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The need for psychiatric treatment in the general population: the Camberwell Needs for Care survey

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ABSTRACT

Background. This paper presents the first results of a two-stage psychiatric population survey, which uses a new method of directly evaluating needs for specific psychiatric treatment and the extent to which they have been met.

Method. The sample was drawn at random from the population of an area of inner south London with high levels of deprivation. Seven hundred and sixty subjects aged 18–65 completed the GHQ-28. All those scoring > 5 and half of the rest were invited to take part in the second stage, comprising measures of mental state (SCAN), social role performance (SRPS), life events and difficulties (LEDS) and a Treatment Inventory. This information was used to rate the community version of the Needs for Care Assessment (NFCAS-C).

Results. In all, 408 subjects were interviewed in the second stage. The weighted 1 month prevalence of hierarchically ordered ICD-10 psychiatric disorders was 9·8%, the 1 year prevalence 12·3%. The equivalent prevalences for depressive episode were 3·1% and 5·3% respectively, while those for anxiety states were both 2·8%. At interview nearly 10% of the population were identified as having a need for the treatment of a psychiatric condition. This rose to 10·4% if the whole of the preceding year was assessed. Less than half of all potentially meetable needs were met. There was only partial overlap between diagnosis and an adjudged need for treatment.

Conclusion. A majority of people with mental health problems do not have proper treatment; given more resources and greater public and medical awareness, most could be treated by family doctors.

INTRODUCTION

Dohrenwend & Dohrenwend (1982) have identified three generations in the development of community psychiatric surveys, the most recent characterized by standardized psychiatric instruments for case identification. Such instruments reflected a convergence in the definition of individual psychiatric disorders, although they themselves contributed to this consensus. As a result, communication between researchers in different locations and with different traditions has improved.

Although each has its advantages and disadvantages, the most widely used instruments in this type of survey have been the Present State Examination (PSE) system (Wing *et al.* 1974, 1978), and the Diagnostic Interview Schedule (DIS – Robins *et al.* 1985). Between them, they have been used in around 30 community surveys worldwide (Bebbington, 1994). These surveys give reasonably consistent results for the prevalence of the more common psychiatric disorders. The new (tenth) edition of the PSE forms part of the Schedules for Clinical Assessment in Neuropsychiatry (SCAN – Wing *et al.* 1990; WHO,

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1992*a*), a more elaborate instrument that permits diagnostic classification according to ICD-10 (WHO, 1992*b*). This has considerable advantage over its predecessors, and researchers are now in the process of using it in community surveys (Brugha *et al*. 1996; McConnell *et al*. 1996; Vázquez-Barquero *et al*. 1996, all personal communications).

Establishing the general population prevalence of psychiatric disorders has several functions (Bebbington, 1990). One of the most important in practical terms is as an indicator of the overall requirements for psychiatric treatment and services. This serves two purposes related to the equitable and proportionate distribution of health service resources. First, identifying the overall burden of need will quantify differences in the populations under study, which can then be used to decide on the *per capita* allocation of financial resources. Secondly, while the quantification of unmet needs also addresses this question of equity, it may identify specific deficiencies in local services and thus the particular managerial actions required to deal with them. However, as we have argued elsewhere (Bebbington *et al*. 1996), symptomatic prevalence is an imperfect indication of these needs.

Standardized instruments for establishing the prevalence of psychiatric disorders are dependent on agreed procedures for defining cases symptomatically. The definitions are broadly based on the sort of disorder seen, recognized and treated by clinicians. Finding symptomatic cases may suggest that treatment is necessary: after all, one of the purposes of distinguishing medical conditions is to guide treatment. However, clinicians quite properly do not base their decisions to treat or their choice of particular treatments purely on diagnosis: they take account of the way the symptoms have evolved, how long they have lasted, the levels of associated distress and of concomitant impairments of social performance, and the likelihood that symptoms will resolve quickly without treatment. Moreover, the view of clients must be taken into account.

We, therefore, felt that a fourth generation of psychiatric community surveys was required, in which needs for treatment are evaluated directly and clinically. To our knowledge, only two studies have actually attempted to quantify the need for treatment, and both employed crude and indirect measures (Shapiro *et al*. 1985; Lehtinen *et al*. 1990). The relationship between prevalence and treatment needs therefore remains undefined.

In order to move forward, procedures for applying clinical judgement of need to epidemiological samples must be standardized, since expert-defined needs assessments have a considerable potential for idiosyncrasy, being dependent on individual clinical values that are often strongly held. We have argued that this should be done through the application of principles equivalent to those used successfully in standardizing mental state assessments (Bebbington *et al*. 1996). The first of these involves standardization of coverage; in the assessment of treatment needs, the coverage of both disorders and treatments must be decided. Then disorders must be linked with treatment through rules that operationalize need. Because treatments in psychiatry are imperfectly established, it is impossible to make judgements of appropriate treatment without the exercise of considerable clinical expertise. However, the introduction of rules of procedure governing these judgements represent a necessary first step in standardizing them. Our own procedure for assessing needs for psychiatric treatment in non-clinical samples (the Community Version of the MRC Needs for Care Assessment – NFCAS-C) incorporates explicit guidelines and examples in a manual (Brewin *et al*. 1994). The very complex decisions that have to be taken in developing an instrument of this sort are discussed further by Bebbington and his colleagues (1996).

This paper is the first to report data from the Camberwell Needs for Care Survey, a community survey carried out in an inner city area of south London. The survey itself had several aims, but in this paper we describe the basic methodology of the study and in particular report the application of our technique for identifying needs for psychiatric treatment. This is predicated on the belief that diagnosis is an insufficient basis of the judgement of treatment need. The study is among the first to use SCAN for case finding in the general population, and the first to attempt direct and detailed assessment of needs for treatment. We thus provide data on prevalence of disorders covered by ICD-10, and relate this to needs for treatment and the extent

to which they are met, whether by primary care or by specialist psychiatric services. More elaborate analyses will be presented in later papers.

METHOD

Design

The Camberwell Needs for Care Survey is a two-stage cross-sectional random sample of the general population of the catchment area of the Bethlem–Maudsley Joint Hospital. This catchment area comprises the southern two thirds of the Borough of Southwark and the eastern two-fifths of the Borough of Lambeth. It has a population of 220000 and in its northern part is characterized by very high levels of social deprivation and a high proportion of ethnic minorities, mainly Afro-Caribbean and African. As such, it is typical of current British inner city areas and has elevated rates of specialist mental illness referrals.

There are a number of possible sampling frames in Britain. Among these the electoral role has several advantages. It is revised yearly and lists all members of the population over the age of 18, or whose eighteenth birthday falls within a year of the revision. Although there is some under-enumeration, there is a statutory duty on individuals to fill in the returns for the enumeration officer. Every one hundred and fiftieth name was drawn from the electoral wards that made up South Southwark and East Lambeth.

The screening stage of the survey utilized the GHQ-28 (Goldberg & Hillier, 1979), and formed the basis of a second-stage stratified sample. The object was to improve the cost-effectiveness of case detection by increasing the proportion of cases in the second sample. The power of analyses involving case/non-case comparisons was thus also increased. The first-stage sample was divided by the recommended cut-off score on GHQ-28 of 5/6. All high-scorers and a proportion of low-scorers were approached for the second-stage interview. Subjects were offered £5 for returning the questionnaire and a further £10 for a completed interview if they were selected for the second stage.

The first stage was originally intended to be a purely postal survey, collecting basic socio-demographic data together with the GHQ-28. However, it quickly became apparent that although this was designed to make case-finding more cost-effective, it was not entirely successful, as the researcher had to spend time chasing up people who failed to return the GHQ by post. GHQs were sent out in batches of 20. By the end of a week, perhaps a quarter had been returned and L.M. would then contact subjects personally. The two-stage procedure was retained, such that the decision to proceed with the full interview remained dependent on the initial GHQ score. In some instances, subjects completed the questionnaires while L.M. waited. A second-stage interview was then requested if the subject was eligible. The initial contact with subjects included a letter requesting their co-operation, explaining the rationale for the survey and the mechanisms for ensuring confidentiality. Where contact was made personally, this was done verbally, although subjects were also offered the letter to keep if they wished. GHQs continued to be sent out until around 400 second-stage interviews had been completed. Because we could not anticipate non-response rates exactly, the actual number of successful interviews was 408.

There were further problems with this stage of the survey. In the light of our earlier experience in the area (Bebbington *et al.* 1981), we calculated that we would have to send out 1200 questionnaires to obtain 1000 replies. We expected that around 20% ($N = 200$) of the population would exceed a score of 5 on the GHQ-28, and that of these, half would be cases based on SCAN. It was our intention to interview all subjects above the cut-off and randomly to select an equal number of those below. We thence estimated that when we had completed 400 interviews using this strategy, we would have 200 subjects who had been above the cut-off and 100 subjects who were SCAN cases. In the event, these calculations were wide of the mark: in order to make the numbers of high and low scorers equal, we had to sample randomly 1 in 2 of the latter for the second stage. The subjects selected at the second stage were interviewed using the instruments described below, on which calculations of symptomatic prevalence and of needs for care were based.

Instruments at the initial (postal) stage

GHQ-28 (Goldberg & Hillier, 1979).

The General Health Questionnaire (GHQ) is perhaps the best studied psychiatric screening

instrument, originally developed for use in primary care, but also performing well in the general population. As SCAN is a novel instrument, we had no data regarding its use in conjunction with a screening procedure. We were interested to see how the GHQ would perform as a screen for DSM-III-R and ICD-10 disorders as detected by SCAN.

The GHQ-28 version retains the screening functions of the GHQ family, but also permits subject's responses to be broken down into four subscales, which include anxiety and depression subscales. As we anticipated that most of the symptomatic disorders detected in our survey would fall broadly into anxiety or depressive categories, we were interested in how these subscales might perform in relation to the identification of the corresponding ICD-10/DSM-III-R case types.

Self-report Sociodemographic Questionnaire

This was developed specially for the study in order for subjects to record information about their various social statuses with minimal confusion.

At the interview stage

The application of the Needs for Care Assessment requires information about the pattern and evolution of symptoms, the associated impairments of social functions and the relation to social precipitants. In the current study this was obtained from SCAN, the MRC Social Role Performance Schedule (SRPS) and the Life Events and Difficulty Schedule (LEDS). In order to assess the extent to which needs for treatment were being met, we also required information about attitudes towards and experience of specific treatments.

SCAN (Wing *et al.* 1990; WHO 1992*a*)

This comprises a set of instruments for assessing, measuring and classifying the psychopathology and behaviour associated with the psychiatric disorders of adult life. It has four components: the tenth edition of the Present State Examination (PSE-10), a glossary of differential definitions, the Item Group Checklist (IGC) and the Clinical History Schedule (CHS). PSE-10 itself has two parts. Part I covers somatoform, dissociative, anxiety, depressive and bipolar disorders, and the problems associated with appetite, sleep, alcohol and other substance use. There is also a screen for Part II conditions. Part II covers psychotic and cognitive disorders and observed abnormalities of speech, affect and behaviour.

The principles of interviewing are those of a skilled, but standardized, clinical examination. In the current project we employed a computer-based form of the interview. Data from the computer-assisted form are entered directly into a computer file.

A set of computerized algorithms (CATEGO-5) is used to process the data entered, and output options include a range of profiles of symptoms and IGC scores, an Index of Definition, and ICD-10 and DSM-III-R categories. Virtually all the diagnoses in section F0 to F5 of ICD-10 (WHO, 1992*b*) and their equivalents in DSM-III-R, are covered in detail. F6 to F9 are listed in the CHS. There is also a conversion program that derives items equivalent to those of the previous edition, PSE-9. These can then be processed by CATEGO-4 to provide output for comparison with earlier studies.

This is thus an instrument of broad coverage, which is clinically valid and approximates the process of diagnosis as closely as possible. It can be used to rate more than one episode. In the current study, if the subject had not experienced an episode within the last year, we rated only the last month. If they were currently in an episode that had peaked in the last month or so, we assessed symptoms around the peak disturbance. If this peak had occurred some time ago, the period around the peak was assessed, and the current mental state was evaluated separately. Two periods were similarly rated if the subject was now recovered, but had experienced an episode within the year. The interviewer had to use her judgement, erring on the side of over-inclusiveness, as to whether there were grounds for rating an earlier episode within the year. It should be noted that this procedure represents a slight deviation from the guidelines for rating periods in SCAN. However, it permits the most accurate assessment of 1-year period prevalence.

The MRC Social Role Performance Schedule (SRPS)

The development of this semi-structured interview is described by Hurry & Sturt (1981). It

aims to provide a quantitative assessment of social performance as a basis for deriving a profile of significant disablement, as far as possible independent of measures of clinical disorder. Eight areas of social activity are covered. Questions are directed towards actual behaviour rather than subjective accounts of dissatisfaction. An overall score of social performance is obtained by summing the scores on the eight areas of social activity adjusted for the number of applicable sections and expressed as a percentage of the maximum score possible. Those scoring more than zero are classified as socially disabled in some degree since this means a serious problem in at least one of the eight areas. The informant for this version of the interview is the subject.

The community version of the MRC Needs for Care Assessment (*NFCAS-C*)

The community version of the MRC Needs for Care Assessment has been designed specifically for the relatively mild psychiatric conditions seen in general populations (Bebbington, 1992; Brewin *et al.* 1994; Bebbington *et al.* 1996). Its principles are based on the original Needs for Care Assessment developed for the evaluation of those with long-standing mental illness (Brewin *et al.* 1987). It is designed to approximate, in a more itemized and systematic manner, the functioning of well-organized primary care and psychiatric services. Good reliability has now been established (Lesage *et al.* 1996).

The definition of a primary need for care requires two distinct criteria: (*i*) the subject's functioning falls below, or threatens to fall below, some minimum specified level (in the community, this means significant distress from symptoms, with or without disablement); and (*ii*) this is potentially remediable or preventable.

For each area of clinical and social functioning covered, the assessment therefore specifies a minimum level of functioning and a set of appropriate interventions or items of care. Needs for care in each area are then determined by comparing the actual items of care provided with a model of what those items of care should be, based on current clinical consensus and the literature on treatment efficacy.

Unlike conventional measures of symptoms and behaviour, this assessment uses data on level of functioning to identify the appropriate actions to be taken by clinicians. Needs are defined in terms of these actions, i.e. have specific items of care been offered? The primary need status in each area of functioning falls into the categories: 'met need', i.e. appropriate action is already being undertaken; 'unmet need', i.e. there is some action appropriate now that has not been undertaken; 'no need', i.e. there is no clinical problem; and 'no meetable need', i.e. there is disablement but no action that is both appropriate and feasible. The assessment also provides information on 'over-provision'.

In order to identify need, we had to decide how long symptoms must last before treatment should be considered necessary: we took as our threshold the presence of clinically significant (i.e. moderate or severe rather than mild) psychiatric symptoms or disability over a period of 6 weeks. In the NFCAS-C, needs are evaluated on the basis of seven specific areas of functioning: 'positive psychotic symptoms', 'depressive symptoms', 'anxiety and obsessional symptoms', 'problems with alcohol', 'problems with drugs', 'eating disorders' and 'adjustment disorders clearly secondary to an external event or circumstance'. Judgements of treatment needs are made on the basis of the available information by a panel of clinical assessors. The professionals for whom the instrument has been designed are primarily clinical psychologists and psychiatrists.

Our model is based on what might be feasible in a developed economy. While actual services in a given area differ enormously in their philosophy of care and in the resources available, particularly for social and psychological treatments, we deliberately do not take these differences between individual services into account. In order that services can be compared, unmet needs in a given service must be rated without considering whether particular items of care are routinely provided, or whether the manpower and expertise exists to provide them.

The Life Events and Difficulties Schedule (Brown & Harris, 1978)

The inclusion of this well known technique for eliciting and rating social adversity allowed us to decide whether affective symptoms picked up on SCAN represented adjustment disorders. If subjects had no disorder, events were elicited in

the 6-month period before interview. If they had a current disorder, events were elicited for the 6-month period before onset. If the interviewer had chosen to rate a previous rating period, events were also elicited for the 6 months before the relevant onset, whether or not that overlapped with the 6 months before interview. Ratings were made of the contextual threat of events as recommended by Brown & Harris (1978). Events were divided into four levels according to severity. Both short- and long-term threat were rated. The long-term threat of moderate events (rating 2) was further divided into levels 2a and 2b, the former being more severe. Other ratings included the degree of the independence of the event from the agency of the subject, the focus of the event (whether on the subject or on other people), its date and the domain or role area within which it had its impact. At the beginning of the LEDS interview, background information about the subject was elicited, as suggested by Brown & Harris.

In addition to life events, chronic difficulties were elicited and assessed. Severity was rated on a six-point scale, with level 1 being the most severe. Difficulties are problematical situations or conditions lasting a minimum of 4 weeks. If there is a major change in the severity of difficulty over time, this is recorded. Difficulties (like events) are classed according to domain (e.g. housing, work) and independence. The person concerned (e.g. spouse, child), and duration of the difficulty is also noted.

The treatment inventory

This was developed for the current survey. In addition to collecting information about potential psychiatric treatments, it allows the interviewer to record the subjects' views about the treatment that might be deemed appropriate for their psychiatric symptoms. These views are of considerable importance as they are one reason for registering what is technically an unmet need as an unmeetable need. In other words, if the subject rejects treatment either specifically or as a general principle, ostensible needs must then be categorized as unmeetable. The data relating to this aspect of treatment needs will be reported elsewhere. The inventory can be obtained from the first author.

Procedure

Once the second-stage interviews were completed, ratings were made of life events and, where appropriate, of needs for care. L.M. was trained by Professor Brown and his team to rate life events and made initial ratings herself. She then presented vignettes of the events to P.B. in weekly rating sessions and she also attended the rating sessions of Professor Brown's team once a month to solicit their views of doubtful ratings.

The assessments of needs for care involved similar use of a panel, in this case comprised of P.B. and C.R.B. The sessions for rating needs for care took place several weeks after the life event ratings in order to minimize bias in rating. Once more, case vignettes were prepared by L.M. for presentation. Subjects were presented if she thought there was any possibility that they might need treatment: in other words the decision to present vignettes was made on a deliberately broad basis. They involved information drawn from SCAN, the SRPS, the LEDS and the treatment inventory. The panel raters often asked for ancillary information. After this, consensus was reached about level of functioning, the appropriate treatment, if any, and the extent to which it was being provided. This information was gathered in relation to any current episode of disorder, but also to any episode, now resolved, that had been present during the past year. It was thus possible to provide a point- and 1-year prevalence of needs for psychiatric care.

Our survey resulted in a complex nested data set: for instance, subjects might have psychiatric evaluations related to one or two periods, and any number of life events with differing characteristics relating to either period. Because the sample was drawn in two stages, we required appropriate standard errors for weighted prevalences. We relied upon the SUDAAN program (Shah *et al.* 1993), which allows for this sampling strategy and can take account of the impact of weighting on sampling error.

Weighting procedure

The results from the second-stage were weighted to take account both of refusals and of the stratification procedure, and of deviations from the sociodemographic attributes of the population. Thus, GHQ-positive cases were weighted

by the factor 1·21, and GHQ-negative cases by 2·35. The sample was compared with 1991 census data for the area from which it was drawn. Corrections for age, sex and ethnic status were made using expansion weightings.

Table 1. *Results of the sampling procedure*

GHQs sent out	1354	
Refusals	132 (9·7%)	
Failed to contact	228 (16·8%)	32·1%
Moved, uninhab.	76 (5·6%)	
GHQs returned	917	
Not in scope (> 65 years)	157 (17·1%)	
In scope	760	
	Scoring 5+	Scoring < 5
	209 (27·5%)	551
Invited for SCAN interview	209	292
Refused SCAN	23 (11·0%)	37 (12·7%)
Failed to contact	13	20
Completed SCAN	173	235
SCAN cases (past month)*	44	10
	54	
SCAN cases (past year)†	55	12
	67	

* Includes 7 cases of substance abuse and anorexia.
† Includes 6 cases of substance abuse and anorexia.

RESULTS

In order to attain our second stage sample size of 408, we had to send out 1354 GHQs. The actual refusal rate, that is to say people who declined to cooperate once contacted in person, was only 9·7%. None of the refusals appeared to be related to a poor command of English, despite the high proportion of people from ethnic minorities in the sample. These were almost all African and African-Caribbean for whom English was either their first language or a close second. However, a further 16·8% could not be contacted after multiple visits at different times, and we obtained information that 5·6% of our subjects no longer lived at their electoral roll address. There is now no way of identifying people over 65 from the electoral role, and such subjects have to be excluded at the first stage (157 in all). The full details of our experience in carrying out the survey are given in Table 1.

The characteristics of the sample are given in Table 2 and compared with the local area census data from 1991. Despite the random sampling procedure, the first stage sample was significantly skewed. Less than 52% of the local population was female, in contrast to 57% of our sample. Detailed examination of the table suggests appreciable under-representation in the younger age groups, particularly in black subjects. It was

Table 2. *Sociodemographic characteristics of first stage sample compared with local 1991 census results*

	Males *N* (% all subjects)			Females *N* (% all subjects)		
Age	White *N* (%)	Black *N* (%)	Other *N* (%)	White *N* (%)	Black *N* (%)	Other *N* (%)
18–29:						
Census	17806 (12·4)	6602 (4·6)	1924 (1·3%)	18826 (13·2)	8084 (5·7)	1915 (1·3)
Sample	47 (6·2)	18 (2·4)	11 (1·5)	76 (10·0)	23 (3·0)	11 (1·4)
30–44						
Census	17830 (12·5)	4487 (3·1)	1661 (1·2)	17510 (12·2)	5824 (4·1)	1794 (1·3)
Sample	104 (13·7)	25 (3·3)	12 (1·6)	131 (17·2)	38 (5·0)	13 (1·7)
45–65						
Census	13858 (9·7)	3871 (2·7)	1189 (0·8)	14907 (10·4)	3952 (2·8)	1039 (0·7)
Sample	87 (11·4)	13 (1·7)	10 (1·3)	105 (13·8)	29 (3·8)	7 (0·9)

	Males			Females		
Age	White	Black	Other	White	Black	Other
Expansion weightings						
18–29	379	367	175	248	351	174
30–34	171	179	138	134	153	138
45–65	159	298	119	142	136	148

Table 3. *The prevalence of individual disorders according to ICD-10*

	One month			One year		
	N	Weighted %	S.E.	*N*	Weighted %	S.E.
Hierarchical prevalence						
Psychosis	0	—	—	2	0·87	0·67
Bipolar disorder	1	0·14	0·14	1	0·14	0·14
Severe depression	2	0·24	0·17	5	0·59	0·26
Moderate depression	5	0·74	0·34	8	1·32	0·50
Panic	2	0·24	0·17	3	0·35	0·20
Mild depression	13	2·14	0·64	20	3·34	0·80
Agoraphobia	4	0·71	0·37	4	0·71	0·37
Social phobia	1	0·14	0·14	1	0·14	0·14
Specific phobia	7	1·40	0·56	6	1·27	0·55
GAD	1	0·14	0·14	1	0·14	0·14
Depersonalization	1	0·28	0·28	1	0·28	0·28
Sleep disorders	9	2·43	0·91	9	2·43	0·91
Non-hierarchical prevalence						
Psychosis	0	—	—	2	0·87	0·67
Bipolar disorder	1	0·14	0·14	1	0·14	0·14
Depression						
Mild	13	2·14	0·64	21	3·58	0·82
Moderate depression	5	0·74	0·34	9	1·95	0·80
Severe	2	0·24	0·17	5	0·59	0·26
Dysthymia	3	0·36	0·21	3	0·36	0·21
Anxiety						
Panic	3	0·45	0·27	4	0·56	0·29
Agoraphobia	4	0·71	0·37	4	0·71	0·37
Social	2	0·36	0·26	2	0·36	0·26
Specific	9	1·63	0·59	9	1·63	0·59
GAD	5	0·74	0·34	6	1·37	0·71
Depersonalization	1	0·28	0·28	1	0·28	0·28
Sleep disorder	13	3·04	0·96	17	3·67	1·01
Alcohol dependency*				5	0·78	0·37
Drug dependency*				2	0·26	0·19
Anorexia*				2	0·33	0·24

* These categories are not treated hierarchically and prevalence relates only to a 1-year period.

these findings that led us to use a further weighting procedure to take account of this skew in the sample. The expansion weightings are also given in Table 2.

The overall weighted one month prevalence of SCAN cases was 9·8%, while that for the year was 12·3%. These cases cover a wide range of diagnoses, as indicated in Table 3 and include cases of substance abuse and anorexia, which are technically assessed by reference only to the preceding year. If cases of sleep disturbance are omitted, the overall presence becomes 7·5% (1 month) and 10·0% (1 year). The prevalence of individual disorders is given in two ways. In the first, it is presented hierarchically, such that each subject has a single primary diagnosis. The hierarchy is represented by the order in which the diagnoses are listed, and is equivalent to that used in the recent British National Surveys of Psychiatric Morbidity (Jenkins *et al.* 1997*a*), with the qualification that more diagnoses are covered by SCAN than the instrument used in that survey (the CIS-R – Lewis *et al.* 1992). Some cases with a mild current diagnosis had an illness earlier in the year that was higher in the hierarchy, and it is this that is recorded in the one year prevalence. Results are also presented non-hierarchically, thus allowing for co-morbidity.

Of the nine current SCAN cases who scored < 6 on the GHQ, four had specific phobias; three only suffered from sleep disturbance, of whom one had suffered from an undefined psychotic episode within the year; one was diagnosed as having panic disorder, and one, depersonalization. In addition two subjects below threshold on GHQ had been cases during

Table 4. *Identified treatment needs for care*

Need status	Care episodes			Individuals requiring treatment	
	Current *N** (%)†	Past year *N** (%)†	Total *N** (%)†	1-month prevalence *N* (%)†	1-year prevalence *N* (%)†
Met need	19 (4·0)	10 (2·1)	29 (6·1)	17 (3·6)	18 (3·7)
Unmet need	41 (6·8)	8 (1·4)	49 (8·2)	34 (5·9)	37 (6·7)
No meetable need	9 (1·5)	4 (0·8)	13 (2·3)	8 (1·3)	10 (1·6)

* Unweighted numbers (weighted %).
ß The weighted % relating to care episodes is the number per 100 subjects.

the previous year, although not currently: one had experienced a psychotic episode and one a mild depressive episode.

As it happened, the weighted 1-month prevalence of depressive disorders as a primary diagnosis was the same as the non-hierarchical weighted prevalence (3·1%). Two-thirds of cases of depression were classified as mild. The weighted 1-year prevalence as a primary diagnosis was 5·3%, while the non-hierarchical equivalent was 6·1%. The weighted 1-month prevalence of anxiety disorders (including depersonalization) as a primary diagnosis was 2·8%, while the non-hierarchical prevalence was 4·2%. The equivalent 1-year prevalences were 2·8% and 4·9%. The non-hierarchical prevalence is relatively high because anxiety disorders are lower in the hierarchy than the more severe depressive disorders with which they often coexist.

As expected, anxiety and depressive states were the commonest diagnoses. There were nine primary cases of sleep disorder five cases of alcohol dependence and two of eating disorder. Although over the whole year of assessment only two cases of schizophrenia and one of mania were identified by SCAN, five other subjects had received treatment for psychosis. The two recognized cases of schizophrenia had experienced psychotic symptoms in the previous year, but did not have any at the time of interview. The case of mania was identified from symptoms present at interview. The remaining five were identified from ancillary information: using SCAN to cover the previous year, two were not identified as cases at all, while the remainder had diagnoses respectively of depressive episode, derealization and sleep disorder.

The needs for care of our subjects are presented in two ways. The first analysis is based on identified treatment needs: it was possible for a given subject to have more than one episode of disorder within the year of assessment, and, indeed, for treatment needs to be identified in more than one area of function. Each identified need can be described in terms of whether it is met, unmet or unmeetable. It is also useful to conduct analyses at the level of the individual subject. This allows the calculation of the actual prevalence of needs for treatment. In this case there has to be a mechanism for collapsing separate episodes of disorder and areas of functioning. We adopted the principle that if a subject had some needs met and others unmet, they should be recorded as having an unmet need. However, met needs were rated in preference to 'no meetable need'. Remember that 'unmeetable need' indicates that a dysfunction has been recorded but that there is some barrier to treating it – either there is no effective treatment, or the client rejects the proposed treatment.

The results of these analyses are presented in Tables 4 and 5. The overall weighted rate percentage of all needs for treatment in the

Table 5. *Treatment needs and provision for the anxiety and depression sections of the Needs for Care Assessment*

Need status	Total care episodes	
	Depression *N** (%)	Anxiety *N** (%)
Met need	8 (1·2)	2 (0·3)
Unmet need	21 (4·0)	13 (2·5)
No meetable need	4 (0·8)	1 (0·1)

* Unweighted number (weighted numbers per 100 subjects).

Table 6. *Cases, non-cases and their needs for treatment*

Treatment need section	No need	Met need	Unmet need	Unmeetable need	Over-provision
Psychosis					
Case	—	5	1	—	—
Non-case	—	2	—	—	1
Depression					
Case	8	4	16	2	—
Non-case	3	—	3	—	—
Anxiety					
Case	5	2	7	1	—
Non-case	1	0	3	—	—
Drugs					
Case	—	2	—	—	—
Non-case	—	—	—	—	1
Alcohol					
Case	—	—	—	3	—
Non-case	—	—	—	—	—
Eating disorders					
Case	—	1	—	1	—
Non-case	—	—	—	—	—
Adjustment disorders					
Case	—	2	5	2	—
Non-case	3	—	—	1	—
Total					
Case	13	16	29	9	—
Non-case	7	2	6	1	2

Five additional ICD-10 cases (with sleep disturbance) were adjudged not to require intervention.

NB: Non-cases with no identified needs for treatment represents subjects in whom the research interviewer thought there was some possibility of need. Their existence in this table is confirmation that the interviewer, as instructed, used a deliberately low threshold in choosing subjects for the needs assessment panel.

month before interview was 12·3%, while for potentially meetable needs it was 10·8%. The weighted rates percentage over the year were 16·6% and 14·3% respectively. The overall 1 month weighted prevalences of subjects requiring treatment were 10·8% (all needs) and 9·5% (meetable needs), while the 1 year equivalents were 12·0% and 10·4%. Some needs were unmeetable, usually because of non-compliance or unwillingness to seek treatment. However, of needs that could have been met, less than half had actually been so.

Table 5 also presents data in relation to the two most common broad categories, depression and anxiety. It will be seen that in both, the general trend is for a clear majority of treatment needs to be unmet. It is apparent that services are failing to treat these disorders adequately.

We are now in a position to test out our assertion that case identification is not equivalent to the identification of needs for treatment. The cross tabulations in Table 6 show that although there was a considerable overlap, there were 13 cases who were adjudged not to require treatment (18 if sleep disorders are included). Treatment was thought unnecessary in eight cases of depression, either because they were of very recent onset or because they seemed to be resolving without intervention. Treatment was felt to be appropriate for nine non-cases. Few of these had their needs met, except for people with psychotic disorders. These data can be amplified by considering two cases in detail (see Appendix 1). It should be noted that nine cases of diagnosed disorder were adjudged to have needs that were not meetable; this is another aspect of the non-equivalence of diagnosis with the need for treatment.

DISCUSSION

The community survey reported here involved detailed clinical assessment based on interviews using established instruments. The quality of the clinical information about the interviewed subjects was very high. As in all general population surveys, we had to trade quality against quantity: our procedures were labour intensive, and this limited the sample size, with consequences for the standard errors of the calculated prevalences. There are disadvantages to the electoral roll as a sampling frame as some residents are excluded, particularly foreign nationals who are not from the European Union. However, its main disadvantage is that it is incomplete, despite the legal necessity for householders to register, and young people may be particularly likely to escape registration. Younger subjects were under-represented in the first-stage sample, although this was probably due largely to a differential failure rate. We have weighted our results to take account of this. The overall failure rate was acceptable, given the inner city location of the survey. Nevertheless, these features of the survey impose some limitation on the generalizability of our findings.

There is a general tendency for clinically-derived prevalences of psychiatric disorders to be lower than those obtained using lay interviewers (Anthony *et al.* 1985; Helzer *et al.* 1985; Romanoski *et al.* 1992). This must be borne in mind in comparing our results with those of other surveys. The most relevant investigations

are those using instruments that provide period prevalence based on DSM-III, DSM-III-R and, in particular, ICD-10 diagnostic classes. Surveys based on the DIS (Robins *et al.* 1985), the CIDI (Robins *et al.* 1988) and the CIS-R (Lewis *et al.* 1992) meet this requirement and are listed in Table 8 in the report of Jenkins and her colleagues (1997*b*) from the British National Survey of Psychiatric Morbidity. The results of the latter are of particular relevance. The inner city location of the current study is characterized by high levels of deprivation: the prevalence of depressive episode is noticeably higher than that found in the National Survey but perhaps not as much as might be expected. Preliminary results of an ongoing comparison study suggest that, although there is discrepancy over individual cases, the CIS-R generates prevalences of the disorders it covers that are quite similar to those obtained with SCAN (Brugha *et al.* personal communication). Although the criteria for the ICD-10 category depressive episode' differ in some respects from those of 'major depressive disorder' in DSM-III-R, the thresholds for the two categories are similar.

A number of disorders appear to be of very low prevalence in relation to the results of other studies and the characteristics of the study location. This is particularly so of alcohol and drug abuse, and of generalized anxiety. Even the non-hierarchical prevalence of generalized anxiety is very low. The low prevalence of substance abuse may arise partly from the clinical judgements on which the diagnosis was based (in contrast for example to the limited and direct questions involved in the National Survey of Psychiatric Morbidity, Jenkins *et al.* 1997*a*). However, the relation between these prevalences and the performance of SCAN is a large question that requires a detailed answer to be published elsewhere.

At the time of interview, 9·5% of the population were identified as having a need for treatment that could have been met. This rose to 10·4% if the whole of the preceding year was assessed. A very small minority of subjects had needs for treatment for more than one condition. Thirty-two per cent of all care episodes involved needs that actually had been met, while the corresponding figures for unmet needs and unmeetable needs were 54% and 14% respectively. The Maudsley catchment area has good community-based secondary services, which like all British inner-city provisions are obliged to focus on severe mental illness. It is thus reassuring to see that the vast majority of treatment needs of all subjects identified as having psychotic disorders were being met. The situation is much less optimistic for anxiety and depression. These disorders are the most salient in the general population in relation to frequency, the burden of suffering they impose, and the effectiveness of treatment. Despite this, only 28% of the meetable needs for treatment of depression were being met, and only 13% of those relating to anxiety. Because of small numbers this finding is not robust, but it is suggestive, and coheres with clinical impressions.

Our contention that diagnosis is not identical to treatment needs received support from our results. There are particular difficulties in relation to psychosis, since many people with psychosis may be in remission but still require prophylactic neuroleptic treatment. However, 13% of needs for treatment of depression were identified in people who failed to meet ICD-10 case criteria, while one-quarter of subjects adjudged to have a need for treatment of anxiety were non-cases. Eight cases of ICD-10 depressive episode were not felt to require treatment, usually because they were of very recent onset. Anxiety disorders include specific phobias, which in some cases cause so little interference or suffering that treatment is inappropriate. Five people with an ICD-10 anxiety state were not felt to require treatment. The current thresholds for disorders in ICD-10 are set at a level that quite often misses needs for treatment. This is despite what we felt was a conservative approach to needs assessment.

There are three studies that can be used to place these results in context. The Household Survey of the British National Surveys provides information about the psychiatric treatment received by subjects (Meltzer *et al.* 1995). Although treatment needs were not assessed directly, the proportion of cases who were not receiving treatment is of considerable interest in the light of the results presented here about unmet needs. Of subjects in the Household Survey diagnosed as suffering from depressive episode, only 16% were receiving antidepressants and only 25% were receiving any treatment at all. Only 12% of subjects with a

neurotic disorder were being treated, although if they were co-morbid (i.e. had more than one diagnosis) this figure rose to 30%.

Shapiro and his colleagues (1984) have also reported on utilization data from three centres of the ECA surveys. In the 6 months before interview, between 6 and 7% of adults had made visits to health-care providers for reasons of mental health, while 3% had visited mental health specialists. Fifteen to 20% of those with a recent DSM-III disorder had made mental health visits, with around 10% visiting specialists. Of subjects with no history of a DSM-III disorder, 3% had still made visits for mental health reasons, 1% to specialists.

Shapiro and his colleagues (1985) also made an attempt to use the data from the Baltimore ECA site to assess actual needs for treatment. They defined need as mental health service use in the last 6 months or two of three indicators of poor mental health. These indicators were a diagnosis of a DSM-III disorder in the last 6 months, a score of 4 or more on a 20-item version of the GHQ, and the respondent's report that they had been unable to carry out normal activities for at least one whole day in the last 3 months. On this basis, 13·6% of the population were defined as having a need for treatment. Of these, 47% had made no recent visits for mental health problems and were thus regarded as having an unmet need. These results are of some interest, but this study clearly confuses the definition of need with the definition of unmet need; put another way it carries the assumption that visits to health professionals for mental health reasons indicates a need for treatment, and a failure to make such a visit implies an unmet need. At least their index of need does include some attempt to measure social functioning.

Lehtinen and his colleagues (1990) evaluated the need for treatment in the mini-Finland Health Survey. Need for specialist treatment was judged to be present if the case was 'definite' according to the PSE9-ID-CATEGO system (i.e. ID level 6 and above), or if the interviewer thought that treatment was needed. Interviewers also made judgements about the need for treatment by general practitioners in cases of less severity. The subject's own judgements about whether they needed treatment were also recorded.

The results of this study are interesting. The need for treatment assessed by the interviewers was less than the prevalence of disorders, and that assessed by the subjects themselves was lower still. The interviewers reckoned that around 9% of subjects were in need of specialist treatment, whereas only 1·5% thought so themselves; a further 6% however felt that they were 'probably' in need of treatment. Taking all forms of treatment, around 4% of subjects were receiving adequate treatment, and 14% showed an unmet need. This study is a useful attempt at a more direct measure of need. Its drawback is that it still confuses need with mere prevalence in as much as an ID level of $\geqslant 6$ is taken as an absolute indication of a need for treatment. Moreover, the structuring of the assessment of need is not described. Finally, no attempt is made to say exactly what treatment is needed, or by whom it might be provided.

In future papers we will present a detailed breakdown of the required treatments, but most of these identified needs, particularly for anxiety and depression, would have been dealt with appropriately at primary care level. The reasons why this is not being done are complex, but relate to issues of public awareness of psychiatric disorders and their treatability, of the alertness of family doctors in identifying affective disorders, and of their diligence and expertise in treating them.

In 1 year, nearly 4% of the Camberwell population receive treatment for a psychiatric problem, but a further 7% were identified as having treatment needs that were unmet. It is clear that additional resources would be required to remedy this situation. Most are likely to be at primary care level, certainly in Britain where general practitioners take on much of the treatment of depression and anxiety. Public awareness campaigns are cheap in relation to the overall cost of treating psychiatric disorder in general, and depressive disorder in particular (West, 1992; Jönsson & Bebbington, 1993; Kind & Sørensen, 1993). However, the size and persistence of their effects is in doubt. The prospect of doubling the amount of treatment for depression and anxiety provided by general practitioners is daunting, although people with untreated disorders tend to consume primary care resources anyway, perhaps to an appreciable extent, and may comprise a large proportion

of those cases that GPs are known to fail to identify. The results of our survey certainly encourage the current emphasis in general practitioner training on the identification and treatment of affective disorders. This would be assisted by the availability of specialist psychiatric expertise to primary care physicians, but the logistics of providing this in an equitable manner are difficult for a secondary care system whose restricted funding in inner-cities leads to a focus on severe and long-standing mental disorder.

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APPENDIX 1

Case 1. ICD-10 diagnosis with no needs for care

This 60-year-old woman works full-time as a cloakroom assistant. She has a lifelong fear of tubes and lifts and cannot go on either unless accompanied. For this reason, she was classed as having a specific phobia. However, this caused no real inconvenience as she went to work on a bus and did not need to use lifts. It was, therefore, decided she had no need of treatment.

Case 2. Needs for care without an ICD-10 diagnosis

This 50-year-old woman with a grown-up family lives on her own and has not worked for 2 years because of stress in her demanding profession. Whenever she thinks of returning to work, even on a voluntary basis, she feels tense and does not follow-up her enquiries. She was rated on the SRPS as having impaired occupational performance. It was felt she would benefit from a cognitive–behavioural approach and she was rated as having an unmet need for this treatment.

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