British Journal of Psychiatry (1989), **154** (suppl. 4), 24–27

Unexplained Physical Complaints

Psychopathology and Epidemiological Correlates

JAVIER I. ESCOBAR and GLORISA CANINO

Definitions of terms

'Hypochondria', 'hypochondriasis', and 'somatisation' are terms long used to characterise individuals who display unrelenting somatic symptoms that cannot be medically explained. A psychiatric aetiology for such phenomena is often assumed on the basis of potential psychological gain, the presence of 'stressors', the co-existence of unexplained somatic symptom and symptoms of depression or anxiety, or merely the absence of a medical explanation.

'Somatisation', the term coined by Stekel (1921) to denote a bodily disorder thought to arise from psychological causes, has become one of the most widely used concepts when referring to unexplained physical symptoms, perhaps because others have acquired a pejorative connotation. 'Somatisation' and 'hypochondriasis' are used more or less interchangeably to describe broad categories of disorder (Barsky & Klerman, 1983; Kirmayer, 1984) more commonly observed among females, those with low levels of education and those with symptoms of depression particularly if they are from a non-western or developing country.

Current diagnostic systems such as DSM–III and ICD–10 include a category of 'somatoform' disorders that seeks to encompass phenomena previously referred to as hysteria/hypochondriasis/somatisation, in efforts to allocate them into more discrete categories. Only one of these categories, Somatisation Disorder in DSM–III or multiple somatisation disorder in ICD–10, has been dutifully validated through follow-up studies, at least in its original form, by the Washington University–Renard Hospital's group in their concept of Hysteria/Briquet Syndrome (Perley & Guze, 1962). The remaining somatoform diagnoses constitute rather non-specific symptom clusters that cannot be properly operationalised and rarely occur in pure forms.

Functional somatic symptom assessment

In North American operational systems, e.g. Feighner *et al* (1972), Research Diagnostic Criteria, RDC (Spitzer *et al*, 1975) and DSM–III, Somatisation Disorder (SD) is effectively assessed by specifically asking and probing about each of a long list of potential symptoms. Interestingly, the number of possible symptoms and the necessary thresholds for them have undergone progressive shrinkage since the original St Louis criteria were devised. Although the original criteria took into account qualitative aspects of the symptoms (e.g. vagueness, dramatism) as important elements for the diagnosis, in DSM–III and DSM–III-R, the diagnosis is made solely on the basis of counts of symptoms that meet criteria for severity and exclusion. Thus, DSM–III SD could be technically described as 'Somatic Symptom Index-12, 14', DSM–III-R's SD as 'Somatic Symptom Index-13', and so on.

Diagnostic interview schedule (DIS) somatisation disorder items

The DIS is a highly structured diagnostic instrument that elicits operational diagnoses (e.g. DSM–III) (Robins *et al*, 1981). In the case of SD, the DIS asks about the presence of each of 37 possible symptoms (e.g. pain in various areas, cardiovascular, gastrointestinal, or gynaecological symptoms). If the symptom is present, a system of probes explores its severity and rules out its relatedness with physical illness, or the use of medication, drugs, or alcohol prior to scoring it as a 'possible' psychiatric symptom (or a functional somatic symptom).

Abridged somatisation constructs

In view of the rarity of the full DSM–III SD in the community populations surveyed by the Epidemiological Catchment Area (ECA) study (Robins *et al*, 1984), the senior author (JIE) explored the use of abridged or subsyndromal symptom counts in efforts to assess the correlates of the more broad somatisation/hypochondriasis notions, and in particular their ethnic distribution in community populations (Escobar, 1987). A clinical study with the DIS on a clinical sample of males of Hispanic and non-Hispanic White ethnic backgrounds had shown that a cut-off of four or more symptoms that were scored as meeting criteria significantly discriminated between the two groups. This score was arbitrarily set as the cut-off for males, while two more symptoms ($n = 6$) were set as the cut-off for females. To distinguish it from other somatisation notions, this abridged construct is referred to as Somatic Symptom Index 4, 6 (SSI 4, 6).

SSI 4, 6 in community populations

SSI 4, 6 was tested on two large data sets, the Los Angeles ECA study (Escobar *et al*, 1987) and the Puerto Rican

https://doi.org/10.1192/S000712500029572X Published online by Cambridge University Press

epidemiological survey (Canino *et al*, 1987). These two surveys used identical methods, including the DIS, in interviewing large representative samples of three populations: Los Angeles Mexican Americans, Los Angeles non-Hispanic Whites, and Puerto Ricans residing in Puerto Rico. The lifetime prevalence of DSM-III – Somatisation Disorder was 0.06% in Los Angeles and 0.7% in Puerto Rico (both, lifetime and 6-month rates were identical at each site), while the lifetime prevalences of SSI 4, 6 were 4.4% in Los Angeles and 19% in Puerto Rico. In both surveys, the correlates of abridged somatisation were identical. Thus, SSI 4, 6 was more prevalent among females, those above the age of 40, and those with a co-existent diagnosis of major depression/dysthymic disorder (Escobar *et al*, in press).

Ethnicity and SSI 4, 6

Ethnic comparisons of the prevalence of SSI 4, 6 showed that Puerto Ricans had the highest rates, followed by Mexican Americans, and non-Hispanic Whites. Mexican American females over the age of 40 had higher prevalence rates than their non-Hispanic White counterparts, but other differences between Mexican Americans and non-Hispanic Whites disappeared when educational level was controlled. However, even after controlling for age, gender, and educational level, the relative risk for SSI 4, 6 among Puerto Ricans remained about twice as high as that for the other groups (Fig. 1).

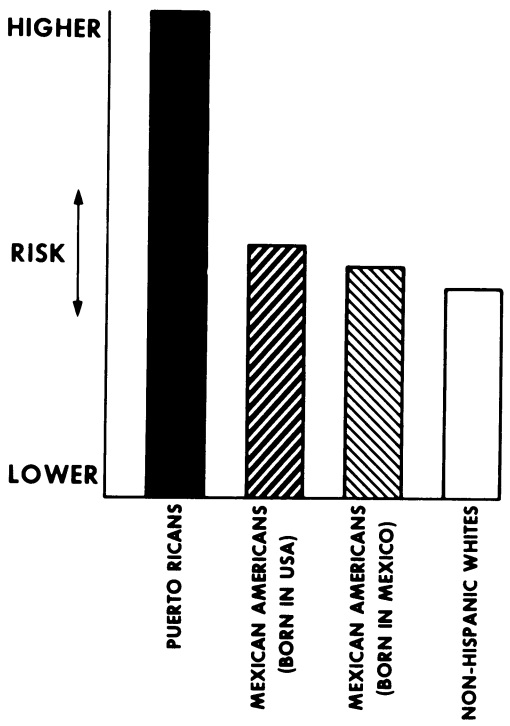


FIG. 1 SSI and ethnicity. Relative risk for community respondents at the Los Angeles and Puerto Rico study sites to meet the SSI criteria. Logistic regressions with the unweighted data showed the differences between Puerto Rican and other ethnic groups were statistically significant (Escobar *et al*, in press).

SSI 4, 6 and use of medical services

One of the common correlates of somatisation is the preferential and repeated use of medical services for 'physical' problems. Information to test this outcome was available only for the Los Angeles ECA study, and is summarised in Fig. 2. As can be seen in the figure, when respondents who meet criteria for at least one psychiatric diagnosis are considered, those who also meet criteria for SSI 4, 6 use medical services overwhelmingly more than those who do not meet the SSI criteria.

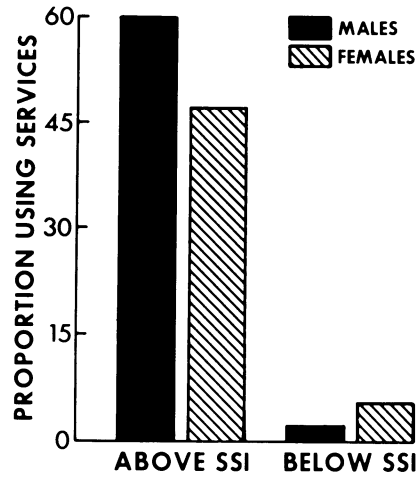


FIG. 2 SSI and use of medical services. Use of medical services reported by community respondents at the Los Angeles ECA site shown broken down into male and female for those above *v.* those below the SSI, 4, 6 cut-off.

SSI, 4, 6 and disability

We believe that the validity of a somatisation construct hinges on its predicting high levels of disability. In the Los Angeles ECA survey, disability was operationally defined during the 'past week' as at least one day in bed (sick leave), or inability to function due to 'physical' condition. In Puerto Rico, disability was estimated only on the basis of 'current inability to work due to poor health'. Although relative rates are about one-third lower in Puerto Rico, (perhaps reflecting the higher unemployment and the less specific question asked), differences between those at or above, and those below the SSI 4, 6 threshold were dramatic at both sites (Fig. 3).

https://doi.org/10.1192/S000712500029572X Published online by Cambridge University Press

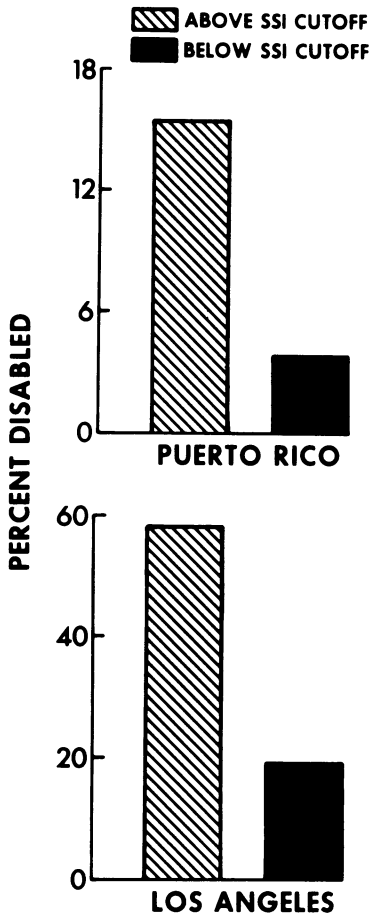


FIG. 3 SSI and disability. Proportion of respondents who reported significant disability. This was operationalised differently at each site (see text).

SSI 4, 6 and major depressive/dysthymic disorders

When samples are broken down by DIS diagnoses into three groups: (a) those with diagnoses of major depressive/dysthymic disorder; (b) those with other DIS diagnoses (excluding depression, dysthymia, and somatisation) and (c) those without any DIS diagnosis, striking cross-cultural differences emerge (Escobar *et al*, in press).

Thus, while the SSI 4, 6 prevalence increases progressively from 'no DIS diagnosis', through 'DIS depression/dysthymia', this increase is most dramatic for the Puerto Rican and Mexican American respondents (data not shown).

Discussion

In the absence of 'gold standards' to confirm validity of a diagnosis, inferences about usefulness of a new set of criteria have to be made on the basis of its discriminating power – e.g. association to such outcomes as use of medical services, consistent relatedness to some socio-demographic and psychopathological factors, and most importantly, its auguring future impairment (e.g. disability). Also, if the construct is to have practical value (e.g. to be used as screener), it should have a relatively high prevalence and a high overall sensitivity that would allow effective netting of most cases for posterior sorting. SSI 4, 6 is an abridged construct of somatisation that may capture phenomena once broadly covered by the pre-DSM-III notions of hypochondriasis/somatisation. Its prevalence is about 100 times higher than that for the full DSM-III, SD diagnosis, while having similar correlates and predicting similar outcomes. In view of the low prevalence of SD, which is the only DSM-III somatoform diagnosis amenable for expedient elicitation, developing such an abridged construct may have enormous practical value, particularly if the number of 'possible' symptoms (those to be individually scrutinised) can be trimmed down to the range of 10–15 symptoms. The data indicates that SSI 4, 6 is strongly associated with diagnoses of major depressive/dysthymic disorder, and that this association is stronger in the case of Hispanic populations. Recent comparative data from three other ECA sites have also shown that Blacks have higher rates of SSI 4, 6 than non-Blacks (Marvin Swartz, MD, Duke University, personal communication, June 1988).

Data on Hispanic populations indicate that Puerto Ricans of any age and sex are more likely to exhibit unexplained somatic symptoms than Mexican Americans and US non-Hispanic Whites, even after controlling for level of education. In the case of Los Angeles Mexican Americans, only females older than 40 years have a unique tendency to display unexplained symptoms, particularly if they are depressed. These observations are in support of those of past cross-cultural studies (Mezzich & Raab, 1980; Escobar *et al*, 1983) which reported that Latin American patients somatised more than their North American counterparts, implying that unexplained somatic symptoms are a culturally relevant phenomenon. Unfortunately, it is not always possible to disentangle the contributions of ethnicity from those of social class, since Hispanics are often over-represented in the lower educational strata.

https://doi.org/10.1192/S000712500029572X Published online by Cambridge University Press

References

BARSKY, A. J. & KLERMAN, G. I. (1983) Overview: hypochondriasis, bodily complaints and somatic styles. *American Journal of Psychiatry*, **140**, 273–283.

CANINO, G., BIRD, H. R., SHROUT, P., *et al* (1987) The prevalence of specific mental disorders in Puerto Rico. *Archives of General Psychiatry*, **44**, 127–135.

ESCOBAR, J. I., GOMEZ, J. & TUASON, V. B. (1983) Depressive phenomenology in North and South American patients. *American Journal of Psychiatry*, **140**, 47–51.

—— (1987) The somatizer cross-culturally: Towards an operational definition of the trait 'somatization'. *Hospital and Community Psychiatry*, **38**, 174–180.

——, BURNAM, M. A., KARNO, M., *et al* (1987) Somatization in the community. *Archives of General Psychiatry*, **44**, 713–718.

——, GOLDING, J. M., HOUGH, R. L., *et al* (1987) Somatization in the community: Relationship to disability and use of services. *American Journal of Public Health*, **77**, 837–840.

——, RUBIO, M., CANINO, G., *et al* (in press) Somatic Symptom Index (SSI) A new and abridged somatization construct: prevalence and epidemiological correlates in two large community samples. *Journal of Nervous and Mental Disease*, (in press).

FEIGHNER, J. P., ROBINS, E., GUZE, S. B., *et al* (1972) Diagnostic criteria for use in psychiatric research. *Archives of General Psychiatry*, **29**, 381–389.

KIRMAYER, L. J. (1984) Culture affect and somatization. *Transcultural Psychiatry Research*, **21**, 159–188.

MEZZICH, J. E. & RAAB, E. S. (1980). Depressive symptomatology across the Americas. *Archives of General Psychiatry*, **37**, 818–823.

PERLEY, M. G. & GUZE, S. B. (1962) Hysteria: The stability and usefulness of clinical criteria, *New England and Journal of Medicine*, **266**, 421–426.

ROBINS, L. N., HELZER, J., CROUGHAN, J., *et al* (1981) The National Institute of Mental Health Diagnostic Interview Schedule: Its history, characteristics, and validity. *Archives of General Psychiatry*, **38**, 381–389.

——, HELZER, J. E., WEISSMAN, M. M., *et al* (1984) Lifetime prevalence of specific psychiatric disorders in three sites. *Archives of General Psychiatry*, **41**, 949–958.

SPITZER, R. L., ENDICOTT, J. & ROBINS, E. (1975) *Research Diagnostic Criteria (RDC) for a selected group of functional disorders.* New York: New York State Psychiatric Institute.

STEKEL, W. (1921) Storungen des Trieb und Affektlebens. *Nervose Angstzustande und Ihre Behandlung*. Berlin: Urban & Scwarzenberg.

*Javier I. Escobar, MD, *Department of Psychiatry, University of Connecticut Health Center*; Glorisa Canino, PhD, *Department of Psychiatry, University of Puerto Rico, San Juan, Puerto Rico*

*Correspondence: *VA Medical Center (14A), 555 Willard Avenue, Newington, Connecticut 06111, USA*

https://doi.org/10.1192/S000712500029572X Published online by Cambridge University Press