What can alert the general practitioner to people whose common mental health problems are unrecognised?

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ABSTRACT

Objectives: To assess the characteristics of people with common mental health problems who are recognised by their general practitioner, and those who are not.

Design: Two different case-finding techniques (brief self-report and structured diagnostic interview) were compared with GPs' independent assessments of patients' presentations as psychological and/or medical.

Setting and participants: 371 patients in general practices in metropolitan Sydney and rural New South Wales, with follow-up telephone interview as soon as possible after the GP visit. The study was conducted from 2001 to 2003.

Main outcome measures: Overall rates of disorder, measured by the 12-item Somatic and Psychological HEalth REport (SPHERE-12), and anxiety, depression and somatisation diagnostic categories of the Composite International Diagnostic Interview – Auto; rates of disability, assessed by the 12-item Short-Form (SF-12) General Health Survey's mental (MCS) and physical component scales; GP ratings of patients' psychological problems, and intended treatments.

Results: The SPHERE-12 showed the highest rate of case detection and greater agreement with GP assessments of psychological reasons for presentation. Patients who presented with somatic symptoms alone were most likely to be overlooked by GPs: none of the 57 patients identified by SPHERE-12 with a somatic disorder were identified by GPs as psychological presentations. Specificity for the SPHERE-12 psychological scale changed from 72% to 93%, and from 84% to 96% for the combined psychological and somatic scale, when the criterion of an SF-12 MCS score $\leqslant 40$ was added.

Conclusion: Low rates of recognition of psychological problems by GPs, and infrequent treatment for those presenting with somatic symptoms, indicate a need for building GPs skills in the assessment and management of somatisation. The SPHERE-12 may be a useful screening tool for primary care if followed by further questioning and other methods to assess diagnosis and severity to target appropriate treatment.

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Mental disorders are common in primary care, with a review of studies using structured case-finding interviews concluding that they were present in a quarter of all presentations.[1] Depressive and anxiety disorders were most common, with current depression reported in 17% and generalised anxiety in 10% of all presentations.[1] When self-report screening instruments are used, the rates of possible mental illness are even higher, with estimates of a third[2] to a half[3,4] of all primary care presentations.

The assessment and management of common mental disorders in primary care is thus an essential aspect of health care. Increasing treatment rates over the past 15 years are likely to have played a significant role in the fall in suicide rates in Australia.[5] Early intervention for common mental disorders is now widely promoted,[6] with an emphasis on increasing detection and treatment rates in young people.[7] In primary care settings, depression and anxiety frequently occur in conjunction with other medical conditions. Patients may be more willing to emphasise their somatic symptoms, and, consequently, non-specific symptoms such as insomnia, prolonged fatigue, headache, nausea and musculoskeletal pain are common presentations in people with depression or anxiety.[8]

The self-report 12-item Somatic and Psychological HEalth REport (SPHERE-12)[3] was developed specifically to capture non-specific presentations that may indicate the presence of a psychological disorder, although its efficiency as a screening tool in primary care has been criticised.[9] Others have promoted tools such as the Composite International Diagnostic Interview – Auto (CIDI-A),[10,11] which generates diagnoses based on criteria of the *Diagnostic and statistical manual of mental disorders*, fourth edition (DSM-IV) and the International classification of diseases, 10th revision (ICD-10).

In recent years, the rate of psychological disorder diagnoses made by general practitioners has remained relatively steady, at less than 15% of presentations.[12] Given that about a third of these will be patients not currently reporting psychological symptoms, we can estimate that GPs detect about half of those with high symptom levels. One view suggests there is little merit in promoting detection of those patients with psychological disorders that GPs do not recognise, in the belief that these are less severe cases or that they will be detected on another occasion. An alternate view is that among those undetected are a significant number of people at considerable risk of ongoing disability or premature death, and that the reasons they are not detected are likely to be due to other demographic, symptom pattern, or medical practice factors.

To explore these competing views in Australian primary care, we compared two very different case-finding techniques (SPHERE-12[3] and CIDI-A[11]) with GPs' detection and treatment rates for psychological disorders.

METHODS

Procedure

Four research assistants asked 613 patients of 36 GPs in 15 general practices across metropolitan Sydney and rural New South Wales to participate in a two-stage process during 2001–2003. Patients were asked to complete the SPHERE-12 in the waiting room and to consent to a telephone interview as soon as possible after the visit to the doctor. Of the patients approached, 490 (79.9%) agreed and were eligible to participate, while 123 patients were excluded for the following reasons: age under 16 years (2 patients); inadequate spoken or written English/couldn't read forms (38); evidence of cognitive decline or obvious behavioural disturbance precluding informed consent (5); or gave reasons for not participating in the second stage (eg, no phone, going away) (78).

GPs and patients gave informed consent before participation. The doctor's secretary placed a form in each participating patient's file to be completed by the doctor at the time of consultation, without knowledge of the patient's SPHERE-12 results. The doctor

1 General practitioner assessments of patient presentation compared with rates from various case-finding techniques and self-reported health status for 371 patients

	Medical	Psychological	Medical and psychological	Other
Number of patients	279	23	50	19
SPHERE-12				
PSYCH-6 only	34 (12%)	6	7	2
SOMA-6 only	45 (16%)	0	7	5
PSYCH-6 and SOMA-6	44 (16%)	15	19	4
No symptoms	156 (56%)	2	17	8
DSM-IV (1-month prevalence rates)				
Mood disorder	7 (3%)	6	8	3
Anxiety disorder	12 (4%)	5	9	4
Somatisation disorder	5 (2%)	4	3	0
Any disorder	19 (7%)	9	13	6
Two or more disorders	4 (1%)	6	6	1
Mean (SD) SF-12 subscale score				
Physical Component Summary	45.4 (10.4)	53.2 (10.0)	44.2 (12.1)	50.4 (7.7)
Mental Component Summary (MCS)	52.7 (8.3)	30.6 (11.7)	44.2 (11.9)	47.1 (8.9)
MCS for all patients with MCS ≤ 40 ($n = 64$)	32.8 (5.7)	26.4 (7.6)	28.7 (4.9)	35.4 (5.0)
Self-reported health status				
Poor to fair health	61 (22%)	7	19	2

SPHERE-12 = 12-item Somatic and Psychological HEalth REport. PSYCH-6 = 6-item psychological subscale of SPHERE-12. SOMA-6 = 6-item somatic/fatigue subscale of SPHERE-12. DSM-IV = *Diagnostic and statistical manual of mental disorders*, fourth edition. SF-12 = 12-item Short-Form General Health Survey.
Figures are number of patients or number (%) unless otherwise indicated. ◆

noted the presence and severity of any emotional problems, and treatment recommendations.

The CIDI-A was subsequently administered by telephone by the same research assistant who had recruited the patient, to generate DSM-IV categories for anxiety, depression and somatisation (CIDI/DSM-IV), as well as the patient's score on the 12-item Short-Form (SF-12) General Health Survey.[13]

Details of patients' SPHERE-12 and CIDI/DSM-IV caseness categories were later mailed back to their respective GPs, for their own information.

Ethics approval

The study obtained institutional ethics committee approval from the University of New South Wales Committee on Experimental Procedures Involving Human Subjects.

Measures

GP assessment

GPs rated their assessment of the patient's presentation as "medical", "psychological", "medical and psychological" or "other", and indicated which treatments they intended to provide from a list of psychopharmacological agents (eg, selective serotonin reuptake inhibitors, tricyclic antidepressants, benzodiazepines) and psychological interventions (eg, supportive counselling, cognitive behaviour therapy, referral for psychiatrist/psychologist/other mental health service).

SPHERE-12

The SPHERE-12 is a self-rating screening tool for common mental disorders in primary care.[3] It has six psychological items (PSYCH-6) and six somatic/fatigue items (SOMA-6) rated in terms of how troubling they were over the past few weeks ("never or some of the time", "a good part of the time", or "most of the time"). Patients were considered to have a possible psychological disorder if they scored two or more on the PSYCH-6 scale, and a possible somatic/fatigue disorder if they scored three or more on the SOMA-6 scale. The SPHERE-12 also asks patients to rate their health as generally "poor", "fair", "good", "very good" or "excellent".

CIDI-A

The CIDI-A is a structured, telephone-administered interview enabling automatic generation of 1-month and 12-month prevalence rates of DSM-IV disorders.[11] We used only the components assessing common anxiety, depression and somatisation, as these mapped onto corresponding SPHERE-12 domains. Thus, DSM-IV caseness was determined for major depression, bipolar disorder, social phobia, panic disorder, agoraphobia, generalised anxiety disorder, and somatisation disorder.

SF-12

The CIDI-A also derived data for the SF-12,[13] a measure of disability due to physical health problems (Physical Component Summary [PCS]) and mental health problems (Mental Component Summary [MCS]). Each scale has a mean of 50 and standard deviation of 10 in community samples.[13] A score ≥ 50 represents above average health status; a score of ≤ 40 represents function at a level lower than 84% (one standard deviation) of the population, while a score of ≤ 30 is two standard deviations lower. We used an MCS score of ≤ 40 as a measure of significant disability, in combination with SPHERE-12 and CIDI/DSM-IV caseness criteria.

RESULTS

Complete data were obtained for 371 patients (mean [SD] age, 50.7 [18.2] years; 71.2% [264] female), and 119 patients had incomplete data. Reasons for missing data included: difficulties contacting patients by telephone; incomplete questionnaires; GP drop-out; and incomplete GP-rated forms. The two groups did not differ in terms of sex ($\chi^2 = 0.07$; $P = 0.79$), but the group with incomplete data was younger (mean [SD] age, 44.4 [17.4] years; $t_{488} = 3.30$; $P = 0.001$) and more likely to have any disorder on the SPHERE-12 scales (68.9% [82/119] v 50.7% [188/371]; $\chi^2 = 9.5$; $P < 0.01$).

Of the 371 patients with complete data, 47 (12.7%) fulfilled CIDI/DSM-IV criteria for at least one DSM-IV disorder in the past month. These diagnoses included anxiety disorder (30), depressive disorder (24) and somatisation disorder (12).

The SPHERE-12 had a broader caseness threshold. It identified 49 patients (13.2%) with a psychological disorder only (PSYCH-6), 57 (15.4%) with a somatic disorder only (SOMA-6), and 82 (22.1%) with a mixed presentation (PSYCH-6 and SOMA-6).

For all 371 patients, the mean aggregate SF-12 PCS score was 45.9 (range, 11–66) and the mean MCS score was 49.9 (range, 13–65). There were 64 patients (17.3%) who scored an MCS of ⩽ 40. On the general health self-rating scale, 89 patients (24.0%) saw themselves in poor to fair health.

Of the 47 patients meeting CIDI/DSM-IV criteria, 25 (53.2%) reported their general health as poor to fair. There was a gradation in perception of poor to fair health across the SPHERE caseness groups. Of the 49 patients classified as PSYCH-6 only, 11 reported poor to fair health; while of the 57 classified as SOMA-6 only, 19 reported poor to fair health. Of the 82 patients classified as both PSYCH-6 and SOMA-6, 45 reported poor to fair health.

GP assessment of presentation compared with case-finding techniques

GP assessments of the reasons for patient presentation, compared with case rates using the different detection methods, are shown in Box 1.

GPs assessed the reason for presentation as medical in 279 patients (75.2%), psychological in 23 (6.2%), and both medical and psychological in 50 (13.5%), with other reasons (eg, requiring a certificate, repeat prescriptions, flu vaccinations) in 19 (5.1%).

GP psychological assessment compared with case-finding techniques

GPs assessed 73 patients (19.7%) as having a psychological presentation (either with or without concurrent medical presentation) (Box 1). These patients had a mean SF-12 MCS score of 39.9 (SD, 13.4), and 26 of them reported their medical health as poor to fair. Of these 73 psychological presentations, 47 were categorised by SPHERE-12 as having any psychological disorder (PSYCH-6, with or without SOMA-6), and 22 received a CIDI/DSM-IV diagnosis. All patients identified by SPHERE-12 with a somatic/fatigue disorder were rated by GPs as medical, or medical and psychological presentations, but none as psychological presentation alone.

GP treatment decisions compared with case-finding techniques

GPs' treatment decisions for the 371 patients and how these rates varied according to the case-finding techniques are shown in Box 2. The criterion of an SF-12 MCS score ⩽ 40 was superimposed on SPHERE-12 and CIDI/DSM-IV case rates as a measure of significant psychological disability. Patients were more likely to receive both drug and non-drug interventions than either alone, particularly patients with any SPHERE-12 psychological disorder. The rates of agreement with GP treatment decisions were higher for patients identified by SPHERE-12 than those diagnosed by CIDI/DSM-IV, and all rates lowered when the MCS criteria were imposed.

2 Comparison of rates of general practitioner treatment decisions by SPHERE-12, CIDI/DSM-IV and SF-12 MCS score ⩽ 40, for 371 patients

	Drug	Non-drug*	Drug and non-drug*	Other	Not applicable
Number of patients	12	65	36	34	224
SPHERE-12					
Any PSYCH-6†	6	31	26	9	58 (26%)
PSYCH-6 and SOMA-6	2	22	17	4	36 (16%)
SPHERE-12 plus SF-12 MCS ⩽ 40					
Any PSYCH-6†	3	11	19	3	14 (6%)
PSYCH-6 and SOMA-6	1	10	13	1	11 (5%)
DSM-IV (1-month prevalence rates)					
Any CIDI case	5	13	11	6	12 (5%)
DSM-IV (1-month prevalence rates) plus SF-12 MCS ⩽ 40					
Any CIDI case	4	7	10	3	4 (2%)

SPHERE-12 = 12-item Somatic and Psychological HEalth REport. CIDI = Composite International Diagnostic Interview. DSM-IV = *Diagnostic and statistical manual of mental disorders*, fourth edition. SF-12 MCS = 12-item Short-Form General Health Survey Mental Component Summary. PSYCH-6 = 6-item psychological subscale of SPHERE-12. SOMA-6 = 6-item somatic/fatigue subscale of SPHERE-12.

* Non-drug interventions included education, counselling and psychotherapy. † All PSYCH-6, with or without SOMA-6.

Figures are number of patients or number (%). ◆

3 Comparison of the SPHERE-12 and CIDI/DSM-IV detection of caseness for patients with general practitioner-rated emotional problems

	Sensitivity		Specificity	
	No. (n = 73)*	% (95% CI)†	No. (n = 298)‡	% (95% CI)†
SPHERE-12				
Any PSYCH-6§	47	64% (52%–75%)	214	72% (66%–77%)
PSYCH-6 and SOMA-6	34	47% (35%–59%)	250	84% (79%–88%)
SPHERE-12 plus SF-12 MCS ⩽ 40				
Any PSYCH-6§	30	41% (30%–53%)	278	93% (90%–96%)
PSYCH-6 and SOMA-6	23	32% (21%–43%)	285	96% (93%–98%)
DSM-IV (1-month prevalence rates)				
Any CIDI case	22	30% (20%–42%)	273	92% (88%–95%)
DSM-IV (1-month prevalence rates) plus SF-12 MCS ⩽ 40				
Any CIDI case	17	23% (14%–35%)	287	96% (93%–98%)

SPHERE-12 = 12-item Somatic and Psychological HEalth REport. CIDI = Composite International Diagnostic Interview. DSM-IV = *Diagnostic and statistical manual of mental disorders*, fourth edition. PSYCH-6 = 6-item psychological subscale of SPHERE-12. SOMA-6 = 6-item somatic/fatigue subscale of SPHERE-12. SF-12 MCS = 12-item Short-Form General Health Survey Mental Component Summary.

* All patient presentations assessed by GPs as "psychological" or "medical and psychological". † Binomial confidence intervals. ‡ All patient presentations assessed by GPs as "medical" or "other". § All PSYCH-6, with or without SOMA-6. ◆

Sensitivity and specificity

Sensitivity and specificity rates for SPHERE-12 and CIDI/DSM-IV cases (both with and without the additional criterion of SF-12 MCS score ⩽ 40), with GP assessment as the reference point, are shown in Box 3. The addition of the SF-12 MCS score ⩽ 40 criterion made a substantial difference to the specificity of SPHERE-12, which increased from 72% to 93% for all patients identified with a psychological disorder, and from 84% to 96% for those with both psychological and somatic/fatigue disorders. However, the addition of the SF-12 criterion made little impact on CIDI/DSM-IV rates, presumably because DSM-IV disorder criteria already have disability measures built in.

A profile of 21 patients whose presentations were not rated as psychological by GPs, but who were identified as having a mental disorder by SPHERE-12 or CIDI/DSM-IV, is shown in Box 4. Nearly half had a SPHERE-12 somatic/fatigue disorder (without psychological disorder), and 12 had an anxiety disorder according to the DSM-IV. The mean MCS score was around 40 in this group, indicating less disability than in the groups identified by GPs. However, 12 of the patients rated their health as poor to fair.

4 Profile of 21 patients not reported as psychological presentations by general practitioners, but identified as having a mental disorder by SPHERE-12 or CIDI/DSM-IV

	No. of patients*
SPHERE-12	
PSYCH-6 only	4
SOMA-6 only	10
PSYCH-6 and SOMA-6	7
DSM-IV (1-month prevalence rates)	
Mood disorder	9
Anxiety disorder	12
Somatisation disorder	5
Two or more disorders	4
Mean (SD) SF-12 subscale score	
Physical Component Summary	39.6 (11.5)
Mental Component Summary (MCS)	39.9 (9.2)
MCS for patients with MCS ⩽ 40	31.8 (6.9)
Self-reported health status	
Poor to fair health	12
GP treatment decision	
Drug	4
Non-drug†	3
Drug and non-drug†	1
Other	4
Not applicable	9

SPHERE-12 = 12-item Somatic and Psychological HEalth REport. CIDI = Composite International Diagnostic Interview. DSM-IV = *Diagnostic and statistical manual of mental disorders*, fourth edition. PSYCH-6 = 6-item psychological subscale of SPHERE-12. SOMA-6 = 6-item somatic/fatigue subscale of SPHERE-12. SF-12 = 12-item Short-Form General Health Survey.

* Unless otherwise indicated. † Non-drug interventions included education, counselling and psychotherapy. ◆

DISCUSSION

In this study, the SPHERE-12 showed a higher rate of case detection and greater agreement with GP assessments of psychological reasons for presentation than the CIDI/DSM-IV. Patients who presented with somatic symptoms alone were most likely to be overlooked by GPs, with none of these patients being identified by GPs as psychological presentations alone. The specificity for both the SPHERE-12 psychological and combined psychological and somatic scales improved with the addition of the significant disability criterion from the SF-12 MCS.

The rates of depressive and anxiety disorders reported here are comparable with rates detected in primary care,[1] although rates of somatisation disorder were higher.[14,15]

In a large New Zealand primary care study,[16] GPs recognised psychological issues in more than half of patients not meeting CIDI-diagnosed DSM-IV disorder criteria, suggesting that GPs use different assessment criteria when assessing psychological problems. In our study, GPs identified psychological issues in 20% of patients overall, but only 30% of these patients met 1-month criteria for at least one of the DSM-IV disorders. This finding underlines the premise that "primary care psychiatry is not specialist psychiatry in general practice",[17] and that GPs are managing different conditions, where the DSM-IV system is not the "gold standard".[16] Because of this difference between GP practice and psychiatric practice, we took GPs' judgements of the presence of psychological problems as the benchmark for caseness, rather than ICD-10 or DSM-IV psychiatric diagnoses.

Although the structured CIDI/DSM-IV case-finding instrument did not seem useful in guiding management of common mental health conditions in primary care,[17] GPs still need knowledge of psychiatric condition diagnoses (such as melancholic depression, bipolar disorder, schizophrenia and severe somatoform disorders) used by psychiatrists, psychologists and mental health teams.

Conversely, the SPHERE-12 captures a much wider range of problems presenting as psychological or somatic distress, and has more in common with GPs' clinical decision making. Its threshold is designed to identify patients who may require further questioning about common mental health problems, and this appeared to be successful here. The GPs seemed more familiar with identifying patients with depression and anxiety symptoms (ie, PSYCH-6 only, or PSYCH-6 and SOMA-6). However, there is still work to be done in assisting GPs to identify and manage psychosomatic presentations (ie, SOMA-6 only). This finding is in keeping with other reports of lower recognition of somatising patients who present without obvious psychological symptoms.[12,14,15] We found that the use of self-report patient information on general health and disability added to the identification of somatic patients whom GPs had overlooked.

Our study has some limitations, most notably in retaining GPs and their patients in what was essentially a naturalistic study. In particular, patients with psychological impairment (indicated by SPHERE-12 caseness) were more likely to be excluded from the study due to missing data or inability to be contacted for telephone interviews. The study sample was also significantly older than the group with incomplete data, and may have had more medical comorbidity. Despite these sampling problems, caseness rates on the SPHERE-12 were similar to those reported elsewhere in large Australian[3] and New Zealand[16] primary care samples.

The SPHERE-12 was designed as a screening instrument with broad criteria, and subsequently produces high rates of possible cases, particularly those with somatic presentations, as in this study. The somatic/fatigue scale of the SPHERE-12 may assist in identifying patients requiring further consideration of "hidden" and potentially treatable psychiatric disorders.[18] A screening instrument is useful if it captures most or all likely cases, including somatic patients, and leads to better and early identi-

fication of psychiatric disorders, less distress, better functional outcomes and more efficient use of medical resources. The SPHERE-12 is not a diagnostic system, but a tool for identifying patients with whom GPs could potentially spend more time to assess their emotional distress.[3] However, the benefits of such a screening instrument need to be weighed against the potential costs of capturing false positives.

We noted a relationship between perception of poor to fair general health and higher caseness rates using the SPHERE-12 and CIDI/DSM-IV. Health perception describes a patient's view of his or her health, and a study of adult patients in general practice found similar rates of patients who perceived themselves as being in poor health (21%, compared with 24% here).[19] In that study, the authors noted that the patients' perception of poor health (when contrary to their doctor's perception) predicted emotional distress, poor social and occupational function, and high service utilisation, and concluded that the patients' doctors had not appreciated the impact of health-related worry, acute pain, anxiety or depression on the patients' sense of wellbeing.[19] The SPHERE-12 already includes this general health question and a short self-rated disability measure,[3] and should prove effective in detecting somatic presentations.

We contend that the SPHERE-12 is a useful screening instrument, particularly if supplemented by a disability measure to increase detection rates of clinically relevant disorders. The addition of the SF-12 MCS disability criterion gave similar sensitivity and specificity rates to those for the CIDI/DSM-IV, and has the potential to identify patients likely to benefit from mental health interventions. There is still a need for more education to assist GPs in conversing with their patients on the issue of medically unexplained symptoms, as increasing recognition will only improve outcomes if GPs have the skills and resources to deliver adequate interventions.

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COMPETING INTERESTS

None identified.

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