagnostic Interview Schedule¹ (DIS) in the Epidemiologic Catchment Area (ECA) study² has enabled researchers to study the phenomenon of somatization in the general community and its relationship to age, sex, culture, and psychopathology.³ Using *Diagnostic and Statistical Manual of Mental Disorders—Third Edition* (DSM-III)⁴ criteria for somatization disorder, less than 0.1% of adult respondents at five United States sites met criteria for a lifetime diagnosis of somatization disorder.² Low prevalence rates of somatization disorder have also been found in epidemiologic studies of primary care clinics.⁵ Despite the low rates of somatization disorder, primary care researchers have demonstrated that 50% to 70% of primary care patients with a psychiatric illness present to their medical physicians with a somatic symptom.^{6,7} The studies have documented that anxiety and depression are the most common psychiatric symptoms associated with somatization, not the DSM-III somatoform disorders.^{6,7}

Contrary to the low prevalence rates of somatization disorder, Escobar and colleagues³ found that 4.4% of 3132 people interviewed in the Los Angeles site of the ECA study met criteria for an abridged somatization construct (four or more medically unexplained symptoms for men

and six or more medically unexplained symptoms for women on the 37-item somatization disorder section of the DIS). When this construct was applied to a community sample of mixed ethnicity in Los Angeles, the cutoff scores discriminated in the predicted direction between age, sex, and ethnic groups, and between respondents with and without psychiatric diagnoses, suggesting that the construct had validity.³ The validity of this construct has also been supported by the recent findings that it is associated with the frequent use of health services, the preferential use of medical over mental health services for a mental disorder, and an index of disability.⁸ Escobar and colleagues demonstrated that for both sexes, age and DIS diagnosis had a significant effect on the mean number of somatization disorder symptoms. Older men and women (older than 40 years) had significantly more symptoms than the younger age groups. Both men and women with a lifetime diagnosis of major depression or dysthymic disorder had significantly more symptoms than either men or women with other DSM-III disorders or those without a DSM-III diagnosis.

In primary care clinics patients with major depression have been shown to have higher medical utilization rates than nondepressed patients⁹⁻¹¹ and to present frequently with one or more somatic complaints or amplification of complaints of chronic medical illness.^{11,12} Research, however, has not yet focused on the number of somatization disorder symptoms present in patients of medical clinics with and without DSM-III diagnoses. Physicians in medical clinics are often faced with difficult diagnostic decision

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TABLE 1. DEMOGRAPHIC VARIABLES AND NUMBER OF SYMPTOMS BROKEN DOWN BY GROUP

Diagnostic Group	Total Sample No. (%)	Sex		Age (years)		Number of Symptoms	
		Men No. (%)	Women No. (%)	Mean	SD	Mean	SD
Current major depression	51 (26)	22 (43)	29 (57)	41.7	± 15.0	4.9	± 3.5
Lifetime major depression	38 (19)	12 (32)	26 (68)	36.5	± 11.5	3.4	± 3.4
Combined major depressive sample	89 (45)	34 (38)	55 (62)	39.5	± 13.8	4.2	± 3.5
Alcohol abuse/dependence	25 (13)	9 (36)	16 (64)	38.3	± 12.1	2.3	± 2.5
Somatization disorder	14 (7)	2 (14)	12 (86)	37.6	± 7.8	14.7	± 4.0
No diagnosis	69 (35)	25 (36)	44 (64)	39.2	± 15.2	1.0	± 1.7

making in patients with ill-defined somatic complaints, and knowledge of an association between specific psychiatric diagnoses and an increased tendency to report somatic complaints might enhance the accuracy of diagnosis.

The purpose of this study was to examine the positive number of medically unexplained somatic complaints on the somatization disorder section of the DIS in three subgroups of medical patients: (1) patients with major depression, (2) patients with alcohol abuse, and (3) patients without psychiatric diagnoses. The hypothesis of the study was that patients with both current and lifetime diagnoses of major depression would have significantly more positive somatic complaints on the DIS than patients with lifetime alcohol abuse or dependence, who would have significantly more complaints than medical patients with no positive DIS diagnoses.

METHODS

A total of 197 medical patients were interviewed utilizing the National Institute of Mental Health Diagnostic Interview Schedule¹ The DIS, a structured psychiatric interview developed for use in large-scale surveys, generates 16 major DSM-III diagnoses. The DIS covers questions on 37 somatization disorder complaints and, for each positive answer, probes to inquire whether the symptom meets severity criteria and whether the symptom is due to alcohol, drugs or medications, physical illness, or psychiatric illness. Only symptoms that met severity criteria and that were not due to drugs, medications, alcohol, or physical illness were coded as positive in this study. The DSM-III diagnostic hierarchy was utilized.⁴ In addition, a diagnostic hierarchy was utilized so that somatization disorder took precedence over alcohol abuse or dependence and affective illness, and current alcohol abuse or dependence took precedence over current affective illness.

Over a 2- to 3-year period, separate studies were carried out on four samples of medical patients to study the prevalence of psychiatric illness in these patients compared with a medical control group. Thus, in the first sample, patients

with chronic pelvic pain ($N = 25$) were contrasted with a comparison group of women who were being seen for infertility workups and bilateral tubal ligations ($N = 30$)¹³; in the second sample, patients with chronic tinnitus ($N = 40$) were contrasted with a comparison group with hearing impairment ($N = 14$)¹⁴; and in the third sample, patients with chronic fatigue ($N = 24$) were contrasted with a comparison group without fatigue ($N = 18$).¹⁵ The fourth sample included 50 patients with chronic back pain from the inpatient pain service at the University of Washington.¹⁶

For DIS-generated DSM-III diagnoses, respondents were divided into five groups:

1. Those who met DSM-III criteria for major depression within the last month
2. Those who met DSM-III criteria for major depression at some point in their lifetime, but not in the last month
3. Those who met lifetime criteria for alcohol abuse or dependence
4. Those who met DSM-III criteria for somatization disorder
5. Those who did not meet criteria for any lifetime DIS-generated DSM-III diagnoses.

Based on the work of Escobar and colleagues,³ patients were dichotomized according to specific scores on the DIS somatization disorder section. The presence of four or more somatization disorder symptoms was used as a cutoff point for male patients; six or more symptoms were required for female patients. This sex differential corresponds to the differential criteria for male and female subjects included in the Feighner et al¹⁷ and DSM-III diagnostic criteria for somatization disorder.⁴

RESULTS

Table 1 is a breakdown of patients by age, sex, and number of symptoms for the five groups. The five groups did not differ significantly in age ($F [4, 191] = 0.88$). Although only 14 (7.1%) of these medical patients met criteria for

somatization disorder (2 men and 12 women), a total of 62 (31.5%) met the abridged construct of somatization described by Escobar and colleagues.³ Women were more likely to meet criteria for somatization disorder (9.4% of women compared with 2.9% of men); however, this difference was not significant ($\chi^2(1) = 2.06$). No sex differences were noted in the percentage of women and men meeting the abridged definition of somatization (30.7% of women compared with 32.9% of men, $\chi^2(1) = 0.02$, NS).

The *F* test on the above five groups of men and women combined revealed significant differences $F(4, 188) = 69.18$, $P < .001$ (Table 1). Post hoc Tukey tests ($P < .05$) revealed that the patients with somatization disorder had significantly higher symptoms than all other groups ($P < .05$). Patients with current major depression had a significantly higher mean total of somatization symptoms when compared with the other three groups, and patients with lifetime depression had significantly more somatization symptoms than patients with no disorder.

To examine sex differences and their potential interaction with psychiatric diagnosis on the number of somatization symptoms, a two-way ANOVA (sex by diagnosis) was performed. The somatization disorder group (only two men) could not be used, and the two depression groups were combined. Thus three levels of diagnosis (no disorder, major depression, and alcohol abuse or dependence) were used. Results revealed no significant sex and diagnosis interaction ($F[2, 173] = 0.66$) or main effect of sex ($F[1, 173] = 1.38$); however, there was a significant diagnosis effect ($F[2, 173] = 25.0$, $P < .001$).

In men, three of the nine patients with alcohol abuse or dependence met abridged criteria for somatization compared with only one out of 25 patients with no disorder ($\chi^2(1) = 5.48$, $P < .02$) (Table 2). Seventeen of the 34 men with one or more lifetime major depressive episodes met abridged criteria for somatization, a significantly greater number than the patients with no disorder ($\chi^2(1) = 14.4$, $P < .001$).

In women, three of 16 patients with lifetime alcohol abuse or dependence met the abridged criteria for somatization compared with two of 44 patients with no disorder ($\chi^2(1) = 1.52$, NS). Twenty-three of 55 women with one or more lifetime episodes of major depression met the abridged criteria for somatization, a significantly greater number than the patients with no disorder ($\chi^2(1) = 16.1$, $P < .001$).

DISCUSSION

As in the Epidemiologic Catchment Area study,² there were few cases of somatization disorder in the medical patients (14 of 197, 7.1%), but a higher number of cases (32.0%) associated with Escobar and colleagues' abridged notion of somatization (four positive somatic in men and six positive somatic symptoms in women from the somatization disorder section of the DIS).³ In this sample nearly one third of medical patients met this abridged

TABLE 2. PERCENTAGE OF MEN AND WOMEN WHO MET ABRIDGED CRITERIA FOR SOMATIZATION, BROKEN DOWN BY DIAGNOSIS

Group	Men No. (%)	Women No. (%)
Combined major depressive sample	17 (50)	23 (42)
Alcohol abuse or dependence	3 (33)	3 (19)
No diagnosis	1 (4)	2 (4)

definition of somatization because the medical samples were selected from patients with such problems as chronic pain and fatigue, which are usually associated with disability and a high prevalence of psychiatric illness, especially depression.¹³⁻¹⁶

Patients with current and lifetime major depression had significantly higher mean totals of positive somatic symptoms compared with controls who had no psychiatric disorder. The rates of positive somatic symptoms in the combined sample of patients with current and lifetime major depression (mean of 4.2), alcohol abuse or dependence (mean of 2.3), and no psychiatric disorder (mean of 1.0) were similar to the prevalence rates of positive symptoms associated with these diagnoses in the Los Angeles study (major depression, mean of 3.60, other diagnoses, mean of 2.2, no diagnoses, mean of 1.28).³

The above data suggest that medical patients with either current or lifetime depression tend to complain of increased somatic symptoms compared with controls with no psychiatric disorder. These data are in agreement with two recent studies that also demonstrated that currently depressed patients complained of significantly more symptoms on a medical review of symptoms checklist when compared with nondepressed patients.^{18,19} In the first study, 51 depressed patients were compared with 51 nondepressed control patients. The depressed patients had a mean of 12.3 ± 5.4 symptoms compared with 3.6 ± 2.8 in the control group. In the second, 127 community elderly were assessed with the Geriatric Depression Scale²⁰ and the Cornell Medical Index.²¹ Patients with low depression scores had a mean of 3.6 complaints, participants who were moderately depressed had a mean of 6.0 complaints, and participants who were highly depressed had a mean of 12.1 complaints.

The tendency for affective illness to lead to increased somatic symptoms, a poor perception of one's health, and increased perception of disability and impairment in one's vocational and social roles was also recently described by Wells and colleagues.²² They found that both depressive symptoms and major depression had large and significant effects on perceived general health status, social role, and physical functioning and pain. These effects were at least as significant as the associations between these health vari-

ables and a variety of medical conditions including coronary artery disease, diabetes, and arthritis. Dworkin and colleagues²³ also recently demonstrated an association between depression and pain complaints in a study of over 1000 patients in a health maintenance organization. Using a diagnostic algorithm applied to symptom checklist data, they found that persons with a single pain complaint had the same prevalence of depression as persons with no pain complaints, about 2%. After adjusting for age and sex, however, persons with two pain symptoms had a prevalence rate of depression four times greater, and persons with three or more pain symptoms had a sixfold increased prevalence of depression compared with persons without multiple pain complaints.

In this study there were too few depressed patients to perform a discriminant analysis of the symptoms that were associated with major depression. This work is important to carry out in future analyses because, although major depression is the most frequent disorder seen in primary care clinics with prevalence rates of 5% to 10% by structured interview^{24,25} and operationalized criteria (DSM-III⁴ or research diagnostic criteria²⁶), the rates of accurate diagnosis by primary care physicians have been demonstrated to be less than 50%.²⁷ Two studies^{6,7} have shown that 50% to 70% of patients with major depression come to primary care physicians with somatic complaints, and the Bridges and Goldberg⁷ study demonstrated that somatization was the major reason for the lack of accuracy of diagnoses. It would be quite helpful for primary care physicians to recognize the association between depression and an increased pattern of medical visits as well as a tendency to have increased somatic complaints.¹¹ Future studies need to assess whether there are specific somatic complaints that are highly associated with the syndrome of major depression.

Future research studies, like the above, also need to be carried out in a random sample of primary care patients to see whether similar patterns are evident. These samples represent patients who were visiting specialists with discrete complaints, many of which (pelvic pain, tinnitus, and back pain) have been strongly associated with psychiatric disorder.¹³⁻¹⁶ Because these results are quite similar to those reported in a general community sample,^{3,8} a similar association of depression and somatic complaints may also occur within primary care samples. Moreover, Widmer and Cadoret¹¹ have demonstrated in a series of studies the tendency of depressed patients to consult primary care physicians with a pattern of increased health utilization and one or more somatic complaints such as nonspecific symptoms (fatigue, insomnia), pain complaints, and complaints of tension or anxiety.

One implication of above data for the primary care physician is that it would be helpful to be able to screen patients for hypochondriacal traits, as these are strongly associated with high medical utilization and depression. Thus, in a patient who complains of headache to the primary care physician, an important question is: Is this an isolated complaint or part of a wide array of somatic symptoms the patient has? The DIS is a research tool and too

lengthy to utilize for clinical practice, but recent experience has suggested that shorter screening instruments, such as the Barsky Somatosensory Amplification Scale²⁸ and the Whitely Index,²⁹ provide short, sensitive measures of the patient's tendency to amplify symptoms. Similarly, several short depression screening tools have proved to be quite sensitive to the diagnosis of depression.³⁰⁻³² Recent data suggest that depressed patients with a tendency to somatize are likely not only to be high utilizers of health services but also to preferentially visit primary care physicians rather than mental health services when suffering from a mental disorder.⁸

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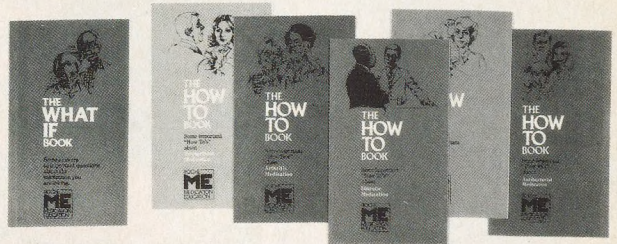
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