Twelve month outcome of depression in general practice: does detection or disclosure make a difference?

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Abstract

***Objectives*—To assess the extent to which the outcome of depression among primary care attenders may be affected by medical diagnosis or by feedback of questionnaire results in unrecognised cases.**

***Design*—Prospective 12 month study including a randomised controlled trial of the effects of disclosure, with data on depression status and clinical management collected by questionnaire and interview.**

***Setting*—Two group practices in north Liverpool.**

***Subjects*—1099/1444 (76%) consecutive adult attenders completed the Beck depression inventory, of whom 179 with scores of at least 14 were followed up.**

***Interventions*—Disclosure of a random 45% (52/116) of depression scores to general practitioners for subjects whose depression was undetected.**

***Main outcome measures*—Depression status estimated by depression score at start of study and at six and 12 months, with subsample validation against ICD-10 criteria.**

***Results*—Questionnaire response rates were 76% (136/179) at six months and 68% (122/179) at 12 months and were higher for women than men. The median depression score was 19 (interquartile range 15 to 22) initially, decreasing to 16 (11 to 23) at 12 months. The median depression score decreased significantly (two sided test, P=0·019) in subjects whose depression was unrecognised at the index consultation but increased in those whose depression had been detected by their general practitioners. Disclosure of cases of unrecognised depression to general practitioners had no effect on outcome. Intention to treat was associated with a worse prognosis, although only a minority of subjects received adequate treatment.**

***Conclusions*—Disclosure of undetected depression did not improve prognosis. A diagnosis of depression in general practice should be considered simply as a marker of its severity.**

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Introduction

Research into the outcome of depression in general practice has yielded conflicting results. Some studies have reported 12 month recovery rates of over two thirds for new cases,[1,2] while others have found minimal improvement on self report scales[3,4] and high rates of relapse.[5] At least 12% of cases are likely to become chronic.[6] Prognosis may be worse if the depression is severe[7] or long standing before treatment.[8] Life events and difficulties, including physical illness,[9] may be more predictive than clinical risk factors of the chronicity of depression.[10]

The effect of diagnosis by, or disclosure of depression to, general practitioners is also unclear.[11] Medical consultation, diagnosis, or prescription of psychotropic drugs were not significant factors in determining recovery from neurotic illness in an epidemiological study in Camberwell.[12] In a Dutch study, by contrast, subjects whose depression was recognised by their general practitioner had a better outcome in terms of both psychological and social functioning than those whose depression went unrecognised.[13] Disclosure of unrecognised psychological morbidity to general practitioners was associated with reduction in duration and severity in two controlled trials,[14,15] while a third trial could show no such effect.[4] These findings are sufficiently ambiguous to warrant further investigation.

Method

We undertook a prospective study during 1993-4 of the 12 month outcome of episodes of depressive illness in general practice attenders. This incorporated a randomised controlled trial of the effects of disclosure of unrecognised depression.

The setting was two group practices in north Liverpool comprising nine general practitioners and 18 000 patients. One practice was based in a relatively affluent area with a low Townsend deprivation score of −1·4, while the other was based in a deprived inner city area with a high Townsend score of 5·4.[16] We assessed the doctors' knowledge of managing depression through semistructured questionnaires. We invited consecutive attenders aged 16-64 years to participate in the study. Those who agreed completed there and then the Beck depression inventory,[17] a well established self report instrument designed to track depression over time, whose weighting towards cognitive rather than somatic manifestations of depression is beneficial in settings where patients may present with physical symptoms.[18,19] We compared the responses of participants with encounter sheets on which the general practitioners noted whether they considered the same patients to be not depressed, probably depressed, or definitely depressed. The doctors were not aware of the Beck depression scores at this stage.

RECRUITMENT

The threshold for recruitment was a depression score of 14, higher than in previous studies[3,20,21] to increase specificity. Subjects with a score of 35 or above, or who were clearly suicidal, were made known to their general practitioner and excluded from the study. Recruitment continued until 116 subjects had been identified at or above threshold who had not been diagnosed as depressed by their general practitioners. These were randomly subdivided on a 6:5 ratio to allow later diagnoses to be discerned in assessing changes in depression status: the depression scores for 64 (55%) of the subjects were not disclosed to the doctors, while the scores for the remaining 52 (45%) were disclosed. The

method of disclosure was twofold. Each doctor was given a sealed envelope with forms containing details of the relevant patient's name, age, and depression score with diagnostic interpretation. In addition, the depression score and interpretation was recorded in the patient's medical notes.

A further 63 subjects, rated probably depressed or definitely depressed by their general practitioners and with a depression score at or above threshold, were randomly allocated to a control group of "detected" subjects.

We offered a random 40% of subjects from each of the three study groups a semistructured interview within two weeks of recruitment to validate the depression scores. The diagnostic reference criteria according to the *International Classification of Diseases, Tenth Revision* (ICD-10)) were those of depressive episode (F32) and recurrent depressive disorder (F33).[22,23] We followed up the subjects with postal depression inventories (with up to three reminders) at six months. At 12 months, postal inventories were sent to all the subjects, and the subset was reinterviewed.

The general practitioners' clinical notes on these subjects were reviewed for information on intention to treat depression. Any record of treatment with antidepressant drugs, referral to a mental health specialist (psychiatrists, psychologists, psychotherapists, or counsellors), or discussion of depression with the subject was included as intention to treat. Intention was graded as 0 (none), 1 (possible), or 2 (definite).

STATISTICAL ANALYSIS

Sample sizes were calculated with 80% power to detect a difference of 15% on depression score with a 5% probability of detecting a false effect (α). The size of each group was increased to allow for a 33% dropout over 12 months, and a 20% later detection rate in the group whose scores were undisclosed. The data for the subjects completing the inventory on all three occasions were analysed and median scores within and between the study groups were compared. The Mann-Whitney U test was used to make unpaired comparisons between groups and Wilcoxon's signed ranks test was used to analyse the paired differences within groups. Confidence intervals for differences were constructed with appropriate nonparametric methods.[24]

Results

RESPONSE

In all, 1099/1444 (76%) eligible subjects responded to the initial questionnaire, of whom 179 were recruited for the study. The response rates of subjects to postal questionnaires were 76% (136/179) at six months and 68% (122/179) at 12 months. In all, 114 (64%) subjects completed the Beck depression inventory on all three occasions. There was a pronounced sex difference in response: 96/127 (76%) women responded at 12 months compared with only 25/52 (48%) men. The odds ratio for this was 3·34 (Gart's 95% confidence interval 1·60 to 6·96), Fisher's two sided test of probability $P<0·001$. Interviews were offered to 76 subjects, of whom 59 (78%) accepted; of these, 45 (76%) agreed to be reinterviewed at the end of the study. Data from medical records were obtained for 173 (97%) subjects.

DEPRESSION OUTCOMES

The initial median depression score for the 114 full respondents in the whole study was 19 (interquartile range 15 to 22); 31 of these subjects had a depression score of 25 or higher. Diagnostic interviews with 39 of the full respondents found that 38 fulfilled the criteria according to ICD-10 for at least mild depression, while 16 were rated as severely depressed.

Table I shows the changes in depression scores over the 12 months of the study. The median depression score had decreased by just two points at six months and by three points over the 12 months of the study. These changes were, however, both significant. Only 21 subjects had scores less than 10 (indicating low probability of depression) at six months, and 19 had scores less than 10 at 12 months. The number of subjects with scores of 25 or higher, however, rose to 24 at six and 12 months. On ICD-10 criteria 30/39 subjects who were reinterviewed were still at least mildly depressed, while the number rated severely depressed had increased to 18.

Disclosure of depression status to the general practitioners had no discernible effect on depression scores (table I). The median score decreased in each group of initially undiagnosed subjects: by three points in the group whose depression status was disclosed and by four points in the group whose status was undisclosed; significant differences were found only in the latter group. In contrast, the median score increased by one point over 12 months among those subjects whose depression was initially diagnosed by the general practitioners. This increase was not significant.

Table II shows the differences in median depression scores between study groups. No significant differences were found between the subjects whose depression status was disclosed and those whose status was undisclosed. The differences between the subjects who had been diagnosed and those who had not, however, increased at both six and 12 months, with a difference of seven points (95% CI=3 points to 11 points) at 12 months.

The same effects within and between the groups were observed when the data were reanalysed to exclude 13 subjects whose status had not been disclosed who were subsequently diagnosed as depressed by their general practitioners.

MANAGEMENT OF DEPRESSION

In their initial accounts of managing depression the general practitioners showed a clear understanding of treatment strategies. All nine reported using doses of antidepressant drugs in line with the *British National Formulary*.[25] Eight doctors said that they would follow up patients for up to six months; the remaining doctor referred patients to a psychiatrist if they did not improve after one month. All the doctors were aware of several specialist options for referral. A discrepancy existed, however, between these accounts and their clinical practice as recorded in the medical case notes.

We categorised 109 of the full responders in terms of

TABLE I—*Median depression scores* (interquartile range) and median differences from scores at start of study (95% confidence interval; P value†) for full respondents, by study group*

Group	At start of study	At six months	At 12 months
Depression not disclosed (n=46)	18 (15 to 21)	16 (13 to 19)	14 (11 to 19)
Median difference from score at start of study		−1·5 (−3·5 to 0·5; 0·1532)	−3 (−5·5 to −0·5; 0·0186)
Depression disclosed (n=33)	18 (16 to 21)	17 (8 to 23)	15 (10 to 22)
Median difference from score at start of study		−2·5 (−3·5 to 0; 0·0723)	−3 (−6 to 0; 0·0616)
Depression diagnosed (n=35)	21 (16 to 25)	21 (14 to 30)	22 (14 to 29)
Median difference from score at start of study		0 (−2·5 to 3·5; 0·9804)	1·5 (−1 to 4; 0·2535)
All subjects (n=114)	19 (15 to 22)	17 (12 to 24)	16 (11 to 23)
Median difference from score at start of study		−1·5 (−2·5 to 0; 0·0633)	−1·5 (−3 to 0; 0·0488)

*On Beck depression inventory. †Two sided test.

TABLE II—*Differences in median depression scores* (95% confidence interval; P value†) between study groups and over time*

Groups compared	At start of study	At six months	At 12 months
Depression not disclosed *v* disclosed	0 (−2 to 2; 0·8808)	−1 (−4 to 3; 0·7462)	0 (−3 to 4; 0·9247)
Depression not diagnosed *v* diagnosed	−2 (−4 to 0; 0·0632)	−5 (−1 to −8; 0·0199)	−7 (−3 to −11; 0·0018)

*On Beck depression inventory. †Two sided test.

Key messages

- Research into the outcome of depression in general practice has yielded conflicting results
- The effect on outcome of diagnosis by, or disclosure of depression to, general practitioners is unclear
- This study shows that prognosis for depressive illness is poor and that neither diagnosis nor disclosure of depression has an appreciable impact on outcome
- A diagnosis of depression should be seen simply as a marker of the severity of the depression

the general practitioners' intention to treat. There was no evidence of intention to treat in 62 cases, possible intention in 20, and definite intention in 27. Intention to treat, however, was associated with a worse outcome as measured by the 12 month change in median depression score (table III). Kendall's rank correlation showed a significant interdependence of scores and intention to treat categories (two sided test, P=0·014 (adjusted for ties)).

TABLE III—*Median depression scores* (interquartile range) over time by "intention to treat" group*

Group	Start of study	At 12 months
No intention to treat (n=62)	18 (16 to 21)	14 (10 to 29)
Possible intention to treat (n=20)	17 (13 to 22)	19 (12 to 25)
Definite intention to treat (n=27)	22 (17 to 27)	22 (11 to 30)

*On Beck depression inventory.

For the 60 subjects who received treatment, those taking antidepressant drugs and counselling had greater median improvements in depression score than those whose treatment consisted simply of a discussion with the general practitioner, but there were too few in each category to allow adequate statistical comparisons.

Discussion

This study had several limitations. Using three point data to represent the outcome of a disorder which has a fluctuating course meant that we could not detect changes in depression status that may have occurred between the three time frames. The depression scores were validated against clinical criteria of depression in only one third of cases. Over one third of study subjects did not respond to all three questionnaires, and the rate was particularly low for men. More generally, screening processes of this type are difficult to blind. All screened subjects, whether experimental or control, are more aware of psychiatric symptoms and are more likely to report them if asked to complete such a questionnaire; doctors will also have a higher index of suspicion. In addition, the clinical researcher was not blind to the group status of the subjects, and this could have led to selection bias at the diagnostic interview.

Nevertheless, we conclude that the prognosis for depressive illness was poor, and that neither diagnosis by general practitioners nor disclosure to them of the depression scores in cases in which depression had not been recognised had an appreciable impact on the six or 12 month outcome. Indeed the subjects whose depression was diagnosed and for whom there was an identifiable intention to treat tended to have a worse result than those whose condition remained unrecognised. The small proportion of cases in which adequate treatment was provided makes it difficult to assess the effects of such treatment despite the benefits of drug and non-drug treatments reported elsewhere.[26] The data also pose the question of whether poor outcome was affected by a tendency to select frequent attenders with a higher than average probability of physical or social problems, leading to increased levels of life events and difficulties.[27] This offers a potential explanation for the differences found between outcome studies (including this one) starting from a prevalence sample[3-5] and those based on an incidence sample of "new" cases.[1,2] It also suggests that a diagnosis of depression should be seen simply as a marker of the severity of the depression, an epiphenomenon in the natural course of a condition whose major determinants may lie outside the reach of the medical profession.

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