

The Undertreatment of Depression

T. S. Brugha¹ and P. E. Bebbington²

¹Department of Psychiatry, Clinical Sciences Building, Leicester Royal Infirmary, P. O. Box 65, Leicester LE2 7LX, UK

²MRC Social and Community, Psychiatry Unit, Institute of Psychiatry, London, UK

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Abstract. In spite of considerable progress in the establishment of physical and psychological treatments for major depression in clinical trials, little is known of the impact of treatment on the prevalence and course of depression in the population. Improved methods for assessing need for care have not yet been applied systematically to such a population. One hundred and thirty men and women attending psychiatric hospitals with depressive disorders were interviewed at the time of their initial contact. After a mean 4-month interval, 119 were reassessed in order to determine the extent to which potentially effective treatments were being fully deployed in those who had not made a complete recovery. Half had made a good recovery. At least 78% of those remaining at threshold level or above apparently had not been offered alternative, potentially effective physical or psychosocial treatment, and were therefore rated as having unmet need. Older male patients were less likely to have unmet need. This study thus raises doubts about the effectiveness of routine clinical management of depression. However, we will remain uncertain of how far the routine falls below the ideal until systematic needs for care procedures (Brewin et al. 1987) are applied prospectively to depressed populations.

Key words: Depression – Drug treatment – Psychological treatment – Public health – Need

Introduction

Effective physical and psychological treatments of clinical depression have been developed (Morris and Beck 1974; Paykel 1989; Elkin et al. 1989), and in the case of physical treatments are widely available at relatively little cost in the developed countries. An important task for epidemiology is to ascertain whether treatments

shown to be effective in controlled clinical trials are being developed fully and effectively (Alderson 1983). Otherwise the potential for reducing the prevalence of remediable disorders will remain unrealised. Advances have recently been made in assessing need reliably, in the more long-term psychiatric disorders (Brewin et al. 1987). The Needs For Care Assessment Schedule requires that assessments of care needs are made after a service has had an opportunity to assess the patient fully, initiate a treatment plan and evaluate and monitor its initial outcome. This demands the evaluation of treatment procedures over a realistic interval. Longitudinal studies of patients in treatment provide a good opportunity for the initial examination of the effectiveness of established forms of care in clinical practice.

The Camberwell Collaborative Depression Survey (Bebbington et al. 1988; Brugha et al. 1987c) involved the collection of data on 130 adults with clinical depression from a defined geographic area. The short-term outcome of these episodes was determined by personal interview. The study allowed two questions about treatment to be answered. First, to what extent is the outcome of depression over a period of several months determined by the use of potentially effective treatments? Second, to what extent is treatment being provided that might reasonably be expected to produce a better clinical outcome, both at the initial point of contact and also later on, in those who have failed to respond to initial attempts at treatment?

The first of these and a number of related questions have already been answered in previous reports. The outcome of depression was predicted by the initial severity and duration of the episode of depression and by various aspects of social support (Brugha et al. 1987a, 1990) and adversity (Brugha 1991, and submitted for publication). Clinical outcome was, however, shown to be unrelated to the prescription of medication when patients first came into contact with psychiatric services (Brugha et al. 1992). This failure to demonstrate an association between drug treatment and outcome could have been

due to the widespread use of inadequate doses of tricyclic or equivalent preparations. It might also have been due to the period of follow-up (3–6 months), by which time the short-term effects of physical treatment might be less apparent.

In our study, information was gathered about treatment that was being given at outcome, typically 4 months after treatment was commenced. This made it possible to conduct a preliminary assessment of need at this time. In addition to pharmacological treatment and electroconvulsive therapy (ECT), we had data on referrals for non-physical forms of treatment such as psychotherapy and for rehabilitation in a day hospital setting. Both of these facilities were available to the psychiatrists and patients at the Maudsley and Bethlehem Hospital where the research was carried out. Patients also had access to National Health Service general practitioners in their local area or neighbourhood: most psychiatric problems are treated by general practitioners (GPs) at no direct financial cost to the patient (Goldberg and Huxley 1992).

The evaluation of more systematic methods for assessing need for care, and the extent to which such need is met by psychiatric services have recently been described (Brewin et al. 1987, 1988; Brugha et al. 1988). This method was originally designed to be applicable only when a patient has already been in contact with a treatment agency for at least 3 months. By this time potentially effective forms of treatment should have been instituted. If they have been unsuccessful, alternative treatments should be under active consideration.

Within the field of depression, there is little consensus about which types of treatments should be begun first (psychological, social or physical) and about when a change in approach should be considered in a case that is resistant to treatment. In the present study, it was only possible to examine whether the need for physical treatment had been unmet in the following way. First, we could examine whether physical treatments had been implemented rigorously at first contact with the service. Secondly, we could examine whether such treatment was being continued in those who remained cases at follow-up (by definition, those who are well no longer have a need for active treatment). Thirdly, we could examine whether alternative therapies had been initiated in those who had failed to respond to physical treatment. We would argue that if physical treatment had not been effective after a period of 3–6 months (including trials of different types of drug treatment), then an alternative method should be attempted. Thus, psychotherapy, day or inpatient care involving a multi-modal psychosocial approach, should have been initiated in those who were still cases of depression and who were therefore in danger of becoming chronic cases. In conclusion, our aim was to examine whether treatment was being effectively deployed. A *prima facie* argument for more systematic and detailed research using a needs for care assessment schedule would exist if it appeared that treatment was not effectively deployed. We also wished to gain preliminary data on factors that might influence decisions about treatment: age, gender, the type of depressive episode, availability of social support and the level of adversity.

Method

Patients

A general description of the study and its design is provided by Bebbington and his colleagues (1988). As far as possible, our depressed patients were consecutive series of men and of women from the Camberwell area presenting at the Maudsley Hospital outpatient and emergency clinics with new episodes. The design required equal numbers of men and women (Bebbington et al. 1988). Male patients continued to be collected when the sampling target for women had been achieved, and it proved necessary to top up with 14 male patients from adjacent and sociodemographically similar areas of South London (Bebbington et al. 1988). Altogether, 130 patients were assessed and complete follow-up data were obtained on 119.

Measures and Procedures

Interviews with potential subjects were carried out by a research psychiatrist as soon as possible after they had been seen at the Maudsley Hospital. The first interview determined the subject's psychiatric state, clinical history and basic sociodemographic characteristics. This was closely followed by a second interview with one of the other members of the team, concerning recent experience of adversity and details of social contacts.

After a mean interval of 4 months (range 3–6 months), the subjects were contacted again, their psychiatric state was once more established at a third interview. Details of interim treatment and disposal were obtained. A fourth interview at that time sought information about intervening adversity and current social contacts.

Clinical Assessment

The psychiatric status of our subjects was established through the PSE-ID-CATEGO system (Wing et al. 1974; Wing and Sturt 1978). For entry to the study, the subjects had to be diagnosed clinically as suffering from a depressive episode that dated from within 6 months of the interview. The actual date of onset was carefully established, as was the number of previous episodes of depression. The PSE was administered at the initial point of contact and at the follow-up interview, 3–6 months later. The DSM-III-R and ICD 10-DCR rules for major depressive episode and depressive episode respectively were also applied to the series, according to methods detailed in a separate report (Brugha and Bebbington 1992).

Treatment Received

At the first clinical interview, conducted by PB or TB, patients were asked about preceding treatment. A coding was made of the mode of referral to the Maudsley Hospital: self-referral; GP referral; other doctor. Medication before onset and medication after onset were separately coded as: tricyclic antidepressive or similar; monoamine oxidase inhibitor; benzodiazepine and 'other'. The dosage of antidepressive was also coded using antidepressive dose equivalent preparations as: none prescribed; equivalent of up to 100 mg of Amitriptyline per day; equivalent of at least 100 mg of Amitriptyline per day. The interviewing psychiatrist also enquired about compliance with treatment, using his clinical judgement to make one of the following ratings: rigorous compliance; occasional lapses; failure to comply probably affected the efficiency of medication. The examination of this issue was carried out in some detail, and we tried to ensure that questioning was sympathetic and sensitive.

At the follow-up clinical assessment, which was carried out by the same psychiatrist, patients were asked about interim treatment and disposal since the first interview. Patients were asked whether they were then being treated only by their GP, or through psychiatric services of whatever type; a coding of 'lapsed from treatment' was

also available. The type of psychiatric service in which the patient was being treated was categorised as: outpatient, inpatient, referral to a day hospital (this would include extensive psychological and social rehabilitation facilities), and referral for psychotherapy (the form of which was not specified). We also coded whether ECT had been prescribed and if so, if the course had been completed. Drug use was coded as at the first interview, and again a judgement of compliance was made.

Assessment of Need

We gathered data on initial treatment, as far as possible, within 1 week of the patient's first contact with the psychiatric service, following at least one consultation with the psychiatrist. We report here on medication, dosage and compliance following the onset of the current episode of depression. We did not make a judgement of unmet need in those cases in which no physical treatment was provided at this early stage because it is probable that patients were still undergoing assessment, but we took information about initial treatment into account in rating need at follow-up.

Because the information concerning treatment was not recorded in detail, our evaluation of need had to be simple. We decided to rate two forms of unmet need. Need for care was judged to be met if both of the following two criteria was satisfied at the time of the follow-up interview:

1. The patient at follow-up was no longer a threshold or definite case of depression according to CATEGO-ID based on our own PSE assessment;
2. If the patient was a threshold or definite case, a different form of treatment to that being prescribed at the time of the initial interview was being provided. The list of alternatives included ECT, hospital admission or referral to a day hospital, or referral for psychotherapy. An alternative form of care could be a different form of pharmacological treatment. For example, if at the first assessment the patient had been prescribed a particular type of antidepressant at an adequate (therapeutic) dosage, and if at the follow-up assessment the patient was being prescribed a different form of antidepressant treatment with adequate compliance, a met need would be rated.

If a patient was a threshold or definite case at follow-up and none of the alternative treatments listed above (under 2) had been offered since the initial assessment, a "Type-I unmet need" was rated. However, if an alternative non-physical treatment (formal psychotherapy, inpatient or day care) had not been offered a Type-II unmet need was rated. The more stringent Type-II unmet need was based on the following rationale. As it was by then 3 months or more since the patient had made first contact with a specialised treatment service, effective physical treatment should have reduced the ID level to below the standard threshold. Where this was not so, systematic psychological or social approaches should have been initiated by this time, irrespective of whether a change in physical treatment was being prescribed. The rating was based on the assumption that such approaches would be part of an inpatient or day-care program or a psychotherapy programme. Whilst alternative forms of care could not yet be expected to have been fully effective, it was judged that one of these must have been offered for us to consider that need had been fully met.

Factors Influencing Met Need

We conducted further analyses to explore the possible reasons for treatment decisions. We wanted to consider whether the provision of more effective or potentially effective treatment was influenced by demographic, clinical and psychosocial factors. Among patients who had not recovered at outcome we thus examined, the extent to which need was rated as unmet in relation to gender, age, social class (Goldthorpe and Hope 1974), social support, adversity and symptom picture. The absence of adversity was partly studied because it might indicate to the clinician that the episode is more endo-

genous and more likely to respond to physical treatment. Similarly, the existence of smaller and therefore less supportive social networks might influence a clinician to make less use of physical treatments. We also related these variables to the provision of specific treatment events that we judged to indicate met need. These were hospital admission, day care and psychotherapy referral. Finally, we analysed variables that indicated little about met need: discharge from care (or lapse from care) or continuing outpatient care.

The analyses required the use of measures of social relationships and of adversity.

Social Relationships

Social networks and social support were assessed by the Interview Measure of Social Relationships (IMSR). This instrument is described in detail elsewhere (Brugha et al. 1987b). It is used to gather information on network composition and range, extent of social contacts and quality of contact in the week before interview and the extent to which social support was sought and obtained from network members. Crisis support in relation to threatening life events was also assessed by interview. The extent to which network members knew and had contact with each other, termed network connectiveness, was also assessed (Brugha et al., submitted).

Recent Adversity

Within 1 week of the initial assessment, patients were assessed independently of the clinical interviewer, by a non-clinical research worker. Full details of the procedures have already been described previously (Bebbington et al. 1988). The occurrence of life events or difficulties during the period beginning 6 months before the onset of their episode of depression and up to the time of interview was established using the semi-structured methods of the Life Events and Difficulties Scales (LEDS: Brown and Harris 1978). Following the procedure of these authors, contextual ratings of life events and difficulties were established, at a later date during meetings of the research team. In this report, the rate method, which is a continuous and additive measure of threatening life events was used (Brugha et al., submitted for publication; Surtees and Duffy 1989).

Results

Details of the socio-demographic and clinical characteristics of the sample have already been described (Bebbington et al. 1988; Brugha et al. 1987a). Briefly, it consisted of 33 men and 34 women with 'endogenous' depression (CATEGO Classes D and R) and 21 men and

Table 1. Treatment disposal at outcome in recovered patients (non-cases) and in threshold and definite case

Mode of care	Non-cases	"Cases"	Total
Continuing outpatient care	24	30	54
Inpatient admission	6	7	13
Day hospital referral	0	3	3
Psychotherapy referral	0	1	1
Referred back to general practitioner	20	9	29
Lapsed from psychiatric contact	10	9	19
Total	60	59	119

Table 2. Need status (Type I) of 59 threshold or definite cases assessed by research team at 3–6 months follow-up (PSE-ID level)

Met need	N	%	Unmet need	N	%
Total number	13	22	Total number	46	78
<i>Reasons for judgement of met need</i>			<i>Reasons for judgement of unmet need</i>		
Inpatient admission	7	11.9	Outpatient (treatment unchanged)	28	48
Day care referral	3	5.1	Discharged back to general practitioner (treatment unchanged)	9	15.3
Psychotherapy referral	1	1.7	Lapsed from treatment and not being actively followed up	9	15.3
Changed drug treatment	1	1.7			
ECT course (inpatient)	1	1.7			

42 women with 'neurotic' depression (Classes N and A). Ninety-nine (76%) were definite cases at the first interview, while 30 were merely threshold cases on the Index of Definition. Seventy-six (64%) of those reassessed with a PSE at the third interview had improved by at least two ID levels. One hundred and sixteen cases met ICD 10-DCR criteria for depressive episode and 114 met DSMIII-R criteria for major depressive episode, as described in another paper (Brugha and Bebbington 1992).

Sixty percent of the patients were referred by a family doctor (GP); 31% were self-referred and 9% (12 patients) were referred by another doctor. Seventy-eight patients were being treated with a tricyclic or other antidepressant following the onset of their episode. Seven of these patients (9%) were on a non-tricyclic preparation. Only 36% of the patients on antidepressants were on doses equivalent to at least 100 mg of Amitriptyline; these patients were typically taking 150 mg per day. This figure suggests that many cases were being treated inadequately. However, we did not rate unmet need in cases receiving lower doses as it is possible that the dose was to be increased at the following consultation and some patients may have been experiencing marked difficulties with side effects. Compliance was rated as rigorous in 76% of treated cases. There were occasional lapses in 12% and serious lapses likely to affect the efficacy of medication also occurred in 12% of those receiving medication.

At the follow-up assessment, PSE data were successfully obtained concerning 120 patients (92% of the original sample) who were re-interviewed. Twenty-eight (23%) were threshold and 31 (26%) were definite cases on CATEGO-ID. The 59 recovered patients (49%) could not be said to have an unmet need. Complete information concerning treatment and disposal at this stage was available for 119 patients. Nineteen (16%) had themselves lapsed from treatment and 29 (24%) had been referred back to the GP (family doctor). Fifty-four (45%) were still being seen as outpatients, 13 had been admitted to an inpatient facility, 3 to a day hospital and 1 had been referred for psychotherapy (Table 1).

Judgements of Need

Of the 59 patients who were threshold or definite cases at follow-up, 7 had been admitted to inpatient care, 3 re-

ferred to day care, 1 to psychotherapy and one each had received a course of ECT or had had a change in the type of antidepressant prescribed, with good compliance at the follow-up assessment. Thus, of the 59, there were 13 (22%) with a need according to our broad definition that was being met. Therefore 78% of those who had not yet recovered were rated as having Type-I unmet need. Taking into account that 60 patients were no longer threshold or definite cases, 39% of the total sample of 119 fully assessed patients had unmet need at the time of follow-up.

The reasons for unmet need are set out in Table 2. Of the 46 patients rated as having a Type-I unmet need, most were continuing in outpatient care with no change in management. Nine had been referred back to the GP, or had lapsed from attending the service of their own accord and were not being followed up by the service in the community. All of these findings are set out in Table 2.

Type-II unmet need was rated when either admission, day care or psychotherapy were not offered to those who had not recovered. According to this more stringent criterion, 11 were judged to have met need and 48 were judged to have a Type-II unmet need. Thus, of the 119 patients on whom data were available 40% had Type-II unmet need at the time of the follow-up assessment. This is very similar to the findings for Type-I unmet need because a change in the type of antidepressant prescribed was exceedingly rare.

Our patients had also been reclassified at initial assessment and at outcome according to the DSMIII-R and ICD 10-DCR rules for major depressive episode and depressive episode, respectively (Brugha and Bebbington 1992). Although at the initial assessment all the patients in the series were required to have the symptom of depressed mood, some failed to fulfill these diagnostic criteria for depressive episode, partly because anxiety symptoms were predominant. One hundred and fourteen fulfilled the DSMIII-R criteria at first assessment and 116 fulfilled the ICD 10-DCR criteria. Of the 40 who still fulfilled DSMIII-R criteria at the follow-up PSE, Type-I unmet need was rated in 31 patients (77.5%). Of the 44 who still fulfilled ICD 10-DCR criteria at the follow-up PSE, Type-I unmet need was rated in 34 (77.3%). More detailed analyses confirmed that the reasons for rating need as met or unmet were distributed as for the series as a whole (Table 2).

Factors Influencing Met Need

The results of our analyses of factors that might influence whether need was met were largely negative. In general, both the rating of met need and the provision of treatment alternatives was found to be unrelated to each of the variables that might influence the decision to use such treatments. Gender and age were the only variables that appeared to be influential: alteration in treatment likely to lead to a met need was more likely to occur in men and more likely to occur in older rather than younger patients. However, the magnitude of the effect was small in both cases. Social class, adversity prior to the first interview and the size of the patient's primary group (social support network) were unrelated to the decision to treat in this way.

Discussion

We report a preliminary attempt to apply the principles underlying a recently developed method for assessing need for care to patients undergoing specialised psychiatric treatment for depression. Our results suggest that many of those who have not recovered after a period of 3–6 months are not being offered alternative treatments from which they might be expected to benefit. Older patients and men are more likely to be offered altered treatment that has the potential of meeting need. But the type of depression, a history of adversity, socio-economic group status and level of social support are not related to such a decision. These findings must be regarded as preliminary, as the data were not specifically gathered with needs assessment in mind. However, they imply a clear requirement for more systematic longitudinal research, involving the application of the full Needs Assessment Schedule (Brewin et al. 1987).

Reserving our final judgements until patients had had access to the service for at least 3 months gave the caring clinician the opportunity to implement effective treatment in a rational way with a good chance of a positive outcome. It was thus a reasonable test of the effectiveness with which treatment was deployed.

We assumed that, if a patient had been admitted to an inpatient unit, need was met. This was based on the supposition that admission would necessarily expand the opportunities for different treatments and consistent monitoring of progress.

In a substantial number of cases, care had either reverted to the family doctor or the patient had stopped attending. It should be said, however, that in these cases we were successful in obtaining a detailed clinical interview, usually in the patient's own home. An active out-reach policy would probably be able to engage most of these patients in further and perhaps different treatment. The case for out-reach can also be argued from our present knowledge of the short- and long-term outcome of depression (Keller et al. 1982; Lee et al. 1988). According to the principles of the Needs for Care Assessment Schedule (Brewin et al. 1987), although serious attempts should be made to offer further treatment, al-

lowance has to be made for refusal (in which case met need would be rated, subject to the proviso that further attempts to offer treatment should be made from time to time).

The remainder of our patients who received a rating of unmet need did so because, to the best of our knowledge, they remained in contact with the service but were not being offered potentially effective alternative treatment. Unmet need was often rated for the same reason (no attempt to alter treatment) in a survey of the long-term mentally ill, based on the Needs for Care Assessment Schedule (Brewin et al. 1988). In particular, referral for psychotherapy and a change in the method of drug treatment were very rarely provided to the patients that we have studied. Once again, however, without a more detailed intensive study, we cannot be certain about the reliability of our treatment data in these two areas. It is possible that many of those in continuing outpatient care were being offered potentially effective alternatives, such as cognitive behaviour therapy, or practical help with major social and economic stressors.

Routine clinical practice in the treatment of depression has received surprisingly little attention (Kupfer and Friedman 1986). We are aware of only one systematic and prospective attempt to examine the relationship between the diagnosis of depression and its treatment (Keller et al. 1986). This study was part of the Collaborative Program on the Psychobiology of Depression, and therefore based in well-staffed and well-resourced, specialised treatment settings. Outcome was assessed over a period of 8 weeks, shorter than in the present report. Very few clinical factors were found to predict the nature or intensity of treatment. Moreover, as in our own research (Brugha et al. 1992) there was little relationship between treatment and outcome. In contrast to these prospective studies, two retrospective studies, employing largely unstandardized methods of data collection led to apparently opposite results (Goethe et al. 1988; Glick et al. 1991). These contradictory findings emphasize the need for rigorous, and sophisticated prospective research. It would be all too easy for retrospective gathered data on diagnoses and treatment to be subject to bias, fulfilling the expectation that appropriately chosen treatment is effective in day-to-day clinical practice. Only prospective assessments beginning at the time of the initial diagnostic assessment, which also includes reliable, contemporaneous data on treatment and compliance can be fully relied upon in this difficult field of research.

Conclusion

The work upon which this report is based, was designed for and was successful in identifying psychosocial predictors of recovery from depression (Brugha et al. 1990, and submitted for publication). But it also showed that treatment does not appear to predict outcome (Brugha et al. 1992). The current paper suggests that this may be because treatment is not effectively deployed. In this report, we have shown that in a high proportion of those who have not recovered within at least 3 months of enter-

ing psychiatric care, treatment by the psychiatrist or family doctor was limited: in particular, it did not include alternative methods of intervention that might be expected to enhance outcome. The limitations of the treatment data in this study lead us to recommend more systematic research. However, it provides the initial basis for questioning the effectiveness of services for depressed patients.

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