

# Somatic presentation of psychiatric morbidity in general practice

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## SUMMARY

**Background.** Twenty per cent of new illnesses in general practice, and 3% of consecutive attenders, are incident cases of 'pure' somatization.

**Aim.** This study set out to estimate the prevalence of consultations by patients with psychiatric morbidity who present only somatic symptoms (somatic presentation), and to compare this with the likely prevalence of pure somatization.

**Method.** A cross-sectional survey of consecutive general practice attenders was carried out. Psychiatric morbidity was measured using the general health questionnaire. Pure somatization was defined as medical consultation for somatic symptoms that were judged by a psychiatrist during an interview to be aetiologically attributable to an underlying psychiatric disorder but which were not recognized as such by the patient.

**Results.** Of attenders 25% were identified as somatic presenters. Of the somatic presenters interviewed one in six were estimated to be pure somatizers, which would extrapolate to 4% of attenders. Though all somatic presenters were probable cases of psychiatric disorder, subjects in this group had lower scores on the general health questionnaire than those who presented with psychological symptoms. General practitioner recognition of psychiatric morbidity was significantly lower among somatic presenters than for other subjects with psychiatric morbidity.

**Conclusion.** General practitioner recognition of psychiatric morbidity could be improved for all types of somatic presentation, regardless of the aetiology of patients' somatic symptoms. There is a danger that concentrating attention on pure somatization may mean that psychiatric morbidity in the more common undifferentiated form of somatic presentation will be overlooked.

**Keywords:** somatization; psychiatric morbidity; consultation rates; differential diagnosis.

## Introduction

TWO studies have estimated the incidence of somatization in general practice in the United Kingdom, defined as medical consultation for somatic symptoms that are aetiologically attributable to an underlying psychiatric disorder.<sup>1-4</sup> Bridges and

Goldberg defined somatization as: medical consultation for somatic complaints, which the subject attributed to physical causes, in the presence of a psychiatric disorder fulfilling the criteria of DSM-III (*Diagnostic and statistical manual of mental disorders*, 3rd edition), treatment for which was predicted to reduce or eliminate the patient's somatic symptoms.<sup>1</sup> Craig and colleagues found the last of these unsatisfactory, and substituted instead an independent medical rating that the subject's somatic complaints were likely to be 'functional' in origin.<sup>4</sup> Bridges and Goldberg also distinguished 'pure' somatizers from a larger group of 'facultative' somatizers who, on questioning by a psychiatrist, admitted to psychological attributions for their somatic symptoms.<sup>1</sup> Both studies found that 20% of new presentations of illness in general practice, or about 3% of consecutive attenders, met criteria as incident cases of pure somatization.

The term somatization has been heavily criticized, not least because its '-ization' ending implies an active process or transformation.<sup>5</sup> The two most commonly used definitions<sup>1,6-12</sup> assume that functional somatic symptoms are distinguishable from those reflecting genuine organic pathology at the time of presentation. While this might be feasible, prospective validation of these judgements has not been reported. In day to day practice, a more pressing problem arises from the large number of patients who consult their general practitioner for physical problems without reporting any psychological symptoms that they might be experiencing. Some of these may be pure or facultative somatizers, while others may have psychiatric morbidity concurrent with an unrelated genuine physical illness. The presence of psychiatric morbidity is clinically important in all of these circumstances, since it may be associated with a worse clinical prognosis<sup>13-15</sup> and higher rates of medical consultation.<sup>16</sup>

The aim of the present study was to estimate the prevalence of consultations by patients with both physical and psychiatric morbidity who fail to mention any psychological symptoms (somatic presentation), and to compare this with the likely prevalence of pure somatization. Somatic presentation was defined as a medical consultation for somatic complaints only, for which psychological concomitants or attributions were excluded by the patient, and therefore hidden during the interview, in the presence of psychiatric morbidity. Pure somatization, a sub-group within the heterogeneous category of somatic presentation, was defined using the criteria of Bridges and Goldberg.<sup>1</sup>

## Method

The study was carried out in a health centre in south east London over a six month period (October 1991 to April 1992). The study subjects were consecutive patients aged 17 to 66 years consulting R D at randomly selected surgeries. Patients were asked to participate in the study by a research psychiatrist (S W). Patients gave their informed consent for participation in the study and ethical approval for the study was obtained from the local ethics committee.

Four assessment methods were used and all were completed by patients in the waiting room prior to seeing R D. First, the 12-item general health questionnaire,<sup>17</sup> which enquires about recent changes in mental health. The resulting score is a quantitative assessment of the likelihood that an individual would be identified as a psychiatric case by a psychiatrist. The general health questionnaire was scored by the 'general health questionnaire

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method' (0,0,1,1, symptom absent (0) or present (1)) to divide subjects into probable psychiatric cases and non-cases. A probable case of psychiatric morbidity was defined as a score of three or more.<sup>18</sup> The Likert scoring method (0,1,2,3, according to symptom severity) was used to permit analyses with a continuous variable. Secondly, a checklist of nine recent somatic symptoms: fatigue, nausea and/or vomiting, indigestion, bowel trouble, headache, pains in the limbs, chest pain, cough and shortness of breath. Each symptom was scored from zero (no symptom) to three (severe symptom). Thirdly, an open question about reasons for consulting the doctor. Finally, subjects completed two questions about symptom attribution and two questions concerning preparedness to discuss emotional problems, each rated on a four-point scale (zero to three). Item scores were summed to produce 'attribution' and 'willingness to report worry' scores (range zero to six). Psychological attribution was defined as an 'attribution' score of four or more, and non-psychological attribution as a score of two or less.

#### *General practitioner recognition of psychiatric morbidity*

After each consultation R D recorded on special forms the patient's presenting complaint and whether this was primarily psychological, physical or mixed. Where this differed from the patient's given reason for consulting, the general practitioner's account was taken as definitive. The kappa coefficient for agreement between patient and general practitioner was calculated, according to whether or not each party identified a psychological complaint as the reason for consultation. The general practitioner also rated the extent of psychiatric disturbance on a scale of one (no psychiatric disturbance) to four (overt psychiatric disturbance). 'Case recognition' was indicated by a rating of two or more. The sensitivity and specificity of psychiatric case recognition were defined, respectively, as the proportion of probable psychiatric cases (score of three or more on the general health questionnaire) and non-cases correctly identified by the general practitioner.

#### *Definition of somatic presentation*

Patients were classified by S W as psychological presenters, somatic presenters or mixed cases, or as non-cases of psychiatric morbidity. Psychological presenters were patients who were probable cases of psychiatric morbidity (score of three or more on general health questionnaire), presented only psychological symptoms to their doctor, and attributed these symptoms to psychological causes. Somatic presenters (including pure somatizers) were patients who were probable cases of psychiatric morbidity, presented only physical symptoms to their doctor, and attributed neither the aetiology nor any exacerbation of these symptoms to psychological factors. Mixed cases were patients who were probable cases of psychiatric morbidity, but who failed to fulfil criteria for inclusion as psychological or somatic presenters. Non-cases were patients who were only physically ill.

#### *Interviews*

Random samples of somatic presenters and psychological presenters were selected for interview. Patients were invited by telephone and letter to take part in an interview with S W. The interviews took place in the surgery or in the patient's home, according to the patient's preference. Psychiatric morbidity was measured using the revised clinical interview schedule.<sup>19</sup> Interviews usually took place two to three weeks after the index consultation. A cut off score of 12 or more for a case was adopted, as recommended by the authors of the instrument.<sup>19</sup> Patients were asked about past physical and psychological health, and previous consultation for psychological problems. They were also asked for demographic information. All those identified as somatic presenters

using the general health questionnaire were classified by S W as: having psychiatric morbidity secondary to, or coincident with, physical illness, or as facultative somatizers or pure somatizers, according to the criteria of Bridges and Goldberg.<sup>1,2</sup>

#### *Statistical analyses*

Differences in sample means were tested using *t*-tests and non-parametric Mann-Whitney tests. Odds ratios for psychiatric case recognition were calculated and adjusted for the effects of other variables by means of logistic regression. All statistical analyses were performed using the SPSS/PC computer package.

## **Results**

#### *Subjects*

A total of 319 consecutive general practice attenders were asked to participate, of whom 18 (5.6%) refused or were unable to complete the general health questionnaire. Of the 301 respondents 125 (41.5%) were men. Among the respondents the men were significantly older than the women (mean age 39.4 years, standard deviation (SD) 13.9 years versus 35.9 years, SD 14.6 years) ( $t = 2.1$ ,  $P < 0.05$ ). General practitioner ratings were available for 300 of the 301 subjects.

#### *Symptom presentation*

The general practitioner reported that 74.7% of respondents (95% confidence interval (CI) 69.5% to 79.3%) presented with wholly physical symptoms, 15.3% (95% CI 11.2% to 19.4%) presented both psychological and physical symptoms and 7.3% (95% CI 4.4% to 10.2%) presented only psychological symptoms (the remainder were unclassified). The mean score on the general health questionnaire (Likert method) for the 301 patients was 15.2 (SD 7.0), and the mean recent somatic symptom score was 7.5 (SD 4.9).

In all, 58.8% of the 301 subjects (95% CI 53.2% to 64.4%) were estimated to be probable cases of psychiatric morbidity based on a score of three or more on the general health questionnaire. All of those presenting to the general practitioner with psychological symptoms and 87.0% (95% CI 77.0% to 97.0%) of those presenting with 'mixed' symptoms were identified thus, compared with just under half (49.6%; 95% CI 43.1% to 56.1%) of those presenting with physical symptoms.

Table 1 shows the results of applying the study criteria to the sample. In all, 25.2% of the 301 patients (95% CI 20.3% to 30.1%) were identified as somatic presenters, 26.2% (95% CI 21.2% to 31.2%) as mixed cases, 7.3% (95% CI 4.4% to 10.2%) as psychological presenters and 41.1% (95% CI 35.5% to 46.7%) as non-cases of psychiatric morbidity. Somatic presenters had significantly higher scores on the general health questionnaire, significantly lower 'attribution' scores and significantly higher somatic symptom scores than non-cases. However, somatic presenters were no more 'willing to report worry' than non-cases, despite the presence of psychiatric morbidity. Though all somatic presenters were probable cases of psychiatric morbidity, and 50.0% scored six or more on the general health questionnaire, the mean score on the questionnaire for this group was significantly lower than that of both psychological presenters and mixed cases (Table 1; analysis of variance  $F = 14.6$ , 2 degrees of freedom,  $P < 0.001$ ).

#### *Agreement between patient and general practitioner*

The kappa coefficient for agreement between patient and general practitioner concerning the presence of psychological symptoms was 0.60 (standard error 0.06). Fourteen subjects would have been classified differently had the subject's self-report been taken as definitive (4.7% of the sample). Of these, eight mixed

**Table 1.** General health questionnaire (GHQ) score, somatic symptom score, 'attribution' score, 'willingness to report worry' score and general practitioner case recognition rate.

	Probable psychiatric cases			
	Psychological presenters (n = 22)	Mixed cases (n = 79)	Somatic presenters (n = 76)	Non-cases (n = 124)
Mean GHQ score (95% CI) <sup>a</sup>	23.8 (21.0 to 26.6)	20.4 (19.1 to 21.7)	17.4 (16.5 to 18.3)	8.9 (8.6 to 9.2)
Median GHQ score <sup>b</sup>	10	7	5	1
Mean somatic symptom score (95% CI)	9.0 ( 6.7 to 11.3)	9.4 ( 8.3 to 10.5)	9.2 ( 8.1 to 10.3)	5.0 (4.5 to 5.5)
Mean 'attribution' score (95% CI)	4.7 ( 4.2 to 5.2)	3.5 ( 3.1 to 3.9)	1.2 ( 1.0 to 1.4)	0.7 (0.5 to 0.9)
Mean 'willingness to report worry' score (95% CI)	4.2 (3.4 to 5.0)	3.4 (3.0 to 3.8)	2.4 (2.1 to 2.7)	2.3 (2.1 to 2.5)
% of cases recognized by GP (95% CI)	100	53.2 (42.2 to 63.6)	19.7 (10.6 to 28.8)	11.3 <sup>c</sup> (5.7 to 16.9)

n = total number of patients in group. CI = confidence interval. <sup>a</sup>Likert scoring method. <sup>b</sup>GHQ method, range 0–12. <sup>c</sup>False positive rate.

cases would have been classified as somatic presenters, while three somatic presenters and three psychological presenters would have been classified as mixed classes.

### Interviews

Seventeen of the 22 psychological presenters and 39 of the 76 somatic presenters were randomly selected for interview. Thirty somatic presenters (77%) and 14 psychological presenters (82%) were subsequently interviewed. Interviewed somatic presenters had significantly higher mean somatic symptom scores (10.6 versus 8.5;  $t = -2.1$ ;  $P < 0.05$ ) and higher mean 'willingness to report worry' scores (2.8 versus 2.0;  $t = -2.5$ ;  $P < 0.05$ ) than somatic presenters who were not interviewed. These groups did not differ in age, sex, or mean general health questionnaire or 'attribution' scores. No differences were found between interviewed and non-interviewed psychological presenters. Interviewed psychological presenters and somatic presenters did not differ to a statistically significant extent in terms of marital status, occupation, educational attainment, number of children, housing, place of birth or ethnicity.

After the interview the interviewer judged that 15 of the 30 somatic presenters had a physical illness which was either the cause of psychological distress or unrelated to the psychological symptoms reported on the general health questionnaire at the time of consultation, of whom three were identified as cases when interviewed using the revised clinical interview schedule. Nine somatic presenters were judged to be facultative somatizers, of whom seven were found to be cases using the interview schedule and six were classed as pure somatizers, of whom five were found to be cases (extrapolated to the sample as a whole this would mean that between 0.7% and 8.0% of attenders would be cases of pure somatization). In all, 15 of the 30 somatic presenters identified using the general health questionnaire were also classed as cases using the revised clinical interview schedule. The mean general health questionnaire score of the 15 somatic presenters who were identified as cases using the clinical interview schedule was higher than that of somatic presenters who were not found to be cases at interview (18.6 versus 16.6 (Likert method), difference in mean score = 2.0; 95% CI for difference -0.3 to 4.3), but this difference failed to reach statistical significance.

Psychological presenters had a higher mean score on the clinical interview schedule than somatic presenters (13.8 versus 9.9), and 71% of the psychological presenters were found to be cases of psychiatric morbidity on the interview schedule, compared with 50% of somatic presenters. However, neither difference reached statistical significance. Psychological presenters had a significantly higher mean score than somatic presenters on only

one of the 14 items on the clinical interview schedule, a greater disturbance of concentration.

**Past illness behaviour.** While all 14 psychological presenters had consulted a doctor about an emotional problem in the past, 53% of the 30 somatic presenters (95% CI 35% to 72%) also reported having done so. Over half of the psychological presenters (57%, 95% CI 29% to 86%) and one quarter of the somatic presenters (27%, 95% CI 10% to 43%) recalled being referred to a psychiatrist, while 71% of psychological presenters (95% CI 45% to 97%) and 57% of somatic presenters (95% CI 38% to 75%) recalled being prescribed psychotropic medication. The six 'pure' somatizers did not differ significantly from the other somatic presenters in this respect.

### Case recognition by the general practitioner

The percentage of cases of psychiatric morbidity recognized by the general practitioner differed in the three study groups (Table 1). Psychiatric morbidity was detected in all of the psychological presenters, but in only 19.7% of somatic presenters. The overall sensitivity of psychiatric case recognition by the general practitioner was 44.6% and the specificity 88.7%.

It was considered possible that the general practitioner might have been more likely to recognize psychiatric morbidity in those somatic presenters with persistent or severe psychological symptoms. Since somatic presenters who were found to be cases using the revised clinical interview schedule had higher scores on the general health questionnaire than those who were not found to be cases using the clinical interview schedule, all 76 somatic presenters were dichotomized at the median general health questionnaire score. The rate of psychiatric case recognition by the general practitioner was 17% among the 36 somatic presenters scoring less than the median (95% CI 4% to 29%), and 25% among the 40 somatic presenters with scores at or above the median (95% CI 11% to 39%). This difference was not statistically significant.

When all probable cases of psychiatric morbidity (score of three or more on the general health questionnaire) were analysed, a strong association was found between the presentation of somatic symptoms and non-recognition of psychiatric morbidity by the general practitioner (Table 2). This association remained after adjusting for general health questionnaire, somatic symptom, 'attribution' and 'willingness to report worry' scores using logistic regression. Since it was possible that the general practitioner's recollection of the presenting complaint was biased by his assessment of the likelihood of psychiatric morbidity, the analysis presented in Table 2 was repeated using subjects'

**Table 2.** General health questionnaire (GHQ) score, 'attribution' score, 'willingness to report worry' score, somatic symptom score and proportion of subjects presenting only somatic symptoms among cases of probable psychiatric morbidity detected and undetected by the general practitioner, together with odds ratios for general practitioner recognition of psychiatric morbidity.

	Probable psychiatric cases		Odds ratio (95% CI)	
	Detected by GP (n = 78)	Undetected by GP (n = 98)	Unadjusted	Adjusted <sup>a</sup>
Mean GHQ score (95% CI) <sup>b</sup>	21.3 (19.9 to 22.7)	18.2 (17.3 to 19.1)	1.11 (1.05 to 1.18)	1.04 (0.94 to 1.14)
Mean 'attribution' score (95% CI)	3.4 ( 3.0 to 3.9)	2.0 ( 1.7 to 2.3)	1.52 (1.26 to 1.84)	0.94 (0.70 to 1.28)
Mean 'willingness to report worry' score (95% CI)	3.6 ( 3.2 to 4.0)	2.7 ( 2.4 to 3.0)	1.42 (1.17 to 1.72)	1.02 (0.76 to 1.37)
Mean somatic symptom score (95% CI)	9.6 ( 8.5 to 10.8)	9.0 ( 8.0 to 10.0)	1.03 (0.96 to 1.12)	1.06 (0.96 to 1.18)
% of cases presenting only somatic symptoms (95% CI)	26.9 (16.9 to 36.9)	94.7 (90.1 to 99.3)	0.02 (0.01 to 0.06)	0.02 (0.01 to 0.08)

n = total number of patients in group. CI = confidence interval. <sup>a</sup>Adjusted for all the other variables on the table. <sup>b</sup>Likert scoring method.

descriptions of their presenting complaint. Although the magnitude of the independent association between non-recognition of psychiatric morbidity and the presentation of somatic symptoms was considerably reduced (odds ratio = 0.31, 95% CI 0.11 to 0.84), this had little effect on the other values in Table 2.

## Discussion

Three quarters of consecutive general practice attenders presented with wholly physical symptoms according to one general practitioner, of whom half (51%) were classed as probable cases of psychiatric morbidity by the general health questionnaire. Forty three per cent of cases (and one quarter of all presentations) met the study criteria for 'somatic presentation', characterized by medical consultation for somatic complaints, without any mention of psychological symptoms, despite co-existing psychiatric morbidity. It was estimated that one in six of this heterogeneous group also met agreed criteria for 'pure' somatization. Thus, between 0.7% and 8% of consecutive attenders were estimated to be cases of pure (or narrowly-defined) somatization. This range is consistent with previous primary care studies, in which 3% to 4% of consecutive attenders were identified as incident cases of pure somatization.<sup>1-4</sup>

Psychiatric morbidity was assessed using the general health questionnaire. Validation studies have estimated the sensitivity and specificity of the 12-item general health questionnaire in primary care to be 89% and 80%, respectively, using a cut off score of two or more for a case.<sup>17</sup> Although the choice of a higher threshold (a score of three or more for a case) was likely to have reduced the number of false positives, 50% of those identified as somatic presenters were found not to be cases when interviewed two to three weeks later using the revised clinical interview schedule. This finding raises the question of whether these subjects should be included among somatic presenters, or excluded as false positives.<sup>20</sup>

It can be argued that the psychological symptoms elicited by the general health questionnaire accurately reflected the well-being of somatic presenters at the time of consultation,<sup>21</sup> even if these symptoms were a direct consequence of physical illness. The severity of psychological distress among this group is highlighted by the finding that half of the somatic presenters reported at least six out of 12 psychological symptoms on the general health questionnaire. Given the delay between administration of the questionnaire and the interview, the most likely explanation for these findings is that the psychiatric morbidity experienced by some somatic presenters was transient and self-limiting.

The incidence of psychiatric morbidity in this sample was high

compared with previous studies in UK general practice where the range was 22% to 40% (using a lower threshold on the general health questionnaire).<sup>16</sup> This might reflect a tendency for particular patients within the practice to be channelled towards the participating general practitioner (R D), who has an interest in psychiatry. Despite this interest, the rate of case recognition was low compared with previous studies where it was generally greater than 50%,<sup>1,22</sup> suggesting that the general practitioner operated a high threshold for case recognition. It is perhaps questionable whether other general practitioners would have fared better.

The second stage of this study was limited by small samples. Non-response among those selected for interview may have introduced bias, further reducing the likelihood of finding differences between these groups. The interviewer was not blind to whether subjects were psychological or somatic presenters, though this was unlikely to have influenced the most notable finding, that half of the somatic presenters had previously consulted a doctor about an emotional problem, since this was contrary to expectation. More importantly, distinctions within the group of somatic presenters were heavily dependent on clinical judgement. Though this method of identifying pure somatizers was also used by Bridges and Goldberg,<sup>1-3</sup> this appeared to be the least satisfactory aspect of the present study.

Pure somatizers represent a minority of all somatic presenters in general practice. Somatic presentation is a common but heterogeneous phenomenon, which was associated with low rates of recognition of psychiatric morbidity by the general practitioner in this study. Three specific observations can be noted. First, although there was marked psychiatric morbidity among somatic presenters, general health questionnaire scores for this group were significantly lower than those of psychological presenters. Secondly, half of all somatic presenters reported previous consultation for an emotional problem. Thirdly, as discussed earlier, half of those identified as somatic presenters were not found to be cases of psychiatric morbidity at interview two to three weeks later. These findings suggest that somatic presentation may be an episode-specific association with moderately severe or transient psychological symptoms, rather than an enduring characteristic of the individual.

Somatic presentation describes a type of consultation behaviour in which an individual seeks medical attention for a somatic complaint, but fails to report accompanying psychological symptoms, despite the presence of coexisting psychiatric morbidity. Such individuals also fail to recognize the connection between psychological distress and the somatic complaint for which they seek help. In this study the general practitioner also failed to detect this distress in most cases. Somatic presenters

could be quickly and reliably identified by means of a brief screening questionnaire. However, identification of the small number of pure somatizers depended heavily on clinical judgement and required a lengthy interview. Is the distinction between these groups of practical, rather than theoretical importance, that is, does it aid the management of these patients? Psychiatric morbidity appears to be important for prognosis in all its forms and regardless of aetiology.<sup>13-15</sup> Perhaps future research should focus on developing strategies for improving detection of psychiatric morbidity among all forms of somatic presentation, rather than just the pure somatizers.

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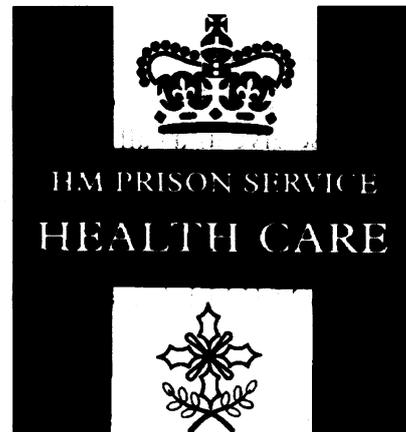
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