

Needs for mental health treatment among general practice attenders

JED BOARDMAN, CAROL HENSHAW and SASI WILLMOTT

Background No study has directly assessed the need for mental health care among those consulting in general practice.

Aims To make a direct assessment of the needs for mental health care in people with non-psychotic disorders consulting their general practitioner.

Method In a two-phase study design, consecutive general practice attenders aged 17–65 years were interviewed using the Structured Clinical Interview for DSM–IV Axis I Disorders. Needs for care were assessed using the community version of the Medical Research Council Needs for Care Assessment Schedule.

Results Three hundred and thirty-six people were interviewed. The overall prevalence of need was 27.3%. More than half of the consulters (59.6%) had unmet needs and a further 6.2% had partially met needs. Needs were met in 28.1% and unmet in 6.2%. The prevalence of unmet need in those with anxiety disorders was 13.9% and depressive disorders 9.5%.

Conclusions The unmet need for mental health treatment in primary care attenders is high.

Declaration of interest None. Funding detailed in Acknowledgements.

Community studies consistently record high levels of psychiatric disorder but it is not clear to what extent this reflects the met or unmet need for treatment (Bebbington, 1990). Two-thirds to three-quarters of people identified in epidemiological surveys as meeting criteria for mental disorder are not receiving treatment (Andrews *et al*, 2000). The prevalence of perceived needs in the population varies from 7.3% to 22.4% (Hornblow *et al*, 1990; Lehtinen *et al*, 1990; Katz *et al*, 1997; Rabinowitz *et al*, 1999; Meadows *et al*, 2000). Three population studies have assessed need from the point of view of the clinician (Lehtinen *et al*, 1990; Bebbington *et al*, 1997, 1999; McConnell *et al*, 2002). In Camberwell, south-east London, the total prevalence of 'expert defined' need was 16.6%, with 63% of these needs not being met (Bebbington *et al*, 1997, 1999); 30% of this sample had visited their general practitioner for 'nerves' and 59% of these consulters had unmet needs for treatment. Bebbington *et al* (2000b) found that only 28.5% of those with neurotic disorders who saw a general practitioner were in receipt of treatment. Thus, consulting the general practitioner may not lead to the needs for treatment being met. No study has directly assessed the needs for care in people with psychiatric disorders who attend general practitioners.

The Mid Cheshire and Keele General Practice Study

The overall aim of this study was to establish the needs for treatment of non-psychotic disorders in general practice consulters. The study was designed to have two stages: the first was a cross-sectional survey of patients attending their general practices, to establish the prevalence of non-psychotic disorders and their associated treatment; the second was a longitudinal study over 3 years of the individuals identified in the first stage to establish their outcomes and

changing needs for treatment over this period. In this paper we report on the first stage of the study, and describe the methodology and the prevalence of the needs for treatment of non-psychotic psychiatric disorders found in the study practices.

METHOD

This cross-sectional study of the prevalence of non-psychotic disorders and the needs for treatment of these disorders in general practice attenders took place between July 1998 and May 2000.

Study setting

General practices in the Mid Cheshire area of England were asked to participate in the study. The area has a mixed urban and rural population, and covers the local boroughs of Crewe and Nantwich, Vale Royal and rural Congleton. The central town, Crewe, developed in the second half of the 19th century around the burgeoning railways and became the centre of the railway industry. The surrounding area consists of older market towns, villages and countryside. The main industries are now car and truck manufacture, salt mining, and farming and horticulture. The total population is 280 000, predominantly White indigenous, with ethnic minorities making up less than 2%. Unemployment is 5–6.9%, income support is claimed by 6.3% of the population and 25.9% live in one-parent households. There are 32 general practices in the area, with an average list size of 1900–1999 per general practitioner.

All 32 practices were approached and eight agreed to participate, three of which subsequently withdrew owing to work pressures. Five practices were surveyed, consisting of 21 general practitioners (11 men and 10 women) and 12 practice nurses (all women). Three of the practices were urban and the others situated in surrounding villages. The practices surveyed were smaller than those that refused to participate (mean 6227 patients *v.* 10 459 patients). There was no difference in the demographic profile of the doctors (mean age 40 years in study sample, 39.7 years in area; males 52% *v.* 57%). Seventeen per cent of the participating doctors had worked in psychiatry after qualification and 17% had been on courses of relevance to psychiatry, as opposed to 28% and 24% of those who refused. When asked to rate their interest in psychiatry as opposed to

general medicine, 25% of the study doctors reported that they had the same interest in both areas, 42% rated themselves as having slightly more or much more interest in general medicine than psychiatry and 33% rated themselves as having more interest in general medicine than psychiatry, compared with 48%, 14% and 38% of those who refused.

Screening

A two-phase design was used. In the screening phase (phase I), all patients (aged 17–65 years) attending consecutive appointments with the general practitioners and practice nurses were asked to complete the 28-item General Health Questionnaire (GHQ-28; Goldberg & Hillier, 1979) and provide some demographic information. A cut-off score of 4/5 was used to identify probable cases ('GHQ case'). At the time of the screening each patient completing the GHQ was asked to consent to be contacted for a research interview. The doctor or nurse completed an encounter form for each person screened. This form was similar to that used in previous studies (Marks *et al*, 1979; Boardman, 1987): it asked the doctor or nurse to rate the patient's level of psychiatric disturbance on a scale of 0 (no disturbance) to 5 (severe disturbance), with a score of 2 or more representing the presence of a psychological problem; such patients were assigned to the 'general practitioner (GP) case' group. Each doctor or nurse was instructed on the use of the scale, but was unaware of the patients' GHQ scores. The doctors and nurses also provided basic information on the reason for the consultation, diagnosis and immediate management plan. All routine surgeries were screened over the course of 1 week, or until at least 40 patients from each practice had completed the GHQ.

Selection for interview

The method used by Ormel *et al* (1990) was adapted to select the patients to be interviewed. The screened sample was divided into four groups according to whether they were GP cases or not (GP+/GP–) and whether they were GHQ cases or not (GHQ+/GP–) (Fig. 1). All the patients categorised as GP+ were included in the study, whereas the other patient groups were sampled at varying rates. The GHQ+/GP+ and GHQ–/GP+ subgroups were systematically sampled and the

GHQ+/GP– and GHQ–/GP– subgroups were randomly selected. The fraction randomly sampled in each of the two subgroups was determined by the numbers in the GHQ+/GP+ and GHQ–/GP+ groups. This reflects the range of participants between the maximum (GHQ+/GP+) and minimum (GHQ–/GP+). The observed proportions can be considered as maximum likelihood estimators if it is assumed that those who refused to be interviewed did not differ from those who assented.

Individuals were excluded from the interviewed sample if they were known to suffer from a psychotic or organic psychiatric disorder or from a learning disability, or were not registered with the practice. All patients who agreed to be interviewed were seen in their own homes or at the surgery.

Measures

Definition of psychiatric cases

The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID; First *et al*, 1996) was used to classify the patients into psychiatric case groups. The SCID questions were supplemented with questions from the Present State Examination (PSE; Wing *et al*, 1974) to allow Bedford College cases of disorder to be defined (see below).

In this study we wished to examine a broad range of cases of non-psychotic disorder in order to establish rates of these disorders and their need for treatment, thus providing data that may be of value in primary care settings. Our aim was to include a broad range of cases of non-psychotic disorder, including those consulting individuals who were not known by the GP or practice nurse to be psychologically distressed. To achieve these goals, we used standardised definitions, based on DSM-IV criteria (American Psychiatric Association, 1994). The range of DSM-IV disorders included major depressive disorder, substance misuse and dependence, generalised anxiety disorder, panic disorder, agoraphobia, social phobia, specific phobia, obsessive-compulsive disorder, post-traumatic stress disorder, somatisation disorder, anorexia and bulimia nervosa. No attempt was made to define Axis II disorders.

We also avoided hierarchical rules. Depressive and anxiety disorders constitute the bulk of disorders seen in primary care, and there is an overlap between anxiety and depression (Goldberg *et al*, 1987; Jacob

et al, 1998; Sullivan & Kendler, 1998; Piccinelli *et al*, 1999; Tyrer, 2001). In view of this it was decided that no hierarchical rules would be applied to the DSM-IV criteria, thus allowing for individuals to have two or more disorders diagnosed.

Finally, we included 'sub-threshold' disorders. In primary care sub-threshold disorders (Pincus *et al*, 1999) are associated with significant impairment and high service usage (Johnson *et al*, 1992). To cover such levels of disorder, sub-threshold or borderline cases of anxiety and depression were recorded in addition to those meeting the standard DSM-IV criteria, in order to establish a wide range of cases that might be of clinical significance to general practitioners. The category 'adjustment disorders' was not used, following the recommendation by Pincus *et al* (1999). The research diagnostic criteria for minor depression as provided in Appendix B of the DSM-IV manual were used (American Psychiatric Association, 1994). In addition to DSM-IV defined cases, those defined by Bedford College case criteria (Finlay-Jones *et al*, 1980) were included. The Bedford College definitions only allow for the diagnoses of depression and anxiety to be made at the level of both case and borderline case; they were used because they allow for the inclusion of borderline anxiety states, which do not require specific diagnostic categories (such as panic disorder or specific phobia) to be specified, and these act as a wider net for anxiety disorders.

As the study progressed it became obvious that there were individuals who did not fit into any of the standard diagnostic categories but did appear to be troubled, usually by chronic difficulties. These individuals did not have sufficient symptoms to meet standard case criteria, but might have had periods of intermittent symptoms that did not reach case threshold level. These people may require some form of assistance from primary care services for their problems. Because of this we included these individuals in the study and categorised them as 'psychosocial cases'.

Measurement of need for treatment

The Medical Research Council (MRC) Needs for Care Assessment Schedule – Community version (NFCAS-C; Bebbington *et al*, 1996) was used to rate the needs for care. The NFCAS-C uses an

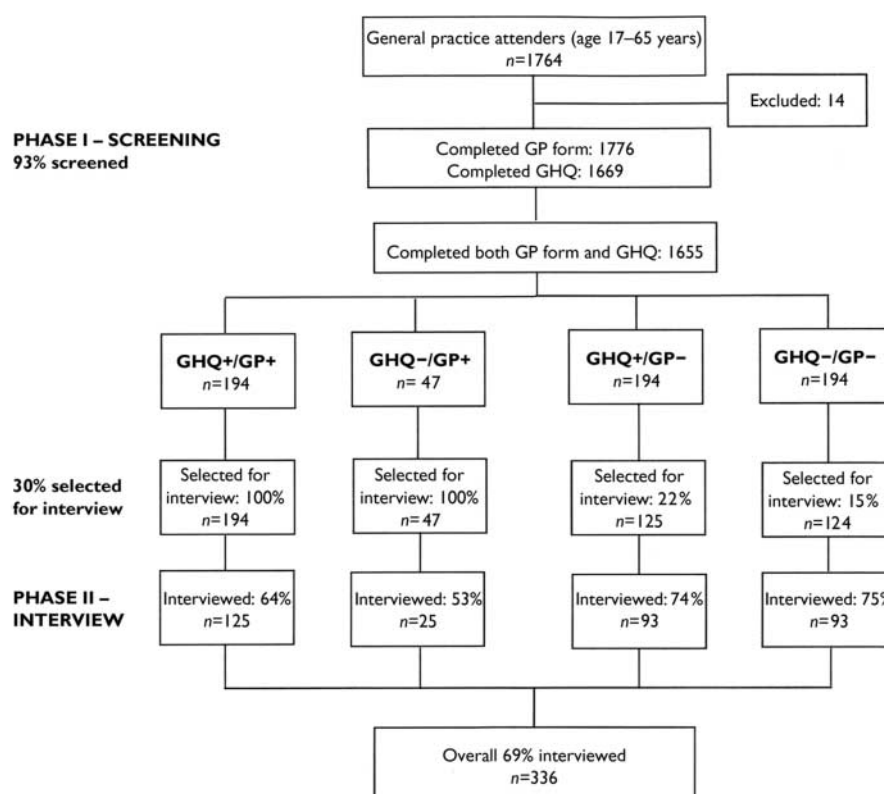


Fig. 1 Study design, sampling fractions and attrition rates.

expert-defined or normative approach (Bradshaw, 1972). It was developed to assist in rating the need for care for psychiatric conditions seen in general populations and was used in the Camberwell and Northern Ireland studies (Bebbington *et al*, 1996, 1997; McConnell *et al*, 2002). The NFCAS-C uses the same approach as the MRC Needs for Care Assessment (Brewin *et al*, 1987). The NFCAS-C provides a structure for the rating of care based on information gathered at interview. Information is required on the course and extent of symptoms and of social disability. The decisions on which the ratings are based are clinical judgements using a panel of experts who must reach a consensus. The rating scheme is provided in a manual, thus enhancing agreement and reliability. Interrater reliability is good on ratings of overall needs and specific interventions but is less good on non-specific interventions, mainly because of differences in clinical judgement (Lesage *et al*, 1996).

The original NFCAS-C covered seven types of disorder (positive psychotic symptoms, depressive symptoms, anxiety or obsessional symptoms, problems with alcohol, problems with drugs, eating disorders and adjustment disorders) and ratings are given for each disorder. Two criteria are required to rate a person as having a

need for care: the person has significant distress from symptoms with or without disablement and this is due to some potentially remediable or preventable cause. Two rating variables are particularly important when considering the NFCAS-C's approach to rating need for care: 'items of care' and 'primary need status'. For each disorder the rating schedule specifies items of care that might be given (e.g. medication, counselling, support and cognitive-behavioural therapy) and these can be rated as 'not appropriate' (no need), 'appropriate and given' (met need) or 'appropriate and not given' (unmet need). In addition, the person's own views and actions on treatment can be taken into consideration (e.g. 'non-compliance' or 'rejection of the idea of treatment'), as can the provision of unnecessary items of care ('overprovision'). In deciding on the treatments to be included in the NFCAS-C, Bebbington *et al* (1996) relied on their own knowledge and research of the psychological and pharmacological literature, and based the model on what ought to be feasible in a developed economy; the same approach has been adopted in this study.

The ratings of 'primary need status' (the overall care need) for each disorder are based on the rating made for the items of care. If any item of care is rated as

'unmet' then the primary need status is designated as 'unmet'; it is thus possible for patients to receive some appropriate treatment but have their overall needs unmet. The overall ratings for this are met need (appropriate action undertaken), unmet need (appropriate action not undertaken) and no meetable need (there is disablement, but no action that is appropriate or feasible).

Bebbington *et al* (1996) suggested that the identification of need must rely primarily on expert opinion. This has the principal advantage that a clinical approach to deciding about treatment can be used, which matches the characteristics of the case to current evidence for treatment. When making a decision about treatment it would be uncommon for clinicians to base their judgement purely on the diagnosis; rather, they would take into account the characteristics of the individual and of the disorder, including the development and duration of symptoms, the levels of distress and impairments of social performance. This decision-making process may be particularly pertinent to primary care physicians who commonly make decisions based on the problem presenting rather than on diagnosis, which may be undifferentiated. Additionally, in a normative approach, needs can be based on treatments that are feasible in the given context and can be based on good practice rather than what is routinely provided. This expert-defined approach can take into consideration the patient's own views on treatment, particularly if the patient does not wish to take up a treatment that might be offered. This acknowledges the importance of mutual collaboration between patient and clinician.

In addition to the advantages outlined above, the approach allows for a direct assessment of need. This is particularly apposite in the present context, as the entire sample consists of those consulting health services. The approach allows for aggregate estimates of need and also calculation of needs for the individuals consulting the primary health care services.

The original version of the NFCAS-C was modified for the purposes of our study. The following changes were made.

- The types of disorder covered were altered to match the diagnostic categories employed in the survey. Positive psychotic symptoms and adjustment disorders were removed as they were

not defined in our study. The broad categories of disorder included were depressive symptoms, anxiety or post-traumatic stress symptoms, obsessive-compulsive disorders, somatisation symptoms, problems with substance misuse (drugs and/or alcohol), eating disorders and psychosocial problems. These categories are referred to as 'diagnostic/symptom areas'.

- (b) For each type of disorder a rating of whether the problem had been identified by the general practitioner or the practice nurse was noted. This was based on the ratings made by the doctor or nurse on the encounter form, the patient's account of the consultation, and the practice notes. It was possible that the doctor or nurse who had seen the patient on the screening day had not recognised the presence of a psychological problem, but that it had been previously recognised (for the same episode) by another practitioner.
- (c) An additional item of care, 'GP acknowledgement, support, reassurance to the patient', was rated; this was based on the patients' accounts of whether they had discussed their difficulties with the doctor or nurse and had these acknowledged at the screening consultation or previously. This allowed for the patient's needs to be met by this single item if appropriate, in line with the classification of psychological problems outlined by Goldberg (1992).

The treatments described as cognitive-behavioural therapy covered those embraced by the terms 'cognitive therapy' and 'behavioural therapy'. Thus, for depressive disorders, the term 'cognitive-behavioural therapy' covered therapy aimed at helping individuals identify and correct their distorted and negatively biased thoughts and also interventions such as activity scheduling, social skills training, structured problem solving and goal planning. For anxiety disorders, the term covered the same approaches as for depressive disorders with the addition of techniques such as relaxation training, hyperventilation control and graded exposure.

To assist in the ratings of need for care, each participant was asked a range of supplementary questions after the SCID interview. These covered the details of the consultation on the day of screening,

current treatment (and planned treatment, e.g. referrals already made to psychiatric services) and treatments received in the past year. Participants were also asked what treatments they would accept for their current problem. This information was elicited through the use of a single open question and a checklist of possible treatments, including medication, psychological therapy, referral and alternative (complementary) therapies.

All participants who were selected for needs rating were discussed at a regular rating meeting, attended by the authors and two psychiatric nurses who had worked in general practice, when each item was rated on a consensus basis. The ratings of the primary needs status, assessment of items of care and overprovision were made as in Bebbington *et al* (1996). If any one item of care was rated as 'unmet' then the primary need status was rated as 'unmet'. People who were diagnosed as having more than one disorder had needs rated for each disorder (diagnostic/symptom area).

All screening and interviews were done by research assistants (two of whom were psychiatric nurses) who were trained to complete the interviews and ratings. The research diagnostic criteria were applied by the interviewers and in the consensus rating meetings. All needs ratings were made in the consensus rating meetings.

Analysis

The prevalence figures were calculated using the sampling proportions (those screened for interview/those interviewed for each of the four GHQ/GP groups) as weighting factors (see Fig. 1), in the same manner as that described by Ormel *et al* (1990). The results were analysed using the Statistical Package for the Social Sciences (SPSS for Windows) and are

reported as prevalence rates (per 1000 attenders).

RESULTS

Screened sample

A total of 1794 consecutive attenders were screened, of whom 1669 (93%) completed the GHQ-28. Encounter forms were completed for 1776 (99%). The eligible sample for interview was the 1655 (92.3%) individuals with completed GHQ and Encounter forms and who were not known to fit the exclusion criteria (Fig. 1).

Interviewed sample

Four hundred and ninety individuals were selected for interview and 336 (69%) were successfully interviewed (Fig. 1). The demographic details of the people who accepted interview were not significantly different from those who refused interview, except that they were slightly older (43.7 years *v.* 39.1 years) and were more likely to be married and less likely to be single (interviewed: 15% single, 72% married; refused: 25% single, 62% married). Two-thirds of the interviewed sample (66.1%) were women. Of the sample, 64.3% were employed, 14.6% unemployed, 15.5% worked in the home, 4.2% were students and 1.5% disabled; 25.9% belonged to social class I/II, 46.5% to III and 27.4% to IV/V. All were White and 98.5% had been born in the UK.

Prevalence of psychiatric disorder

Of the individuals interviewed, 147 (43.8%) were eligible for definition as a case of psychiatric disorder on at least one of the case definitions used. After application of weighting factors, this gives a total prevalence of 279 per 1000 consulters (Table 1).

Table 1 Prevalence of need for treatment in primary care consulters

Need status	<i>n</i>	% of sample with needs	Prevalence per 1000 consulters (95% CI)
No need	1	—	6 (13) ¹
Needs met (all areas)	41	28.1	65 (39–91)
Needs partially met (in at least one area)	9	6.2	11 (0–22)
Unmet needs (all areas unmet)	87	59.6	178 (137–219)
No meetable need	9	6.2	19 (4–34)
Total	147	100.0	279 (230–326)

1. Upper 95% confidence limit.

A DSM-IV disorder was present in 105 participants and a further 17 had minor depression only. The total prevalence of DSM-IV disorders was 190 per 1000 (95% CI 148–232) – 217 per 1000 (95% CI 173–261) if minor depression is included. Anxiety disorders (prevalence 117 per 1000, 95% CI 83–151) and depressive episodes (prevalence 151 per 1000, 95% CI 113–189) constituted the bulk of the disorders seen (see Tables 3 and 4). The most common single categories were major depressive episode (prevalence 108 per 1000) and generalised anxiety disorder (prevalence 77 per 1000). Other disorders were relatively uncommon (Table 2). The majority (58%) of all DSM-IV cases met criteria for only one DSM-IV diagnostic category (60% if minor depression is excluded).

One hundred and twenty-nine participants met the Bedford College case criteria. The total prevalence of Bedford College cases was 235 per 1000 (95% CI 190–280). Only depression and anxiety were included in this case definition and borderline anxiety was the most common diagnosis (prevalence 147 per 1000). There were only five ‘psychosocial’ cases in the sample, giving a prevalence of 15 per 1000.

Needs for care

The 147 participants who met the conditions for definition as a current case on the broad criteria used (including ‘psychosocial’) were included in the analysis. Of these, 81 (55.1%) had only one diagnostic/symptom area rated, 61 (41.5%) had two areas rated, 4 (2.7%) had three areas rated and 1 had five areas rated. The number of participants rated in each area is shown in Table 2. The 147 patients had a total of 220 diagnostic/symptom areas rated.

Overall need for care

The overall needs for care in the 147 cases are shown in Table 1. These were calculated from all the 220 diagnostic/symptom areas rated, taking into consideration whether the primary need status for each area was rated as met, unmet or not meetable. This allowed for needs to be considered as fully met (i.e. met in all diagnostic/symptom areas rated), partially met (met in at least one of the diagnostic/symptom areas, but not all those rated), or not met (not met in any of the diagnostic/symptom areas rated). Those shown as having no meetable need were all people who did not want any intervention.

Only one person was thought to have no need for any intervention (a patient with generalised anxiety disorder). Thus the overall prevalence of need was 273 per 1000 consulters. The majority of the individuals with need had unmet needs (59.6%) and a further 6.2% had needs met in at least one diagnostic/symptom area on which they were rated (partially met needs). Nine people had needs that could not be met because they did not want any form of intervention.

Needs for care for individual disorders/symptom areas

The overall needs for care for the individual diagnostic/symptom areas are shown in Table 2. The column ‘overprovision’ has been added to show those individuals who received an item of care that was seen by the rating panel to be in excess of usual treatment. Individuals entered in this column have been double-counted and are also included among those in the other columns, as many of them had their needs met.

The prevalence of unmet need was higher in anxiety than in depression (139 per 1000 *v.* 95 per 1000). The needs for care of people with the less common disorders were always unmet. This did not mean that the individuals with these disorders did not receive any treatment; rather, they had some item of care rated as ‘appropriate, but not given’ (unmet). For example, all four people with obsessive-compulsive disorder received psychotropic medication but only two of the four were given cognitive-behavioural therapy. All four were thought to require referral to psychiatric services, but only two had actually been referred. Only one of the cases of somatoform disorder had been recognised by the general practitioner, and this patient had been given cognitive-behavioural therapy. Only one of the cases of substance misuse was known to the general practitioner, and this patient had received psychological therapy. Both of the people with eating disorders had received cognitive-behavioural therapy in the past, but it was currently thought that both would benefit from a referral to psychiatric services. Only two of the five psychosocial cases had been acknowledged by the general practitioner.

Anxiety and depression

The treatment needs of the participants with depressive disorders are shown in

Table 3. The highest prevalence of unmet need was for DSM-IV major depressive disorder (71 per 1000). The proportion of cases of major depressive disorders was higher than for minor depression, but this difference was not significant ($\chi^2=2.559$, $P=0.278$). The treatment needs of those with anxiety disorders are shown in Table 4. The prevalence of unmet need was highest in those with Bedford College borderline anxiety (106 per 1000). The proportion of those whose needs were met varied across the specific categories of DSM-IV anxiety disorders. No case of specific phobia had needs met; and only one case each of agoraphobia and of post-traumatic stress disorder had needs met.

The two most frequently rated items of care that were thought to be required for depression were medication (rated appropriate in 85% of cases) and cognitive-behavioural therapy (rated appropriate in 65% of cases). Of the 62 patients with depression for whom the latter therapy was thought to be appropriate, 44 (71%) were not receiving it, 7 (11%) rejected the idea of such therapy and 11 (18%) had received it. In the 82 cases of depression in which the patient was thought to need antidepressant medication, 23 (28%) were not receiving it, 9 (11%) did not want it and 50 (61%) had received it.

For depression, the items of care for which need was most frequently assessed as being unmet were cognitive-behavioural therapy (45%), medication (24%), assessment (24%) and general practitioner acknowledgement (18%). The equivalent figures for anxiety were: cognitive-behavioural therapy 55%, assessment 49%, general practitioner acknowledgement 45% and medication 13%.

Medication (65/108; 60%) and cognitive-behavioural therapy (85/108; 79%) were also the two most frequently rated items of care thought appropriate for anxiety. Of the 85 patients with anxiety for whom cognitive-behavioural therapy was thought appropriate, 59 (69%) were not receiving it and 10 (12%) rejected it. Of the 65 patients with anxiety thought to require medication, 14 (21%) were not receiving it and 4 (6%) did not want it.

DISCUSSION

This is the first study to examine directly levels of met and unmet need for

Table 2 Needs for treatment in all diagnostic/symptom areas

Diagnostic/symptom area	No need		Met need		Unmet need		No meetable need		Overprovision		Total prevalence of disorder per 1000 consultants (95% CI)
	n (%)	Prevalence per 1000 (95% CI)	n (%)	Prevalence per 1000 (95% CI)	n (%)	Prevalence per 1000 (95% CI)	n (%)	Prevalence per 1000 (95% CI)	n (%)	Prevalence per 1000 (95% CI)	
Depression (n=96)	0	0	34 (35)	50 (27–73)	58 (60)	95 (64–126)	4 (4)	7 (14) ⁱ	13 (14)	13 (1–25)	152 (115–191)
Anxiety (n=108)	1 (0.9)	6 (13) ⁱ	24 (22)	38 (8–58)	76 (70)	139 (102–176)	7 (6)	17 (3–31)	11 (10)	15 (2–28)	200 (152–237)
OCD (n=4)	0	0	2 (50)	2 (6) ⁱ	2 (50)	5 (11) ⁱ	0	0	0	0	7 (14) ⁱ
Somatoform disorder (n=2)	0	0	0	0	2 (100)	5 (11) ⁱ	0	0	0	0	5 (11) ⁱ
Substance misuse (n=3)	0	0	0	0	3 (100)	3 (8) ⁱ	0	0	0	0	3 (8) ⁱ
Eating disorder (n=2)	0	0	0	0	2 (100)	5 (11) ⁱ	0	0	0	0	5 (11) ⁱ
Psychosocial disorder (n=5)	0	0	2 (40)	2 (6) ⁱ	3 (60)	13 (1–25)	0	0	0	0	15 (2–28)

OCD, obsessive-compulsive disorder.

i. Upper 95% confidence limit.

Table 3 Prevalence of treatment needs for depressive disorder in primary care consultants

Depressive classification	n	%	Prevalence per 1000 consultants (95% CI)
DSM-IV major depression (n=66)			
Need met	20	30	30 (12–48)
Unmet need	42	64	71 (44–98)
No meetable need	4	6	7 (14) ¹
Total	66	100	108 (74–140)
DSM-IV minor depression (n=29)			
Need met	14	48	21 (6–36)
Unmet need	15	52	23 (7–39)
No meetable need	0	0	0 (0)
Total	29	100	44 (22–66)
Bedford College case depression (n=45)			
Need met	14	31	21 (6–36)
Unmet need	29	64	43 (21–65)
No meetable need	2	5	5 (11) ¹
Total	45	100	69 (41–95)
Bedford College borderline depression (n=32)			
Need met	9	28	16 (3–29)
Unmet need	21	66	34 (15–53)
No meetable need	2	6	2 (6) ¹
Total	32	100	52 (27–75)

1. Upper 95% confidence limit.

psychiatric treatment in general practice attenders. It shows high levels of unmet need in individuals who have common mental disorders; those with anxiety disorders having higher levels of unmet need (71%) than those with depression (60%). The study used a systematic sample of people with non-psychotic disorders consulting in general practices, and used meaningful and reliable diagnostic categories covering a broad range of disorders.

Methodological considerations

The study was conducted with attention given to the sampling procedure and was in line with the two-phase process used by others (Dunn *et al*, 1999). The specific sampling procedure was based on that used by Ormel *et al* (1990), but did not sample 'new' and 'old' patients separately. In addition, in our study the GP-/GHQ- and GP+/GHQ+ fractions were randomly selected, whereas in the Ormel study these were sampled by taking every fourth subject (GP-/GHQ+) and all subjects until the second patient per doctor had accepted (GP-/GHQ-). We believe that our approach offers a refinement to the Ormel *et al* method.

The practices were not randomly chosen and were selected on the basis of their agreement to assist. This may affect the rigorous quality of the results. However, both urban and rural practices were used, which represented the range of populations in Mid Cheshire. The participating general practitioners appeared to be typical of the others in the area, but the practices were generally smaller than the average for the area. This may reflect the problem of getting all the doctors in any one practice to agree to participate in such a study, and may also reflect the perceived time pressures on the doctors. Patients attending both doctor and nurse appointments were used to generate the interviewed sample. This broadened the range of patients included, although in practice the bulk of cases came from those consulting the doctors.

We chose to consider a broad range of cases of non-psychotic disorders, including borderline cases, as we wished to reflect a sample that might have clinical relevance for general practitioners. The cases were all operationally defined, thus allowing for replication. All cases but one were thought to require intervention ranging from acknowledgement of the patient's problems

by the general practitioner to referral to psychiatric services. No hierarchy of diagnoses was applied, thus many of the cases had mixed disorders (mainly anxiety and depression). We did not assess the overall need for treatment of the patients in these mixed cases and judged treatment for each disorder separately. The figures quoted for individual diagnoses are for disorders, not individuals, although the overall needs (see Table 1) are those of the individuals in the study.

Judging treatment needs from an 'expert' point of view may be unreliable, because clinicians will vary in their assessments. We approached this problem by making judgements by consensus, using several raters who took into consideration the clinical details, the context and the available evidence. In addition, a record of previous decisions was made so that consistency between ratings could be achieved. The view of the patient was considered separately and reflected in the rating of 'no meetable need' if the patient did not want the treatment thought to be desirable by the 'experts'. The patient's view of treatment needs is complex, and patients may accept one treatment but reject another. Most patients said they would accept treatments if offered, but some rejected them on the basis of past experience. Patients' acceptance of treatment is likely to change over time, as are their needs and whether these needs are met. This is not adequately reflected in this cross-sectional study and we are now in the process of following up the interviewed sample.

The approach adopted here is time-consuming, but it is flexible as additional ratings can be added depending on the nature of the study.

Overall prevalence of disorder

The overall prevalence obtained in the Cheshire practices sits within the range of nine studies quoted by Vázquez-Barquero *et al* (1999): 15–38.8%. The UK study by Blacker & Clare (1988) gave an overall rate of 35.5%, but included adjustment disorders in this figure; when these are removed the rate falls to 17.4%. Because of the use of different criteria and the brief way in which the Blacker & Clare data were reported, it is difficult to compare them accurately with our results. It is likely that some of the adjustment disorders included in their sample contained the types of disorders covered by

Table 4 Prevalence of treatment needs for anxiety disorders in primary care consulters

Anxiety classification	n	%	Prevalence per 1000 consulters (95% CI)
Bedford College case anxiety (n=26)			
Need met	8	31	15 (2–28)
Unmet need	18	69	25 (8–42)
No meetable need	0	0	0 (0)
Total	26	100	40 (19–61)
Bedford College borderline anxiety (n=78)			
Need met	16	20	24 (8–40)
Unmet need	55	70	106 (73–139)
No meetable need	7	9	17 (3–31)
Total	78	99	147 (109–184)
DSM–IV any anxiety disorder¹ (n=66)			
No need	1	1	6 (13) ²
Need met	14	21	29 (11–47)
Unmet need	46	70	70 (43–97)
No meetable need	5	8	12 (0–24)
Total	66	100	117 (83–151)
Panic disorder (n=10)			
Need met	2	20	2 (6) ²
Unmet need	8	80	8 (16) ²
No meetable need	0	0	0
No need	0	0	0
Total	10	100	10 (19) ²
Agoraphobia (n=8)			
Need met	1	12	1 (4) ²
Unmet need	7	88	9 (17) ²
No meetable need	0	0	0
No need	0	0	0
Total	8	100	10 (19)
Social phobia (n=7)			
Need met	2	29	9 (17) ²
Unmet need	5	71	10 (19) ²
No meetable need	0	0	0
No need	0	0	0
Total	7	100	19 (4–34)
Specific phobia (n=12)			
Need met	1	8	1 (4) ²
Unmet need	9	75	21 (6–36)
No meetable need	2	17	9 (17) ²
No need	0	0	0
Total	12	100	31 (12–50)
Generalised anxiety disorder (n=50)			
Need met	14	28	29 (11–47)
Unmet need	32	64	39 (18–60)
No meetable need	3	6	3 (8) ²
No need	1	2	6 (13) ²
Total	50	100	77 (48–104)
PTSD (n=7)			
Need met	1	14	1 (4) ²
Unmet need	6	86	8 (16) ²
No meetable need	0	0	0
Total	7	100	9 (17)

PTSD, post-traumatic stress disorder.

1. Excluding PTSD.

2. Upper 95% confidence limit.

the borderline/sub-threshold categories in our study. The Blacker & Clare study was also conducted in an inner-city practice, where higher rates of disorder might be expected.

Level of need

In only one case of disorder was the individual thought not to require any treatment. This is a rate much lower than that found in equivalent community studies (e.g. Bebbington *et al*, 1997) and probably reflects the fact that our sample was recruited from those consulting in primary care. Five people did not meet the criteria for definition as cases either on the DSM–IV or Bedford College criteria, but were individuals who were thought to have needs for treatment. These individuals were defined as having ‘psychosocial disorders’, and would have been categorised as ‘non-cases’ in other studies of need, which employed operationally defined diagnostic criteria. The Camberwell Needs for Care study did rate some people who were not identified as ‘cases’ as having a need for care (Bebbington *et al*, 1997).

Some of the individuals who were rated as having a primary unmet need for care might have been receiving some appropriate treatment, but because of the way in which the primary need was defined it does not reflect this receipt of treatment. However, many of those rated as having a primary unmet need were not receiving any treatment, and those who received isolated items of care should be considered as being in receipt of an inadequate package of care. These missing items of care may be given over time and, if so, should be picked up in the follow-up study.

Comparison with other findings

The only comparable UK studies investigated community samples, and showed low levels of met need and low rates of consultation with primary care services (Bebbington *et al*, 1997, 1999, 2000a,b). Comparison of our results with these community studies suggests that visiting the general practitioner does not ensure that needs will be met. The Camberwell Needs for Care study reported on the needs met in people who had contacted their general practitioner in the previous year (Bebbington *et al*, 1999): 54.5% had unmet needs, 13.6% had their needs met and 4.5% had unmet needs. This sample

was small ($n=22$), but the findings are similar to those in our larger sample.

Generalisability of the findings

The actual prevalence rates quoted will inevitably reflect the base population from which the participants were recruited, and the proportions of met and unmet need will reflect the availability of services. Mid Cheshire is a mixed urban and rural area with a substantial White working-class population. The quality of general practice is good. This is not substantially different from many areas in England, although it is certainly different from the major inner-city centres. The findings may thus reflect the prevalence of psychiatric disorders in many UK general practices. There is nothing exceptional about the psychiatric services in Mid Cheshire and no reason to believe that the availability of specific treatments is different from other parts of the country.

Implications

There is good evidence for the efficacy of treatments for non-psychotic mental disorders (Nathan & Gorman, 1998). Our findings suggest that the bulk of people with common mental disorders who visit their general practitioner are not receiving treatments of proven efficacy and this does not appear to be related to their willingness to accept such treatment. The majority of the people with anxiety and depression could be treated in primary care if sufficient expertise were available, and some could be managed entirely by their general practitioner with 'good clinical care' (Andrews, 1993) and possibly the use of medication. Many require psychological therapies, some of which could be delivered by computerised systems (Proudfoot *et al*, 2003) or by group methods such as those tested on non-consulting samples (Brown *et al*, 2000; Watkins *et al*, 2000). Additional self-help approaches could also be of benefit to these individuals.

Delivery of such approaches in primary care would require the appropriate training of general practitioners and other primary care workers in consultation techniques designed to improve detection of psychological disorders (Gask *et al*, 1991), greater awareness of the value of medication, and possibly of cognitive-behavioural techniques such as structured problem solving and event scheduling (Andrews, 2001). Provision of cognitive-behavioural therapy

primary care may be difficult to achieve given the lack of trained therapists (Goldberg & Gournay, 1998), and other potentially cost-effective methods of delivering psychological therapies need to be considered and evaluated (for example, Brown *et al*, 2000; Watkins *et al*, 2000; Proudfoot *et al*, 2003). Many of the disorders identified in this study are chronic and recurrent, and an enhanced care approach might be beneficial in the longer term (Von Korff & Goldberg, 2001). The necessity for secondary care remains much as it is at present, but allowing patients access to effective treatments in primary care will need not only the enhancement of the skills of primary care workers, but also the creation of new and effective working relationships with mental health professionals.

ACKNOWLEDGEMENTS

The authors thank Graham Benson, Angela Jones, Ann Newell and Christine Noble for their assistance with the screening, interviews and data management. The study was funded by the Mid Cheshire National Health Service Trust.

REFERENCES

- American Psychiatric Association (1994)** *Diagnostic and Statistical Manual of Mental Disorders* (4th edn) (DSM-IV). Washington, DC: APA.
- Andrews, G. (1993)** The essential psychotherapies. *British Journal of Psychiatry*, **162**, 447–451.
- Andrews, G. (2001)** Placebo response in depression: bane of research, boon to therapy. *British Journal of Psychiatry*, **178**, 192–194.
- Andrews, G., Sanderson, K., Slade, T., et al (2000)** Why does the burden of disease persist? Relating the burden of anxiety and depression to effectiveness of treatment. *Bulletin of the World Health Organization*, **78**, 446–454.
- Bebbington, P. (1990)** Population surveys of psychiatric disorder and the need for treatment. *Social Psychiatry and Psychiatric Epidemiology*, **42**, 667–676.
- Bebbington, P., Marsden, L., Brewin, C. P., et al (1996)** Measuring the need for psychiatric treatment in the community: the community version of the MRC Needs for Care Assessment. *Psychological Medicine*, **26**, 229–236.
- Bebbington, P., Marsden, L. & Brewin, C. P. (1997)** The need for psychiatric treatment in the general population: the Camberwell Needs for Care Survey. *Psychological Medicine*, **27**, 821–834.
- Bebbington, P., Marsden, L. & Brewin, C. P. (1999)** The treatment of psychiatric disorder in the community: report from the Camberwell Needs for Care Survey. *Journal of Mental Health*, **8**, 7–17.
- Bebbington, P., Meltzer, H., Brugha, T. S., et al (2000a)** Unequal access and unmet need: neurotic disorders and the use of primary care services. *Psychological Medicine*, **30**, 1359–1367.
- Bebbington, P., Brugha, T. S., Meltzer, H., et al (2000b)** Neurotic disorders and the receipt of psychiatric treatment. *Psychological Medicine*, **30**, 1369–1376.
- Blacker, C. V. R. & Clare, A. W. (1988)** The prevalence and treatment of depression in general practice. *Psychopharmacology*, **95**, S14–S17.
- Boardman, A. P. (1987)** The General Health Questionnaire and the detection of emotional disorder by general practitioners. A replicated study. *British Journal of Psychiatry*, **151**, 373–381.
- Bradshaw, J. (1972)** A taxonomy of social need. In *Problems and Progress in Medical Care* (ed. G. McLachlan), pp. 71–92. Oxford: Oxford University Press.
- Brewin, C. R., Wing, J. K., Mangen, S. P., et al (1987)** Principles and practice of measuring need in the long-term mentally ill: the MRC Needs for Care Assessment. *Psychological Medicine*, **17**, 971–982.
- Brown, J. S. L., Cochrane, R. & Hancox, T. (2000)** Large-scale health promotion stress workshops for the general public: a controlled evaluation. *Behavioural and Cognitive Psychotherapy*, **28**, 139–151.
- Dunn, G., Pickles, A., Tansella, M., et al (1999)** Two-phase epidemiological surveys in psychiatric research. *British Journal of Psychiatry*, **174**, 95–100.
- Finlay-Jones, R., Brown, G. W., Duncan-Jones, P., et al (1980)** Depression and anxiety in the community: replicating the diagnosis of a case. *Psychological Medicine*, **10**, 445–454.
- First, M. B., Spitzer, R. L., Gibbon, M., et al (1996)** *Structured Clinical Interview for DSM-IV Axis I Disorders – Patient Edition* (SCID-I/P, Version 2.0). New York: Biometrics Research Department, New York State Psychiatric Institute.
- Gask, L., Boardman, A. P. & Standard, S. (1991)** Teaching communication skills. *Postgraduate Education General Practice*, **2**, 7–15.
- Goldberg, D. (1992)** A classification of psychological distress for use in primary care settings. *Social Science and Medicine*, **35**, 189–193.
- Goldberg, D. & Gournay, K. (1998)** *The General Practitioner, The Psychiatrist and The Burden of Mental Health Care*. Maudsley Discussion Paper. London: Maudsley Publications.
- Goldberg, D. P. & Hillier, V. F. (1979)** A scaled version of the General Health Questionnaire. *Psychological Medicine*, **9**, 139–145.
- Goldberg, D. P., Bridges, K., Duncan-Jones, P., et al (1987)** Dimensions of neurosis seen in primary-care settings. *Psychological Medicine*, **17**, 461–470.
- Hornblow, A., Bushell, J. A., Wells, J. E., et al (1990)** Christchurch psychiatric epidemiological study: use of mental health services. *New Zealand Medical Journal*, **103**, 415–417.
- Jacob, K. S., Everitt, B. S., Patel, V., et al (1998)** The comparison of latent variable models of non-psychotic psychiatric morbidity in four culturally diverse populations. *Psychological Medicine*, **28**, 145–152.
- Johnson, J., Weissman, M. M. & Klerman, G. L. (1992)** Service utilisation and social morbidity associated with depressive symptoms in the community. *JAMA*, **267**, 1478–1483.
- Katz, S. J., Kessler, R. C., Frank, R. G., et al (1997)** The use of outpatient mental health services in the United States and Ontario: the impact of mental morbidity and perceived need for care. *American Journal of Public Health*, **87**, 1136–1143.

Lehtinen, V., Jourkamaa, M., Jyrkinen, E., et al (1990) Need for mental health services of the adult population of Finland: results from the Mini Finland Health survey. *Acta Psychiatrica Scandinavica*, **81**, 426–431.

Lesage, A. D., Fourier, L., Cyr, M., et al (1996) The reliability of the community version of the MRC Needs for Care Assessment. *Psychological Medicine*, **26**, 237–243.

Marks, J. N., Goldberg, D. P. & Hillier, V. F. (1979) Determinants of the ability of general practitioners to detect psychiatric illness. *Psychological Medicine*, **9**, 337–353.

McConnell, P., Bebbington, P., McClelland, R., et al (2002) Prevalence of psychiatric disorder and the need for psychiatric care in Northern Ireland. *British Journal of Psychiatry*, **181**, 214–219.

Meadows, G., Burgess, P., Fossey, E., et al (2000) Perceived need for mental health care: findings from the Australian National Survey of Mental Health and Well-being. *Psychological Medicine*, **30**, 645–656.

Nathan, P. E. & Gorman, J. (eds) (1998) *A Guide to Treatments that Work*. New York: Oxford University Press.

Ormel, J., Van Den Brink, W., Koeter, M. W. J., et al (1990) Recognition, management and outcome of psychological disorders in primary care: a naturalistic follow-up study. *Psychological Medicine*, **20**, 909–923.

Piccinelli, M., Rucci, P., Ustun, B., et al (1999) Typologies of anxiety, depression, and somatisation symptoms among primary care attenders with no formal mental disorder. *Psychological Medicine*, **29**, 677–688.

Pincus, H. A., Davis, W. W. & McQueen, L. E. (1999) 'Subthreshold' mental disorders. *British Journal of Psychiatry*, **174**, 288–296.

Proudfoot, J., Goldberg, D., Mann, A., et al (2003) Computerised, interactive, multimedia cognitive-behavioural program for anxiety and depression in general practice. *Psychological Medicine*, **33**, 217–227.

Rabinowitz, J., Gross, R. & Feldman, D. (1999) Correlates of a perceived need for mental health assistance and differences between those who do and do not seek help. *Social Psychiatry and Psychiatric Epidemiology*, **34**, 141–146.

Sullivan, P. F. & Kendler, K. S. (1998) Typology of common psychiatric syndromes. *British Journal of Psychiatry*, **173**, 312–319.

CLINICAL IMPLICATIONS

- There is a high prevalence of unmet need for mental health care in primary care attenders.
- Some of this need can be met with appropriate training of existing primary care personnel.
- Increased provision of psychological therapies and improved liaison with secondary care services will also be required.

LIMITATIONS

- The general practices in the study were not randomly selected.
- The study did not consider 'borderline' conditions of other diagnoses such as somatoform disorders and eating disorders.
- No attempt was made to include psychotic disorders.

JED BOARDMAN, PhD, FRCPsych, Health Services Research Department, Institute of Psychiatry, London; CAROL HENSHAW, MD, MRCPsych, School of Medicine, SASI WILLMOTT, PhD, School of Computing and Mathematics, Keele University, Staffordshire, UK

Correspondence: Dr Jed Boardman, Chaucer Community Resource Centre, 13 Ann Moss Way, London SE16 2TH, UK. E-mail: jed.boardman@slam.nhs.uk

(First received 8 July 2003, final revision 23 March 2004, accepted 26 May 2004)

Tyrer, P. (2001) The case for cothymia: mixed anxiety and depression as a single diagnosis. *British Journal of Psychiatry*, **179**, 191–193.

Vázquez-Barquero, J. L., Herran, A. & Simon, J. A. (1999) Epidemiology of mental disorders in the community and primary care. In *Common Mental Disorders in Primary Care* (eds M. Tansella & G. Thornicroft), pp. 3–16. London: Routledge.

Von Korff, M. & Goldberg, D. (2001) Improving outcomes in depression. *BMJ*, **323**, 948–949.

Watkins, E., Elliott, S., Stanhope, N., et al (2000) Meeting the needs for psychological treatment of people with common mental disorders: an exploratory study. *Journal of Mental Health*, **9**, 445–456.

Wing, J. K., Cooper, J. E. & Sartorius, N. (1974) *The Measurement and Classification of Psychiatric Symptoms: An Instrument Manual for the Present State Examination and CATEGO Programme*. Cambridge: Cambridge University Press.