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# Abridged Somatization: A Study in Primary Care

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**Objective:** We examined the prevalence, correlates, and predictive value of an abbreviated somatization index, based on specific symptom thresholds, in primary care patients using services at a university-affiliated clinic. **Method:** We interviewed 1456 patients with a survey instrument that included the Composite International Diagnostic Interview (CIDI) to elicit symptoms and diagnoses of several psychiatric disorders as well as demographic information and a measure of disability. Statistical analyses examined the relationship of abridged somatization with physical functioning and various demographic and diagnostic factors. **Results:** About one fifth of this primary care sample met the abridged somatization criteria. "Somatizers," defined according to these criteria, had significantly higher levels of psychiatric comorbidity and disability than "nonsomatizers". Analyses taking into account the number and type of organ/body systems represented by the unexplained symptoms showed that this dimension adds specificity to the prediction of outcomes. Thus, regardless of the total number of medically unexplained symptoms, abridged somatization with unexplained symptoms attributable to four or more organ/body systems showed the strongest association with disability and psychopathology. **Conclusions:** Abridged Somatization is a frequent syndrome in primary care that is strongly associated with psychopathology and physical disability. Our research also yielded a new series of abridged somatization subtypes (eg, "discrete" vs. "comorbid" and "simple" vs. "polymorphous") that may effectively separate among various psychopathologies, and may become useful tools for future research with somatizing patients. **Key words:** somatization, somatoform disorders, psychiatric diagnosis, primary care.

CIDI = Composite International Diagnostic Interview.

## INTRODUCTION

"Somatization," the presentation of many symptoms suggestive of physical disease, but which remain unexplained after medical and laboratory assessments, is one of the most puzzling and frustrating problems in clinical medicine. The numerous labels created to designate these cases range from the rather colloquial and pejorative terms used at many settings, such as "hysterics" and "hypochondriacs," to the more specialized labels crafted by individual specialties, such as the general categories of "somatoform disorders" in psychiatry and "functional somatic syndromes" in medicine. In the case of psychiatry, although these syndromes were solidly anchored in classical psychopathology, they have been relegated to a secondary role in recent times. This is likely due to the frustration that these patients bring to the clinician, a certain nihilism concerning therapeutics and outcomes, and the fact that the majority of these patients use general medical services rather than psychiatric services.

Given the utilization patterns of somatizing patients, the controversies across specialties about their proper management, and the mounting costs in caring for them, it is imperative that collaborations between mental health and primary care practitioners be implemented. An obvious first step in the process of improving communication across medical specialties is the provision of more practical diagnostic constructs that could be applied readily in primary care settings.

In this study, we first provide some background information on the development of an abridged index of somatization and highlight major observations on its application in com-

munity and clinical settings. Then, we draw from a recently completed study on a large primary care sample, to provide additional evidence in support of the utility of such construct. At the end, we outline additional refinements that may contribute to a more precise differentiation of somatizing syndromes.

## Development of the Abridged Somatization Construct

An abridged construct of somatization, also known as the "Somatic Symptom Index" (SSI) and "Somatization Syndrome," was developed by Escobar et al. (1) in an effort to facilitate systematic research on somatization in clinical and community populations. The development of this abridged construct followed the observation that the full somatization disorder diagnosis, as defined in the then-official psychiatric nomenclature (DSM-III), was rare in clinical and community settings, and thus failed to capture a majority of the subjects presenting with high levels of unexplained physical symptoms.

To elicit Somatization Disorder, a list of 37 physical symptoms was included in the Diagnostic Interview Schedule (DIS), a highly structured psychiatric instrument used in large-scale epidemiological studies (2). Assuming that somatization was a dimensional construct, we began exploring below-threshold (DSM-III) clusters of somatic symptoms that met severity criteria, led to physician visits, medication intake, interfered with function, and remained medically unexplained, and arrived at a less stringent or "abridged" cut-off of four symptoms for men and six symptoms for women. This abridged cut-off yielded a much larger number of respondents meeting criteria than did the cut-off for the DSM-III Somatization Disorder Diagnosis, which required 12 symptoms for men and 14 for women, while retaining predictive power (3).

## Abridged Somatization in Community Populations

**Epidemiological Catchment Area Study.** The abridged construct was first tested in a large general-population sample interviewed with the DIS as part of the Epidemiological Catchment Area Study (ECA) (4). In that study, respondents who met the criteria for abridged somatization were found to have a higher prevalence of psychiatric disorders (particularly mood and anxiety disorders), and reported more frequent use of medical services and higher levels of disability (bed days,

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unemployment), than those who were below the abridged somatization threshold. These differences were statistically significant and remained so even after the analyses controlled for health status and demographic factors (3, 5). The pattern of associations identified was similar to that documented for the "full" somatization disorder diagnosis. However, the prevalence of the abridged construct in the general population was, on the average, more than 100 times higher than that of the "full" diagnosis (5).

**Puerto Rican Study in Psychiatric Epidemiology.** The abridged construct was also tested in another large cohort interviewed in Puerto Rico, using identical methodologies to those of the ECA study (6). The results of this study also showed robust associations between this construct and psychopathology, use of services, and disability (5).

**Abridged Somatization as "Idiom of Distress".** Because "distress" often assumes the form of a physical symptom, and clinical observations associate somatization with previous exposure to traumatic events (7, 8), one additional strategy to assess the usefulness of a somatization construct is to examine whether such measure detects the consequences of traumatic exposure. A few studies have examined the relationship between trauma and abridged somatization. In a study of a large community-based sample of women, Golding (9) found that the abridged somatization construct discriminated well between community respondents who had experienced sexual/physical attacks from those who had not faced such "stressors." Walker et al. (10) also found that about two thirds (64%) of the female patients with chronic pelvic pain who reported previous sexual abuse met the criteria for abridged somatization compared with only 12% of controls. In a prospective study of individuals exposed to an overwhelming "stressor" (flash floods), Escobar et al. (11) observed that newly emergent medically unexplained physical symptoms were one of the most reliable "markers" of exposure to the "stressor."

### Abridged Somatization in Clinical Populations

Several groups of investigators have used the abridged somatization construct to systematically examine patients with medically unexplained physical symptoms both in the United States (12–17) and abroad (18). These studies included several specialty referrals, such as patients referred to an otolaryngology practice because of persistent dizziness (13), patients presenting with syncope (14), and patients with respiratory problems seen at a pulmonary clinic (15). Other reports have underlined the usefulness of the construct for case definition before research studies or therapeutic interventions (16, 17). Finally, the research relevance of the abridged somatization concept is highlighted by its incorporation into the International Classification of Diseases' (ICD-10) "Diagnostic Criteria for Research." These criteria require *six* medically unexplained symptoms as the symptom threshold to diagnose somatization disorder (19).

### The Present Study

In summary, the abridged somatization construct has proven useful in both community and clinical populations as a tool for selecting subjects at risk and separating individuals with documented medical disorders from those with functional or psychiatric syndromes. Despite its extensive use in clinical and research settings, the construct has not been

examined formally as the primary measure of somatization in a large primary care sample. Moreover, although proven useful in its current form, it was thought that the construct could be refined additionally to aid in the separation of "primary" somatization syndromes from those somatic presentations embedded in other psychiatric disorders. Although having to elicit and probe a large list of somatic symptoms (as required by current versions of structured interviews) may prove impractical in primary care settings, additional refinements of the construct might assist in the development of briefer and more accurate somatic symptom inventories. With these major goals in mind, we embarked on a reexamination of the abridged construct in a large sample of patients using primary care services.

## METHOD

The sample included 1456 outpatients using primary care services at a university-affiliated outpatient clinic (North Orange Community Clinic) located in Anaheim, California. After completion of informed consent procedures, and in proximity with their clinical examination by a physician, the patients participated in a structured interview (administered by trained interviewers) that included detailed questions on general demographics, psychopathology, and physical functioning. Of the patients initially approached for the study, 50% agreed to participate. There were no demographic differences between study participants and those who declined participation except for level of education. Those who agreed to participate had, on the average, one more year of education than those who did not.

### Measures

The assessment of psychopathology included: a) the sections from the CIDI (20) that elicit and probe symptoms of Somatization, Hypochondriasis, Generalized Anxiety, Panic, Agoraphobia, Simple Phobia, Dysphymia, and Major Depression including melancholic subtypes; b) brief "screens" for psychotic syndromes and substance use disorders; and c) detailed questions to elicit and probe symptoms of Posttraumatic Stress Disorder (PTSD) derived from the DIS (2). The 10-item "physical functioning" dimension from the RAND 36-item Short Form Health Survey (SF-36) (21), was used as a measure of functional "disability."

Bilingual (Spanish/English) research interviewers were trained in the use of the CIDI, adhering to the official CIDI training guidelines as conducted at the United States training site located in the Department of Psychiatry at Washington University in St. Louis. All instruments were translated and validated for use with Spanish-speaking subjects.

**CIDI Somatization Disorders Section.** The CIDI has 41 items that elicit somatization symptoms. Forty items scrutinize specific physical symptoms and one item asks about being "sickly most of the lifetime." We allocated the 40 somatic symptoms into specific organ/body systems as follows:

1. **Pseudoneurological (PN)** (15 symptoms): symptoms suggestive of neurological disease, including blindness, blurred vision, deafness, anesthesia, paralysis, lost voice, seizures, fainting, amnesia, double vision, dizziness, numbness/tingling, unconsciousness, lump in throat, and trouble walking.
2. **Gastrointestinal (GI)** (7 symptoms): abdominal pain, vomiting, nausea, diarrhea, excessive flatulence, food intolerance, and bad taste in mouth.
3. **Musculoskeletal (MS)** (4 symptoms): back pain, joint pain, pain in extremities, and muscle weakness.
4. **Genitourinary (GU)** (4 symptoms): pain on urination, inability to urinate, burning sensation in genitals, and urinary frequency.

5. *Female-reproductive (FR)* (4 symptoms): dysmenorrhea, vomiting throughout pregnancy, irregular menses, excessive menstrual bleeds.
6. *Cardiorespiratory symptoms (CR)* (3 symptoms): chest pain, shortness of breath, heart palpitations.
7. *Headache and other pain* (not classified elsewhere) (H) (2 symptoms): headache, other pain.
8. *Skin (S)* (1 symptom): blotches or discoloration.

After the standard probing system in the CIDI, symptoms were scored as "present" if they met severity criteria and remained medically unexplained after detailed scrutiny. For example, if the respondent answered "yes" to the question, "Have you ever had chest pains?", the interviewer proceeded with a specific set of queries to determine symptom severity, including physician visits, medication intake, or significant interference with life or function. If these criteria were met, the interviewer asked about the physician's diagnosis and probed whether the symptom was ever due to physical illness or injury, or followed the use of medications, drugs, or alcohol. If these inquiries proved negative for medical explanations, the symptom was scored as a positive somatization symptom. Because the four female reproductive items were skipped for male patients, there were only 37 symptoms applicable to men. Patients meeting the criteria for abridged somatization (at least four medically unexplained symptoms for males and six for females) were classified as somatizers and compared with nonsomatizers in the analyses that follow.

### Statistical Analyses

One of the 1456 patients was excluded because of missing data. Thus, the analyses include data on 1455 patients. Also, because CIDI sections on Generalized Anxiety, Panic, and Phobic Disorders were added after the study was well under way, data on Anxiety Disorders is available for only 1084 of the 1455 subjects.

The statistical analyses reported in this study involve the cross-tabulation of the binary abridged somatization variable with demographic variables (eg, gender, ethnicity) and psychiatric diagnostic variables (eg, presence/absence of Major Depression, PTSD). The major goals of these analyses were to seek correlates as well as "risk" or "protective" factors for somatization. The Fisher's exact test is used to examine statistical significance in these analyses. *t* tests are used to relate the abridged construct to continuous variables, such as age. Hierarchical multiple regression is used to relate the number of unexplained symptoms as a continuous variable to the measure of functional disability, controlling for demographic and continuous psychiatric symptom variables (eg, number of depressive symptoms). Although based on previous research reports (22), we expected to find a relationship between the number of unexplained physical symptoms and psychopathology. We also theorized, based on clinical observations, that a key factor in outcome prediction could be the number of organ/body systems to which the various unexplained symptoms are attributed, independent of the total number of symptoms present. Therefore, some of the analyses involved separate counts for each patient of the number of organ/body systems that underlay the patient's somatic complaints. This count, which varies from 0 to 7, derives from the output of a clustering analysis, Hierarchical Classes Analysis (HICLAS) (23–26).

Besides somatic symptoms, other variables entered into the analyses included: *number of organ/body systems* contributing to the unexplained symptom totals; *other psychiatric diagnoses* such as Major Depression, Melancholic Depression, Dysthymia, Generalized Anxiety, Panic, Phobic, and Posttraumatic Stress Disorders; and *disability*. For dichotomous analyses, disability was defined as a total score of 19 or less in the "physical functioning" dimension of the SF-36. This arbitrary cut-off was chosen because it represented at least "moderate" levels of disability and captured the lowest functioning one third of the sample. Total scores in this dimension, which range between 10 (severe disability) and 30 (no disability), were also used as a continuous variable in regression analyses.

## RESULTS

The 1455 patients were 55% female, and their ages ranged between 18 and 66 years. The sample included four ethnic groups: United States-born non-Hispanics ( $N = 533$ ) all white; United States-born Latinos ( $N = 204$ ), all of Mexican origin; Mexican immigrants ( $N = 593$ ), and Central American immigrants ( $N = 125$ ), a large majority from El Salvador and Guatemala.

### Prevalence of Abridged Somatization

The overall prevalence of abridged somatization in this primary care sample was 22%. This prevalence rate is higher than that reported in studies of general population samples (about 10%) (27), but lower than the prevalence rate of the abridged construct in clinical samples, such as patients with chronic fatigue syndrome, for whom rates as high as 50% to 100% have been reported (28, 29).

### Correlates of Abridged Somatization

**Gender.** The respective criteria for abridged somatization was met by 18.4% of the men and 24.9% of women. This difference is statistically significant ( $p < .005$ , Fisher's exact test).

**Age.** Somatizers were older (mean = 39.05, SD = 12.06) than nonsomatizers (mean = 35.66, SD = 11.67), a statistically significant difference [ $F(1,1452) = 4.52$ ,  $p < .0001$ ].

**Ethnic Background.** Although Central American immigrants had higher rates of abridged somatization (30%) relative to the other groups (range 17%–22%), logistic regression analyses controlling for demographic factors did not show any differences attributable to ethnicity.

**Psychiatric Diagnoses and Abridged Somatization.** Table 1 shows the proportion of somatizers and nonsomatizers, as defined by the abridged construct, who also met the criteria for lifetime diagnoses of Somatoform, Mood, and Anxiety Disorders. Note from Table 1 that the prevalence of most of these diagnoses in the somatizing subjects was, on average, twice as high as that for nonsomatizers, and that in each instance, differences were statistically significant ( $p = .001$ , Fisher's exact test). Obviously, Somatization Disorder was fully embedded in the Abridged Construct.

**DSM-IV Hypochondriasis and Abridged Somatization.** Although seemingly related (both syndromes include unexplained physical symptoms and entail certain attitudes that impact the doctor-patient relationship), Somatization and Hypochondriasis are generally conceptualized as separate psy-

TABLE 1. Percent Meeting Criteria for Specific Psychiatric Disorders

| DSM-III-R Diagnosis   | Non-somatizers<br>( $N = 1135$ ) | Abridged<br>Somatizers<br>( $N = 320$ ) | Significance<br>(Fisher's exact test) |
|-----------------------|----------------------------------|-----------------------------------------|---------------------------------------|
| Somatization disorder | 0.0                              | 100.0                                   |                                       |
| Hypochondriasis       | 2.2                              | 15.0                                    | .0002                                 |
| Anxiety               | 2.5                              | 10.0                                    | .001                                  |
| Depression            | 13.6                             | 37.5                                    | .001                                  |
| Melancholia           | 3.1                              | 13.1                                    | .001                                  |
| Dysthymia             | 3.4                              | 7.5                                     | .001                                  |
| Phobia                | 11.9                             | 29.1                                    | .001                                  |
| PTSD                  | 15.1                             | 27.8                                    | .001                                  |
| Any of the above      | 31.9                             | 64.4                                    | .001                                  |

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chopathological constructs. Somatization implies high levels of medically unexplained symptoms, whereas Hypochondriasis refers primarily to preoccupation with or amplification of physical symptoms. Because the CIDI elicits the needed criteria for DSM-IV Hypochondriasis, we examined the relationships between Somatization and Hypochondriasis in this sample. We found that 60% of the subjects meeting the criteria for Hypochondriasis also met the criteria for abridged somatization, whereas only 20% of those without Hypochondriasis met the abridged criteria. This difference is statistically significant ( $p < .001$ , Fisher's exact test).

*Discrete Versus Comorbid Abridged Somatization Syndromes.* We also found (see Table 1) that approximately two thirds of the patients (64%) with abridged somatization met the criteria for other lifetime psychiatric disorders, whereas about one third (36%) did not. From now on, we will refer to these two groups as "comorbid" and "discrete" somatizers, respectively.

*Demographic Factors.* In subsequent analyses, we compared these two groups in terms of their demographics (age, gender, level of education, and immigrant status). These comparisons showed that the two groups were very similar with no significant differences elicited for any of these demographic variables. However, we found that immigrant groups (Mexican and Central American patients) were significantly more likely to have discrete somatization syndromes than their United States-born counterparts. Thus, of the somatizers, 45% of Mexicans and 36% of Central Americans had discrete somatization compared with 28% of non-Hispanic white patients and 24% of United States-born Mexican Americans ( $p < .0004$ , Fisher's exact test).

*Disability.* Statistical analyses revealed no significant differences between these two groups regarding their mean scores on the physical functioning dimension of the SF-36, suggesting that both syndromes are about equally disabling.

*Hypochondriasis and Health-Related Attitudes.* Table 2, shows CIDI items tapping major features of Hypochondriasis and such health-related attitudes as the use of medical services and dissatisfaction with medical care. As can be seen in Table 2, discrete somatizers were significantly less likely to endorse any of these items than comorbid somatizers. This observation suggests that the subgroup of discrete somatizers is rather distinctive, even among somatoform syndromes.

*Clustering by Organ System.* The HICLAS analyses allo-

cated the 1455 patients into one of 11 major clusters. Table 3 lists these clusters, labeled A through K. Note that the most prevalent of these was Cluster K, "no symptom/no pattern," followed by assortments of symptoms from various organ systems (range = 2-7 organ systems), as well as individual symptom clusters representing gastrointestinal, cardiorespiratory, musculoskeletal, headache, and genitourinary symptoms. Surprisingly, these analyses showed that pseudoneurological and female-reproductive symptoms did not occur in isolation, but were always associated with symptoms from several other organ systems (see Clusters A and B in Table 2). Moreover, according to these analyses, the frequency of some of these clusters varied according to immigrant status, whereas in terms of physical functioning, Cluster A (the one including patients presenting pseudoneurological plus six other organ systems) was the most disabling. Results of these analyses have been reported in detail elsewhere (30).

*Abridged Somatization and Disability.* Mean scores in SF-36s "physical functioning" dimension were 22.6 for the somatizers and 25.3 for the nonsomatizers. The proportions of at least "moderately disabled" patients ("physical functioning" scores below 19) were 31% and 19%, respectively, for those above and below the abridged somatization threshold. These differences are statistically significant [ $t(1448) = 7.41, p < .0001$ ].

*Other Factors Associated with Disability.* Table 4 depicts the relationship between several variables and disability in this primary care sample. As shown in Table 4, hierarchical regression analyses indicate that demographic factors, number of depression and anxiety symptoms, number of organ systems, and number of unexplained symptoms all contribute independently to levels of disability as measured by the SF-36 Health Survey. Specifically, levels of disability were significantly higher for people who a) had lifetime diagnoses of Depressive or Anxiety disorders; b) were older; c) were born in the United States; d) had high numbers of somatization symptoms, and e) had somatoform symptoms attributable to many organ/body systems.

*Number of Organ Systems and Abridged Somatization.* When we examined the percentage of somatizers and nonsomatizers who reported symptoms attributable to the various body systems, we found, as expected, that patients who met the abridged somatization criteria were more likely to report

TABLE 2. Two Subtypes of Abridged Somatization, Hypochondriasis, and Health Attitudes

| CIDI Items Tapping Hypochondriasis and Health-Related Attitudes | Percent Endorsing Symptoms      |                                 |                                    |
|-----------------------------------------------------------------|---------------------------------|---------------------------------|------------------------------------|
|                                                                 | "Discrete" somatizers (N = 111) | "Comorbid" Somatizers (N = 203) | Significance (Fisher's exact test) |
| C52 Worry in past 12 months                                     | 32                              | 51                              | .001                               |
| C54 Worry significantly with function                           | 8                               | 42                              | .001                               |
| C55 Saw several MD's because of symptom                         | 15                              | 23                              | .035                               |
| C56 Received several tests because of symptom                   | 17                              | 25                              | .035                               |
| C57 Dissatisfied with MD                                        | 8                               | 30                              | .020                               |
| C58 MD mistaken                                                 | 13                              | 22                              | NS                                 |

TABLE 3. HICLAS Somatic Symptom Clusters

| Cluster | Number of Patients | Type of Symptoms <sup>a</sup> |
|---------|--------------------|-------------------------------|
| A       | 101                | CR FR GI GU H MS PN           |
| B       | 60                 | CR FR GI GU                   |
| C       | 77                 | GI MS                         |
| D       | 133                | CR H                          |
| E       | 271                | GU H MS                       |
| F       | 52                 | CR                            |
| G       | 148                | GU                            |
| H       | 120                | H                             |
| I       | 120                | MS                            |
| J       | 17                 | GI                            |
| K       | 356                | No pattern/few symptoms       |

<sup>a</sup> CR = cardiorespiratory; FR = female-reproductive; GU = genitourinary; GI = gastrointestinal; H = headache; MS = musculoskeletal; PN = pseudoneurological

**TABLE 4. Somatization and Disability<sup>a</sup> in Primary Care: Hierarchical Regression Including Demographic and Psychiatric Variables**

| Variable         | df | P     | Squared <sup>b</sup><br>Semipartial<br>Somatization | Multiple<br>Regression<br>Stand and<br>Estimates |
|------------------|----|-------|-----------------------------------------------------|--------------------------------------------------|
| Depression       | 1  | .0001 | .025                                                | -.025                                            |
| Anxiety          | 1  | .0168 | .003                                                | -.013                                            |
| Age              | 1  | .0001 | .088                                                | -.227                                            |
| Immigrant status | 1  | .0001 | .016                                                | .116                                             |
| Somatic symptoms | 1  | .0001 | .020                                                | .000                                             |
| Organ systems    | 1  | .0001 | .044                                                | -.281                                            |

<sup>a</sup> Score on SF-36 Health Survey, Physical Functioning Dimension.<sup>b</sup> Adjusted  $R^2 = .192$ ,  $p < .0001$ .

symptoms originating in several body systems than those who did not meet such criteria. Thus, 43% of patients with abridged somatization had symptoms attributable to four or more body systems compared with only 8% of nonsomatizers. Because the original definition of the abridged construct allows cases with high numbers of individual symptoms attributable to 1 to 2 body systems to meet criteria for the diagnosis, we thought that this dimension alone (symptom count) would not discriminate as well "pure" from "comorbid" somatizers. Indeed, a linear relationship between the number of somatic symptoms and comorbid psychopathology and disability had been demonstrated previously (22). Therefore, in an attempt to make the abridged index an even more accurate tool, we decided to examine the relevance of another dimension, namely the number of organ systems contributing to the symptoms. For these analyses, we posed the following question: Is the presence of unexplained symptoms attributable to multiple organ systems associated with an increase in the rate of psychiatric disorders? To answer this, we partitioned the 320 somatization patients who met criteria for the abridged construct into two groups; those with relatively "few" systems involved (<3 organ systems for men and <4 for women) and those with "many" systems involved ( $\geq 3$  for men,  $\geq 4$  for women). These procedures split the abridged somatizing group roughly in two halves, with numbers of 150 and 170, respectively. Table 5 shows rates of psychiatric disorders for the two partitions of the somatizing group. Note from Table 5 that rates for comorbid psychiatric disorders are significantly higher for somatizers with "many" organ systems

**TABLE 5. Percent Meeting Criteria for Various Psychiatric Disorders**

| Disorders (CIDI) | Abridged Somatizers                            |                                               | Significance<br>(Fisher's exact test) |
|------------------|------------------------------------------------|-----------------------------------------------|---------------------------------------|
|                  | Many Organ<br>Systems<br>Involved<br>(N = 170) | Few Organ<br>Systems<br>Involved<br>(N = 150) |                                       |
| Anxiety          | 15.3                                           | 4.0                                           | .01                                   |
| Depression       | 45.3                                           | 28.7                                          | .01                                   |
| Melancholic type | 15.9                                           | 10.0                                          | NS                                    |
| Dysthymic        | 9.4                                            | 5.3                                           | NS                                    |
| Phobia           | 35.9                                           | 21.3                                          | .01                                   |
| PTSD             | 49.6                                           | 31.9                                          | .01                                   |

than for those with "few" organ systems involved. For example, it is noteworthy that almost one half of the somatizers with symptoms representing "multiple" body systems met both the PTSD and Major Depression criteria. Thus, Abridged Somatization involving "multiple" body systems seems to predict high levels of psychiatric comorbidity.

## DISCUSSION

The data presented herein, drawn from a large multiethnic sample of primary care users, lend additional support to the validity of an abridged construct of somatization. To our knowledge, this is one of the largest primary care samples systematically examined with a structured diagnostic instrument in the United States. The size and the rich multiethnic composition of this clinical sample are unique factors that may allow the extrapolation of these findings to other primary care samples.

According to these results, a relatively large proportion of primary care users (about one fifth of them) meet the abridged definition of somatization. Two thirds of such patients also meet criteria for other major psychiatric diagnoses. Using these data, several meaningful subtypes of abridged somatization, some of them overlapping, others quite distinct, can now be defined along several dimensions. These subtypes may help discriminate a) the more disabled from the less disabled somatizers, b) those with high prevalence of comorbid depressive or anxiety syndromes from those with low prevalence, and c) among various immigrant groups. These subtypes are described below.

### Abridged Somatization Subtypes

A first set represents differentiation based upon the *number* of organ body systems involved. Here we can distinguish Abridged Somatization involving "few" organ systems, which we will designate as the "simple" type, with a prevalence rate of 8%, and Abridged Somatization involving "multiple" organ systems, designated the "polymorphous" type, and is far more disabling and a bit more prevalent than the former (12%). Recently, a new syndrome, "Multisomatoform Disorder" was derived from the PRIME-MD (31). It resembles the simple type detailed above, and has a very similar prevalence in Primary Care (8.2%). It would be interesting to examine the equivalency of these syndromes in a future study.

A second set represents subtypes differentiated by the *type* of body system involved. Within this set, we distinguish a seven-organ-system cluster, having symptoms attributable to all major organ systems, including pseudoneurological ones, two distinct three-symptom clusters, and three single organ system subtypes (genitourinary, cardiorespiratory, and headache). The above clusters had prevalence rates within the 0.5% to 2.0% range, and differed in their impact on physical functioning (the more organ systems, the more disability).

A third and final set includes discrete versus comorbid abridged somatization syndromes, which show prevalence rates of 7% and 14%, respectively, and are associated with similar levels of disability. According to the data, the discrete somatizers were less likely to endorse symptoms of hypochondriasis, displayed less discontent with medical care, made fewer visits to the physicians, and received fewer tests overall than the comorbid somatizers. Therefore, we are left with the impression that the discrete abridged somatization subtype is an intriguing syndrome for future studies (eg, therapeutic

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trials) because of its relatively high prevalence in primary care (7%), and the fact that it shows very little overlap with other psychopathological constructs such as Anxiety and Depression syndromes and symptoms of Hypochondriasis.

Differences detected across the various groups concerning symptom presentation, somatic symptom clusters, and comorbidity are of significant interest and may be related to unique sociocultural elements operating in these groups. Interestingly, the observation that United States-born patients seemed to have higher levels of disability than immigrants, supports previous observations in community samples (32).

*Usefulness in Primary Care.* Notwithstanding these promising results on the predictiveness and research utility of the abridged construct, it must be emphasized that it is not a formal diagnosis, but rather a symptom index that may help separate organic from functional somatic syndromes. However, having to scrutinize such a large number of individual symptoms ( $N = 40$  in CIDI) remains a practical shortcoming for using this construct in primary care. Thus, although a patient with the disorder may meet criteria after asking about only 10 to 12 symptoms, one cannot be sure that a patient does not have the syndrome until one has gone through all symptoms. Obviously, practical use of this construct in primary care awaits the development of briefer symptom inventories, ideally suited for self administration, a task we are currently addressing.

The present study is limited because of its exclusive reliance on self-report of symptoms, the lack of a measure of medical comorbidity, and the use of lay examiners who may have difficulty differentiating symptoms due to medical illness from symptoms due to "stress" or psychological disorders. We also suspect that because medical visits and diagnoses are an integral component of the set of probes used for eliciting somatization, the rates of this diagnosis in recent, unacculturated immigrants may not have been elicited as accurately as in the case of other groups because of language barriers and other economic and cultural factors affecting the availability of and the access to health services.

Nonetheless, we are confident that the abridged construct is an excellent "screener" for somatoform, mood, and anxiety disorders, and can be an effective predictor of disability in primary care settings. The additional examination of the original construct that we have presented here may enhance its precision, predictiveness, and practical value. Thus, it may be now possible to discriminate more accurately between different types of psychopathology and partition somatization into more meaningful subtypes, just by simply eliciting a handful of somatic symptoms. These promising leads should be replicated in other clinical samples and systematically tested in future research.

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