

# The Relationship of Presenting Physical Complaints to Depressive Symptoms in Primary Care Patients

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**Objective:** *To assess the relationship of specific patient chief physical complaints to underlying depressive symptoms in primary care practice.*

**Design:** *A cross-sectional study that was part of a larger prevalence study of depression in primary care.*

**Setting:** *A general medical primary care practice in a teaching medical center in rural New England.*

**Patients:** *1,042 consecutive outpatients screened for depression with the Hopkins Symptom Checklist 49-item depression scale and for whom physicians filled out a form recording both specific chief complaints and two aspects of complaint presentation style, clarity and amplification.*

**Interventions:** *None.*

**Results:** *Complaints that discriminated between depressed and non-depressed patients (at the  $p = 0.05$  level) were sleep disturbance (PPV 61%), fatigue (PPV 60%), multiple (3+) complaints (PPV 56%), nonspecific musculoskeletal complaints (PPV 43%), back pain (PPV 39%), shortness of breath (PPV 39%), amplified complaints (PPV 39%), and vaguely stated complaints (PPV 37%).*

**Conclusions:** *Depressed patients are common in primary care practice and important to recognize. Certain specific complaints and complaint presentation styles are associated with underlying depressive symptoms.*

**Key words:** *physical complaints; depression; physician recognition; primary care.* J GEN INTERN MED 1992; 7:170-173.

DEPRESSED PATIENTS are common in primary care practice. Several studies have demonstrated consistently high prevalence rates for depressed patients in a wide variety of primary care settings.<sup>1-7</sup> The majority of patients with affective disorders of all types are not seen in the specialty sector of the health care system. Constituting what Goldberg et al. have referred to as the "hidden mental health network" in primary care, such patients represent a challenge to both physicians and researchers.<sup>8-9</sup>

Much of the literature on physician recognition of depression in primary care has focused on physician attributes that are associated with increased or decreased likelihoods of recognition. Such factors include psychiatric knowledge base, interviewing skills

and behavior, personality characteristics, problem solving ability, and attitudes towards psychiatric illness in general.<sup>10-16</sup> The process by which physicians are led to consider the possibility of a patient's being depressed has been less well explored.

Physicians are taught to create a differential diagnosis of etiologic possibilities in response to the patient's expressed chief medical complaint. In this process, data gathering is hypothesis-driven. Focused on the patient's chief complaint, and modified and shaped by direct questions asked of the patient, diagnostic hypotheses are generated and tested. What kinds of chief complaints do depressed patients bring to their primary care providers? Are there specific clues to an underlying depression, other than dysphoric mood, to which the primary care provider should be attuned? What specific complaints significantly increase the odds that a patient is suffering from a clinically meaningful level of depressive symptoms? When should patients be "screened" for depressive symptoms—during a review of symptoms or in the process of working up a chief medical complaint?

Several published studies have addressed these issues. A minority of depressed patients have mood disturbance as their chief complaint, with somatic complaints a more common mode of presentation. Widmer et al. found that pain and functional complaints signaled the onset and paralleled the course of an underlying depression.<sup>17</sup> Chronic pain, pain of undetermined cause in the head, chest, and abdomen, and vaguely described "functional" complaints were often found in such patients.<sup>18</sup> Fatigue, loss of appetite, and "vague" physical complaints were found by Stoeckle and colleagues to be associated with an underlying depression.<sup>19</sup> Variations in how cases were identified, the absence of controls, failure to blind primary care physicians to the psychiatric assessments, and the retrospective use of the medical record alone to assess patients' chief complaints have made interpretation of such studies difficult.

In the course of conducting a prevalence study of depression in a general medical practice, we obtained presenting complaint data for a sample of depressed medical outpatients. The goal of this report is to provide specific information about how our depressed patients presented themselves to their primary care providers, and to report the positive predictive values of (PPVs) of specific chief complaints for significant depressive symptoms.

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Supported by NIMH Grant No. MH-3752.

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## METHODS

### Subjects and Procedure

Subjects were the patients aged 18 years and over of four general internists practicing at the Hitchcock Clinic, the clinical arm of the Dartmouth-Hitchcock Medical Center in Hanover, NH. The general internal medicine (GIM) group practice provides comprehensive and continuous primary care to a stable cohort of adult (nonstudent) patients residing in the communities of Hanover, NH, and Norwich, VT, as well as other surrounding communities. These communities are home to a varied group of people, including faculty and employees of Dartmouth College, small retail business owners and employees, crafts people, farmers, and a large retiree population.

During a 15-month intake period, a research assistant was present in the waiting area for patients scheduled to see one of the four study physicians, all of whom practiced part time in the GIM group. Each patient was asked to complete a 49-item self-report screening inventory asking him or her to check how often a variety of symptoms had been present in the preceding week. If a patient was seen more than once, only the data from the first visit are reported here.

Each participating physician filled out a recording form immediately after seeing each study subject, listing the chief complaints as mentioned by the patient. Symptoms elicited by the physician were not included.

### Measures

**HSCL-90 Depression Scale.** Embedded in the 49-item screening inventory were the items making up the Hopkins Symptom Checklist (HSCL-90) depression scale.<sup>20</sup> For the purpose of this report, the scale was scored by summing the item scores, which could range from 0 to 3, yielding for each individual a depression scale score that could range from 0 to 39. The distribution obtained was skewed, with many more low scores than high ones. For the purpose of this analysis, the depression scale was dichotomized into scores of 0-6 and those of 7 or more. This cutoff point was chosen to provide for our patients the best combination of sensitivity (77%) and specificity (81%) for any research diagnostic criteria (RDC) depressive disorder (major depressive disorder, episodic minor depressive disorder, chronic intermittent minor depressive disorder, labile personality, cyclothymia).<sup>21</sup>

The cutoff score of 7 or more was felt to reflect a clinically significant level of depression, up to and including depressive disorders. Two hundred fifty-three patients (24%) scored 7 or higher.

**Physician Recording Form.** At the time of the patient visit, participating physicians recorded specific chief complaints reported to them by their patients.

Elicited information was not included. A minority of patients had no complaint and physician recording forms were not completed for these patients.

The chief complaints were organized into meaningful groupings (if specific complaint numbers were small) or left alone (if the specific complaint was common). Complaints of patients whose reason for visit was routine monitoring or screening were included if the participating physician felt they would have prompted an independent visit, had the routine visit not been scheduled.

In addition to the reported specific chief medical complaints responsible for the visit, the internists recorded the number of complaints and two dimensions of the patient's complaint presentation style, amplification and clarity. Amplification refers to the process by which patients augment and exaggerate the intensity of physical distress caused by an organic process. Clarity refers to the degree of difficulty involved in understanding a patient's chief complaint. Amplification and clarity were recorded on scales developed by us for use in this study and have been discussed in an earlier report.<sup>10</sup>

**Analysis.** Data analysis consisted of a series of  $2 \times 2$  tables comparing patients grouped by depression score (0-6 or 7+) derived from the self-report screen, with the internist's note of whether a particular complaint was mentioned spontaneously by the patient (chi-square values with one degree of freedom were calculated for each table). Positive predictive value was defined as the percentage of those with the complaint who scored 7 or more on the depression scale.

## RESULTS

Cooperation by the patients asked to participate was excellent. Of the 1,160 patients approached, 1,055 (91%) completed the screening inventory, 63 (5%) refused, and 42 (4%) did not manage to complete the screen, usually because they were too ill or because their internist was ready to see them before they could complete it. Demographic characteristics of the 1,055 patients who completed the screen are given in Table 1. Nearly all the study subjects were white and most were married and middle-aged or elderly.

Table 2 summarizes the results for the 1,042 patients screened for whom physicians filled out a recording form. Physicians failed to fill out recording forms for 13 patients. The complaint that discriminated best between low and high scores on the depression scale was sleep disturbance: 1.7% of the low scorers, but 8.1% of the high scorers, complained of sleep disturbance, a difference significant at the  $p < 0.001$  level. Although sleep disturbance affected overall only about 3% of our primary care patients, of those with sleep disturbance, 61% had a score of 7 or more on the depression scale.

TABLE 1

Demographic Characteristics of the Patients Completing the Screening Inventory ( $n = 1,055$ )

	n	%
Age		
18–44 years	272	25.8
45–64 years	434	41.1
65+ years	349	33.1
Gender		
Male	458	43.4
Female	597	56.6
Marital status*		
Married	759	73.5
Widowed	117	11.3
Divorced/separated	74	7.2
Never married	83	8.0
Race		
White	1,048	99.3
Other	7	0.7

\*Numbers may be less than full  $n$  because of missing data.

Other complaints with high PPVs were fatigue (60%), three or more complaints of any sort (56%), and nonspecific musculoskeletal complaints (43%).

Complaints that discriminated between the high scorers and the low scorers ( $p < 0.05$ ) but had lower PPVs were: back pain (PPV 39%), shortness of breath (PPV 39%), amplification (PPV 37%), vaguely stated complaints (PPV 37%), chest pain (PPV 35%), and non-abdominal-pain gastrointestinal complaints (PPV 34%).

Eighteen percent of high scorers on the depression scale had no complaint, and 12% of patients with no complaint were high scorers.

## COMMENT

Our data describing the specific chief complaints of patients with significant depressive symptoms are consistent with the data from other published reports. These depressed patients commonly complained of vegetative symptoms of depression (fatigue, sleep disturbance) and appeared to somatize (multiple, vague, amplified, and nonspecific musculoskeletal complaints).

In a recent epidemiologic study of sleep disturbance, the risk of developing a new major depression was much higher in those who had insomnia compared with those who did not have insomnia (odds ratio 39.8).<sup>22</sup> Our data support this conclusion, as depressive symptoms were very common in patients with a chief complaint of sleep disturbance.

The "fatigued" patient has received increasing attention in primary care settings. Sixty percent of our patients with a chief complaint of fatigue had significant depressive symptoms. A similar percentage (56%) of significant depression was found by Kroenke et al. in a study of patients screened for "chronic fatigue,"<sup>23</sup> and by Manu et al., who found that 64% of patients with "chronic fatigue" studied in a "fatigue clinic" had psychiatric diagnoses, predominantly depression.<sup>24</sup>

Multiple (3+), vaguely stated (particularly vaguely stated musculoskeletal and gastrointestinal and complaints), and amplified complaints were also associated with the presence of significant depressive symptoms in our patients. This result is consistent with data presented by others and would not surprise most primary care providers. The relationship of depression to somatization is complex and significant, and has been the subject of several excellent reviews.<sup>25-30</sup>

TABLE 2

Presenting Physical Complaints of the Low Depression Patients (HSCL-90 Depression Score of 0–6) Compared with Those of the High Depression Patients (HSCL-90 Depression Score of 7+)

	Depression Level		$p(\chi^2)$	Predictive Value Positive (%)
	Low ( $n = 794$ ) (%)	High ( $n = 248$ ) (%)		
Sleep disturbance	1.7	8.1	<0.001	61 (20/33)
Fatigue	4.4	21.5	<0.001	60 (53/88)
Three or more complaints	5.8	24.0	<0.001	56 (59/105)
Nonspecific musculoskeletal complaints	4.1	9.7	0.001	43 (24/56)
Back pain	3.4	6.9	0.02	39 (17/44)
Shortness of breath	2.8	5.7	0.03	39 (14/36)
Amplification of complaints	29.4	38.5	0.02	37 (77/208)
Vague chief complaint	26.6	35.7	0.02	37 (71/190)
Palpitations/fibrillations	2.0	3.6	0.15	36 (9/25)
Chest pain	3.9	6.9	0.05	35 (17/48)
Gastrointestinal complaints	5.8	9.7	0.03	34 (24/70)
Genitourinary complaints	4.4	7.3	0.08	34 (18/53)
Headaches	2.9	4.9	0.14	34 (12/35)
Abdominal pain	3.3	4.5	0.40	30 (11/37)
Dermatologic complaints	5.6	6.9	0.44	28 (17/61)
Upper respiratory infection/viral/allergies	5.4	6.5	0.54	27 (16/59)
Dizziness	4.2	4.9	0.65	27 (12/45)
High blood pressure	2.2	2.4	0.80	26 (6/23)
Numbness/paresthesias	2.2	2.4	0.80	26 (6/23)
Specific musculoskeletal complaints	13.7	10.9	0.26	20 (27/135)

The depressed patient is not always easy to recognize. Modes of expressing depressive distress are determined by lush psychological and cultural modifiers of affective experience. Our results were obtained in a population of educated, middle-aged, primarily Anglo-Saxon patients with a prevalence of 24% for significant depressive symptoms. The results obtained may not be generalizable to populations with different demographic and cultural characteristics.

Recognition of depression in primary care is important because it is common and it has a serious negative impact on patient's lives. Recent data from the Medical Outcomes Study has shown the negative effect that depression has on a person's functioning and well-being.<sup>31</sup> The results from the Medical Outcomes Study apply to both patients with depressive disorders by DSM-III criteria and patients with significant depressive symptoms without disorder. In another study of the effect on depression on functional outcomes, using data from the Epidemiologic Catchment Area Study in North Carolina, Broadhead et al. found that both major depression and minor depression were associated with a significant increase in number of disability days and number of days lost from work.<sup>32</sup> Unrecognized depression recently has been shown to be a critical factor in smoking patients' inability to stop smoking.<sup>33, 34</sup> Recognition of depressive symptoms in patients in primary care should be a major goal of the medical educational process. Educational strategies that help primary care physicians recognize patients with significant depressive symptoms are needed and should be welcomed by primary care providers.

Patients with significant depressive symptoms are common in primary care practice, and the physician needs to have a high index of suspicion that the patients he or she sees may have such symptoms. We have found certain complaints and complaint presentation styles to be associated with the presence of underlying depressive symptoms.

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