

Is “somatisation” a defense against the acknowledgment of psychiatric disorder?

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Abstract

Objective: To determine whether experiencing physical symptoms is associated with a denial of psychological distress in individuals with probable psychiatric disorder. **Methods:** A nested case-control study was performed using data from a national birth cohort study. All subjects who scored above threshold on a case-finding questionnaire of psychiatric disorder were identified. Those who in a separate question endorsed the presence of psychiatric disorder (“acknowledgers”) were compared with those who did

not. **Results:** Acknowledgers were more likely to be female, better educated and have more severe current and past psychiatric disorder. They were also more likely to report multiple physical symptoms, even when potential confounders and severity of psychiatric disorder were controlled. **Conclusion:** There is no evidence that experiencing multiple physical symptoms helps the individual deny the presence of psychiatric disorder. © 2001 Elsevier Science Inc. All rights reserved.

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Introduction

Patients with psychiatric disorder are more likely to present to general practitioners complaining of physical symptoms than with emotional distress [1]. This phenomenon, usually referred to as somatisation, has been explored in a number of studies in primary care settings [2–9]. Bridges et al. [5] used operational criteria to define somatisation. Patients were described as somatisers if (1) they suffered from a diagnosed psychiatric disorder, (2) they complained to their GP of physical symptoms unaccounted for by defined organic pathology, (3) they were resistant to psychological attributions for their symptoms, and (4) the symptoms were judged likely to improve if the psychiatric disorder was successfully treated. Although these criteria (especially 4) have been modified in subsequent research [6,7,9,10], and it is often difficult to determine reliably whether a physical symptom is accounted for by defined pathology, the concept of somatisation as described has been influential.

Psychological presentations of psychiatric disorders are relatively rare in primary care. Most patients with psychiatric disorder present with somatic symptoms, although those fulfilling all four of the Bridges and Goldberg criteria (true somatisers) are less common than those who either present with physical symptoms, which they attribute to psychological factors (initial somatisers), or present with physical symptoms attributed to physical causes but who can be persuaded to make psychological attributions when directly questioned (facultative somatisers) [7].

Several studies (reviewed by Garcia-Campayo and Sanz-Carrillo [11]) have shown relatively consistent features of somatised presentations for psychiatric disorder. (1) Somatisers had less psychological distress than psychogisers [2,4,5,7,9,10]. (2) Somatisers had similar levels of somatic distress compared with psychogisers [5,7]. (3) Somatisers have fewer social problems and dissatisfaction than psychogisers [2,12]. (4) Somatisers may have better outcome than psychogisers, both in terms of psychological distress and physical symptoms [7]; and (5) somatisers were less likely to have a past psychiatric history than psychogisers [5,7].

A widely held view is that in patients with medically unexplained symptoms, the physical complaints are a

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means of avoiding underlying psychological distress. Bridges et al. put it as follows “somatization in community settings may not be a maladaptive but an adaptive response to psychiatric illness: a person can avoid the blame for life’s vicissitudes...” [5]. Hence, the finding that somatisers have less psychological distress than psychologisers is often interpreted as evidence that the act of presenting in a somatic form protects or defends against painful symptoms of depression or anxiety.

This view is at odds with data from epidemiological studies, which consistently show a striking relationship between physical symptoms and minor psychiatric morbidity: thus, the greater the number of physical symptoms subjects endorse, the greater the likelihood they will report symptoms of anxiety and depression [13–17]. While it may be that some of the physical symptoms reported in such studies are due to defined biomedical disease, and these diseases are themselves associated with psychiatric disorder, this is unlikely to account for the majority of subjects with physical symptoms. Nor is it likely to account for such strong associations. Most physical symptoms in primary care are not accounted for by defined disease [18], and there is no reason to believe that the situation is any different in community studies.

If most people with psychiatric disorder do not identify themselves as depressed or anxious, what are the characteristics of those who do? In this paper, we use a population-based survey to define a group of individuals with probable psychiatric disorder (defined as scoring above threshold on a self-report questionnaire), and determine which factors are associated with the disorder being acknowledged by the individual. In particular, we address the hypothesis that experiencing physical symptoms may act as a defence against acknowledging psychiatric disorder. Put formally, we seek to test the following hypotheses.

Hypothesis 1: Individuals suffering from probable psychiatric disorder who label themselves as such will have more severe psychological symptoms and are more likely to have a past history of psychiatric disorder.

Hypothesis 2: Individuals who do not acknowledge psychological distress will complain of more physical symptoms when the severity of psychological distress is controlled for. They will also be more inclined to consult with physical symptoms.

Methods

The Medical Research Council National Survey of Health and Development

The Medical Research Council National Survey of Health and Development is a national birth cohort set up in 1946 [19]. The survey was based on a social-class

stratified sample of all single, legitimate births, which occurred in England, Wales and Scotland in 1 week of March 1946. The sampling procedure and follow up has been described in detail elsewhere [19]. The stratification was based on father’s social class: all children born to farm labourers and nonmanual workers were surveyed, while those born to manual labourers were sampled in a ratio of 1:4. Since 1946, 19 waves of data gathering have been performed, which have included gaining information from the teachers, health visitors, parents, and school doctors during childhood, and postal questionnaires and interviews with research nurses during adulthood.

Assessment of psychiatric disorder

At age 36, the survey members were administered a semi-structured psychiatric interview, the Present State Examination (PSE) [20], a diagnostic assessment that asks about 48 psychological symptoms, including low mood, anxiety and phobias. From the PSE, a validated ordered categorical variable, the “index of definition” may be calculated, which corresponds to differing severities of distress. An ID of 5 or more is conventionally taken as evidence of psychiatric disorder. An ID of 3–4 can be considered to be “subthreshold” disorders. The PSE interviews were audio-taped and validated by a psychiatrist [21]. The PSE scores were used to gain a proxy measure for past psychiatric disorder.

At age 43, the Psychiatric Symptom Frequency (PSF) questionnaire was administered [22]. This is an 18-item checklist of psychiatric symptoms, which records the frequency with which they were present over the previous year. The questionnaire has been validated and shows high internal consistency between items (Cronbach’s alpha = .88). Factor analysis indicates the scale reflects one main factor (depression/anxiety). A score of greater than 13 was used to define probable psychiatric disorder. At age 43, survey members were also asked “have you ever had nervous or emotional trouble or depression?”

For the purposes of this study, we defined the study sample as all those who had a score >13 on the PSF. Therefore, all subjects included in the analyses presented here had probable psychiatric disorder. Subjects known to have suffered from psychotic illness were removed from the sample. Subjects were categorised according to their answer to the question on past or present emotional disorder or depression. Those who acknowledged emotional disorder were labelled as “acknowledgers.”

Socio-demographic factors

The survey has collected information on Survey Members’ educational attainment, marital status, social class, and past psychiatric admissions.

Physical symptoms

At age 43 years, the survey collected information on the following physical symptoms or complaints: chest pain, dizziness, back pain, arthritis and rheumatism, headache and abdominal pain. The complaints were assessed according to the survey members' reports from a checklist of symptoms administered by the nurse. The question implied a recurrent problem with the symptom. Chest pain was assessed on the World Health Organisation Angina Questionnaire [23]. For all symptoms except chest pain, subjects were asked whether they had visited their GP.

Statistical analyses

All analyses were performed using STATA computer software [24]. This study was a nested case-control, which compared "acknowledgers" with "nonacknowledgers." After univariate analyses assessing the strength of relationships between socio-demographic risk factors and acknowledgment, logistic regression analysis, weighted for sampling fractions, was performed. This analysis controlled for probable socio-demographic and clinical confounders.

Results

In 1989 (age 43 years), 3262 (60.8%) survey members were interviewed. When those survey members who had died or moved abroad were excluded from the denominator, this proportion rose to 74%. The survey's representativeness of the original sample has been described elsewhere [19]. There was a modest difference in contact according to gender with a slightly higher proportion of women than men being traced, but this is mainly accounted for by higher death rates and more emigration by men. Otherwise, there were no important systematic differences in follow up rates.

Nine hundred seventy-eight individuals were identified as suffering from probable psychiatric disorder age 43. From this, 19 were excluded because of past history of psychotic illness (schizophrenia and bipolar illness). A further 14 had missing data from the question concerning acknowledgment of current or past psychiatric disorder, yielding a total of 955 subjects for this study. Forty-three percent of those identified with probable psychiatric illness had identified themselves as suffering from "nervousness, emotional trouble or depression" on direct questioning. We refer to this outcome as "acknowledgment."

Table 1
Characteristics of "acknowledgers" compared with "nonacknowledgers"

	<i>N</i> (% who acknowledge psychiatric disorder)	Unadjusted odds ratio (95% CI) controlled for sampling fraction	Adjusted odds ratio (95% CI) controlled for all other variables in table, and sampling fraction
<i>Gender</i>			
Male	396 (36.9)		
Female	559 (47.4)	1.6 (1.2–2.2)	1.4 (0.9–2.0)
<i>Educational status</i>			
Below 'O' level	468 (37.2)		
'O' level and above	431 (50.8)	0.6 (0.4–0.8)	0.7 (0.5–1.1)
<i>Social class</i>			
Manual	412 (38.6)		
Nonmanual	494 (46.6)	0.7 (0.5–1.0)	0.9 (0.6–1.3)
<i>Previous psychiatric admissions</i>			
No	878 (38.7)		
Yes	77 (92.2)	19.0 (6.8–53.2)	10.1 (3.0–33.3)
<i>Index of definition on PSE age 36</i>			
1	262 (35.5)	1.0	1.0
2	286 (32.2)	0.8 (0.5–1.3)	0.8 (0.5–1.2)
3	111 (51.4)	1.9 (1.1–3.3)	1.7 (0.9–3.2)
4	85 (57.7)	3.2 (1.8–5.8)	2.3 (1.2–4.6)
5+	104 (69.2)	4.7 (2.6–8.4)	2.2 (1.1–4.4)
<i>Score on PSF age 43</i>			
14–16	237 (29.1)	1.0	1.0
17–20	232 (31.9)	1.4 (0.9–2.3)	1.5 (0.9–2.6)
21/30	280 (42.5)	2.2 (1.4–3.5)	2.1 (1.3–3.5)
31+	206 (72.3)	8.5 (5.2–14.0)	6.3 (3.5–11.4)

Table 1 shows the socio-demographic characteristics and the relationship between severity of current psychiatric symptoms, past psychiatric symptoms and past psychiatric hospital admissions and acknowledgment. The third column indicates that those who acknowledge their distress are more likely to be female, better educated, from higher socio-economic groups, and to have more severe present and past psychiatric disorder. The most powerful association was with previous psychiatric admission. Column four shows the odds ratios for these variables when they are entered into the same logistic regression model. Gender, social class and educational status were no longer statistically significant, but all the associations remain in the same direction.

Table 2 demonstrates the relationship between acknowledgment and physical symptoms. The third column shows unadjusted odds ratios of acknowledging distress according to the presence of symptoms. In all but one case (backache), the presence of physical symptoms is associated with a statistically significant increased likelihood of acknowledging distress. After controlling for the poten-

tially confounding variables shown in Table 1, these relationships were reduced, and only two symptoms (abdominal pain and dizziness) showed a significant relationship. The most striking relationship was between the number of physical symptoms reported and the likelihood of acknowledging distress. Even after controlling for potential confounders, there is a powerful relationship between increasing physical symptoms and increased probability of acknowledging distress.

Table 3 shows the relationship between acknowledgment and reported consultations for physical symptoms. The analyses shown include only those who complain of the various physical symptoms. Thus, for backache, the figures reported describe the relative odds of consulting with the symptom, if distress has been acknowledged. This table indicates that acknowledgment of distress is associated with an increased likelihood of consulting when a symptom is present. For three of the five symptoms, this is statistically significant. On controlling for potential confounders, it only remains statistically significant for dizziness. However, the overall

Table 2
Relationship between individual and multiple symptoms and acknowledgment

Symptom	N with symptom (% acknowledging distress)	Unadjusted OR (95% CI) corrected for sampling weight	OR (95% CI) adjusted for gender, social class, educational level, past psychiatric admission, score on PSE0 (age 36) and score on PSF (age 43)
<i>Arthritis</i>			
No	746 (40.9)		
Yes	206 (51.5)	1.5 (1.1–2.2)	1.3 (0.8–2.0)
<i>Backache</i>			
No	615 (41.3)		
Yes	336 (46.1)	1.2 (0.9–1.6)	1.2 (0.8–1.7)
<i>Dizziness</i>			
No	802 (39.2)		
Yes	152 (63.8)	3.2 (2.1–4.9)	2.5 (1.5–4.2)
<i>Headache</i>			
No	607 (40.0)		
Yes	346 (48.6)	1.3 (1.0–1.8)	1.0 (0.7–1.4)
<i>Chest pain</i>			
No	688 (40.4)		
Yes	266 (50.0)	1.6 (1.2–2.3)	1.4 (0.9–2.2)
<i>Abdominal pain</i>			
No	772 (40.2)		
Yes	180 (55.0)	2.0 (1.4–3.0)	2.3 (1.4–3.7)
<i>Total symptoms</i>			
0	220 (33.2)	1.0	1.0
1	300 (39.3)	1.4 (0.9–2.2)	1.4 (0.8–2.2)
2	224 (42.4)	1.6 (1.0–2.6)	1.6 (0.9–2.7)
3	127 (54.3)	2.8 (1.6–4.8)	2.0 (1.0–4.0)
4+	84 (67.7)	4.5 (2.4–8.5)	3.0 (1.4–6.5)

Table 3
 “Acknowledgment” as a risk factor for consultation with physical symptoms

Symptom	Unadjusted odds ratio (95% CI) of consulting with symptom given acknowledgement	Adjusted odds ratio (95% CI) of consulting with symptom given acknowledgement ^a
Arthritis	1.4 (0.7–2.8)	1.0 (0.4–2.2)
Backache	1.5 (0.9–2.6)	1.4 (0.7–2.8)
Dizziness	8.6 (3.3–22.0)	11.1 (3.1–39.4)
Headache	3.2 (1.6–6.3)	1.5 (0.6–3.4)
Abdominal pain	2.8 (1.2–6.4)	2.0 (0.7–5.4)

^a Adjusted for gender, social class, educational level, past psychiatric admission, score on PSE (age 36) and score on PSF (age 43).

pattern is for a slight increased likelihood of consultation with acknowledgment.

Discussion

This study set out to test two hypotheses. The first was that individuals who suffer from probable psychiatric disorders and label themselves as such have more severe current psychological symptoms and/or a past history of psychiatric disorder. We provide strong evidence for this hypothesis: both past psychiatric disorder and more severe current psychiatric symptoms were related to acknowledgment of psychiatric distress. The second hypothesis was that subjects who failed to acknowledge psychiatric distress were more likely to suffer from physical symptoms and to consult with them. We found the opposite. Subjects who acknowledged psychiatric disorder were more likely to complain of multiple physical symptoms as well as dizziness and abdominal pain, even after controlling for severity of distress and past psychiatric disorder. A similar trend was seen for consultations with consultations for dizziness being strongly associated with acknowledging distress.

Methodological problems

Our measurement of acknowledging psychiatric disorder was crude, and we were not able to assess the survey member’s explanations and attributions for their bodily sensations. An important proportion of “somatisers” present with a mixed attributions and the distinction we make between “acknowledgers” and “nonacknowledgers” does not capture the complexities of clinical practice. Our definition does not map exactly onto current definitions of somatisation.

It is possible that a proportion of the physical symptoms reported by survey members could have been explained by defined organic pathology. If patients with medically explained physical symptoms were more likely to acknowledge psychological distress, this could account for our findings. However, there are three reasons why we do not

think this is likely to be the main explanation. Firstly, the sample was relatively young, which suggests rates of physical disease would be low. Secondly, our previous work on the National Survey of Health and Development shows that only 10% of survey members with multiple physical symptoms had any defined organic pathology to explain their symptoms [25]. Thirdly, most common physical symptoms in primary care are not judged to be explained by defined organic pathology [18].

The distinction between medically explained versus medically unexplained symptoms requires subjective judgement. Studies on somatisation in general practice typically rely on the doctor to make a judgement, and there is little evidence available to show that such judgements are either valid or reliable. The process by which abnormal bodily sensations become symptoms is a complex one, and in many patients judged clinically to have somatoform disorders, there is evidence of minor pathological change (e.g., degenerative spinal disease in patients with chronic low back pain) [26]. Relying on doctors to make such judgements for research studies may bring in a variety of sources of bias — the judgement may be affected by the doctor’s prior knowledge of the patient; their view as to whether the patient is suffering from a psychiatric disorder; and their understanding of a particular symptom. Our study, with its population-based sample and use of structured questionnaires, gets around some of these difficulties, but introduces some ambiguity about the exact nature of the reported physical symptoms.

Interpretation

What are the implications of these findings? The finding that recognition of psychiatric disorder is related to severity of current symptoms and having a past history of psychiatric disorder is hardly surprising. However, this implies that many of the findings of previous studies of somatic presentations in primary care can be explained by the fact that severity of psychiatric disorder has not been taken into account. Patients who (in the terms of the present study) fail to acknowledge psychiatric disorder, are presumably also more likely to be described as somatisers when presenting to primary care. This is because without acknowledging the psychiatric disorder, they are more likely to attribute symptoms to physical health problems, and to be resistant to psychological attributions. We have shown that failure to acknowledge psychiatric disorder is strongly related both to the severity of the current psychiatric disorder, and whether it has been experienced in the past. Instead of suggesting the lower levels of psychiatric symptoms in somatisers result from the protective nature of the process, it is more parsimonious to conclude that patients present somatically because they have milder psychiatric symptoms, and have simply not acknowledged the presence of a psychiatric or emotional disorder.

These findings suggest that in the majority of cases experiencing physical symptoms does little to avoid the acknowledgment of psychological distress. Experiencing physical symptoms does not appear to be a defence against either psychiatric disorder or its acknowledgment. Nor does the acknowledgment of distress prevent patients from consulting doctors with common physical symptoms. This implies that the notion of somatisation as a process where the experience of physical symptoms protects against acknowledgement of psychic pain is likely to be incorrect. While it is possible that some patients with very abnormal illness behaviour use physical symptoms as a means to deny psychological distress, this is unlikely to explain more than a tiny minority of somatic presentations.

In order to understand the consulting behaviour and attributions of patients with medically unexplained symptoms, it is necessary to go beyond simplistic “either/or” arguments about symptoms having a function. To understand the processes by which patients present to their doctors requires research, which can identify risk factors for the various component behaviours involved [27]. We suggest our findings provide some clues on the factors, which determine acknowledgment of psychiatric or emotional disorder, and in turn may cast light on the problem of somatisation.

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