Depression in patients in an Auckland general practice

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Abstract

Aim. To measure the rate of detected and undetected depression in patients attending an Auckland general practice.

Method. At their consultation conclusion, general practitioners (GPs) asked all consecutive patients over sixteen years attending for consultation to participate in a health and mood questionnaire. A researcher administered the Beck Depression Inventory (BDI) to consenting participants. The GPs previously recorded whether they considered these patients depressed.

Results. Response rate among patients was 81% (253/314). The BDI found a 13.8% (35/253) 95% CI (9.6-18.5) depression prevalence among patients. GPs picked up 51% of cases (sensitivity 0.51 and specificity 0.91). Mäori patients were no more likely to be depressed than non-Mäori but they were less likely to be receiving or have received treatment with antidepressants.

Conclusion. The rate of depression in this practice was higher than an earlier study suggesting the true rate may be >10%. GPs see more depressed patients than other health professionals, therefore improvement in detection and management of depression in primary care is important. More work is needed on the difference between Mäori and non-Mäori in the use of antidepressants.

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Depression is a common and costly mental health problem seen frequently in general practice and general medical settings.[1] Researchers at Harvard University estimate that by 2020 unipolar depression will be second only to ischaemic heart disease as the leading cause of disability adjusted life years.[2] When self rated depression scores are used, between 5.5% and 65% of participants are thought to be depressed depending on where the threshold values are set for the self-rating scale.[1] This wide range of prevalence estimates indicates a need for high quality studies about depression set in primary care. The annual economic burden of depression in the US (including direct care costs, mortality costs and morbidity costs) has been estimated to total almost $44 billion.[3]

Major depressive disorder can result in serious sequelae. The suicide rate in depressed persons is at least eight times higher than that of the general population. Most who commit suicide have a mental disorder, and depression is associated with half of suicide cases.[4] There is concern in New Zealand over the youth suicide rate that has been the highest in the OECD countries.[5] The 1996 suicide figures show that Mäori males aged 15-24 years had an age standardised rate of 55.5/100 000 compared with 33.8/100 000 for non-Mäori.[5] On a population basis the most important effect of major depression may be decreased quality of life and productivity rather than suicide. This effect is widespread and has been shown to be comparable to

levels associated with major chronic medical conditions such as diabetes, hypertension or coronary heart disease.[6] Also, depressed persons frequently present with a variety of physical symptoms (three times the number of somatic symptoms compared to controls in one study), leading to excess utilisation of medical services.[7]

The prevalence of depression in New Zealand general practice has not been clearly established. The WaiMedCa study of general practice patients in the Waikato found that 4.4% of patients received a 'psychological' diagnosis.[8] Depression was reported as being 0.5% of all new problems and 0.9% of existing problems. The WaiMedCa study attempted only to identify the one main reason for presentation at the consultation, and this may partly explain the low result. A cross-sectional population study undertaken in Christchurch showed a 3.7% rate for the two week prevalence of depression and a 12.6% rate for the one year prevalence.[9] The WaiMedCa results have long been regarded as a low estimate given the findings in overseas studies and the Christchurch study. The recent MaGPIe study found that GPs thought that 20.7% of their patients described symptoms that were partially or fully psychological within the current consultation, a sizeable increase on the WaiMedCa findings.[10]

There is considerable evidence that GPs miss cases of depression[11] and it would be helpful to have an estimate of that situation. The aim of this study was to measure the rate of detected and undetected depression in general practice patients. The term screening is usually used for assessment in asymptomatic patients whereas patients with undiagnosed depression will have symptoms. Thus we shall use the term case finding.

Methods

This study was undertaken at an Auckland practice with approximately five full time equivalent doctors (four full time one half time and one three tenths). The practice is located in South Auckland and has 25-33% of its patients describing themselves as being of Maori ethnicity. Consecutive patients over the age of sixteen years were asked by their GP if they would participate in a survey about their health and mood at the conclusion of their consultation. Those who consented were referred to a research interviewer. The interviewer obtained written consent and administered the Beck Depression Inventory (BDI) in a separate office following the consultation. Prior to this the GPs had made a note on a piece of paper as to whether or not they thought these patients were depressed. If they were considered suicidal, they could signal the interviewer that this issue had been addressed.

Patients were excluded from the study if they were cognitively impaired or unable to read English. Scores from the inventory were reported back to the patients as soon as they had completed it. Those patients who gave any positive responses to the suicidal feeling questions on the inventory were asked by the interviewer to return to see the doctor. Others who were depressed but not suicidal were asked to return to see the GP in the near future.

It was decided to use the BDI to identify cases of depression. Mulrow et al assessed nine case finding instruments, including the BDI, in eighteen studies of depression in primary care.[12] Their interpretation was that all the instruments had reasonable operating characteristics, and selection of a particular instrument was dependent on issues such as feasibility, administration and scoring times and the instrument's ability to serve additional purposes such as monitoring severity or response to therapy. The BDI intentionally does not include items on physical symptoms such as decreased appetite, decreased sleep and agitation as these are very common in the general population. The National Health Committee guidelines recommended the Centre for Epidemiological Studies – Depression (CES-D) or the Hamilton Depression Inventory (HAM-D). The CES-D does not have a question about suicide and the HAM-D requires it to be interviewer administrated. As a validated, short, self-administered tool, the BDI does not require special training to administer, one of the investigators was familiar with it (BA), it focuses on psychological rather than physical aspects of depression and for these reasons was considered the most appropriate choice for our purposes. The General Health Questionnaire has been used in a number of studies but as it measures 'distress' and not a specific mental health condition we chose not to use it as we were interested in depression.[13] We chose only one questionnaire since we were concerned that patients would find two or more questionnaires tedious. Ethics approval for the study was obtained from the Health Funding Authority Ethics Committee. Statistical testing was done using STAT-SAK 1988.

Results

253 consecutive patients were enrolled in the study and given the BDI. There was an 81% (253/314) response rate among patients whose median age was 45 years (range 16-95).

The BDI consists of 21 questions with a score range 0 to 63. Using a threshold of >16, 35 patients were judged as being depressed, giving a prevalence of 13.8% (95% CI 9.6-18.5). The GPs picked up 51% of these cases (sensitivity 0.51 and specificity 0.91). There were 20 patients (7.9%) judged by the GP as depressed who did not score above the cut-off point for the BDI. The cut point of 16 was chosen as this represents borderline clinical depression and hence this was used to dichotomize the group in order to measure the sensitivity and specificity.[14]

77% (27/35) of patients found to be depressed were female, with a median age of 40 years (range 18-70). Table 1 shows the range of BDI scores for different cut-points and by gender and Mäori and non-Mäori. The majority of non–Mäori were NZ Europeans. The choice of ranges is to facilitate comparison with other studies that used different cut-points. The rate of depression (using >16 as the cut point) is 16%, 9%, 11% and 15% for women, men, Maori and non-Maori respectively. The rate of depression (using >10 as the cut point) is 34%, 20%, 33%, 28% for women, men, Maori and non-Maori respectively.

Table 1. Range of BDI scores by gender and Mäori vs non-Mäori.

Range of BDI scores*	Number of patients	Female patients n(%)	Male n(%)	Mäori n(%)	non-Mäori n(%)
0-10 normal	179	109 (66%)	70 (80%)	43 (67%)	136 (72%)
11-13 mild mood disturbance	17	14 (9%)	3 (3%)	3 (5%)	14 (7%)
14-16 mild mood disturbance	22	15 (9%)	7 (8%)	11 (17%)	11 (6%)
17-20 borderline clinical depression	10	9 (5%)	1 (1%)	1 (2%)	9 (5%)
21-30 moderate depression	14	8 (5%)	6 (7%)	4 (6%)	10 (5%)
31-40 severe depression	10	9 (5%)	1 (7%)	2 (3%)	8 (4%)
Greater than 40 extreme depression	1	1 (1%)	0	0	1 (1%)
Totals	253	165	88	64	189

* The uneven size range of BDI scores is to enable comparison with other studies.

Table 2 shows the study results according to Mäori and Non-Mäori. There was a significant difference between those who were Mäori, had a BDI score > 10 (mild mood disturbance) and who had been or were on antidepressants 4% (1/26) and those whose ethnicity was non-Mäori 31% (24/77). There was no difference in the proportion of Mäori and non-Mäori with depression in the BDI range >16. There was no difference in the average BDI for all Mäori compared with all non-Mäori.

Discussion

This is the first study looking specifically at depression in New Zealand general practice patients and suggests that rates

are almost certainly higher than previously measured and are similar to those found overseas.[15] A strength of our study was the 81% response rate. Another strength was the inclusion of ethnicity. We believe this is the first New Zealand study to make comparisons of Mäori and non-Mäori in terms of depression. While Mäori are no more likely to be depressed in this study they were significantly less likely to be treated with antidepressant medication than non-Mäori. We cannot link this to the high suicide rate in young Mäori, as there were very few adolescents in the study. There was a non-significant difference between the proportion of Mäori (71%) and non-Mäori (64%) in terms of having a community services card. This information suggests that there is a gap in prescribing of antidepressant medication to Mäori patients. We cannot tell from this study if this is an issue on the part of the GPs or an issue to do with patients not wanting to take medication. If it is the former then this is further evidence of a health gap between Mäori and non-Mäori.[16]

Table 2. Mäori non-Mäori comparisons.

	Mäori	non-Mäori
BDI > 10 and now or ever been on antidepressants*	1	24
BDI > 10*	21	53
BDI > 16/Mäori or non-Mäori†	7/64	28/189
Average BDI (se) {n}‡	8.07 (0.74) {64}	8.64 (0.498) {189}
Have CSC card§	46	122
Do not have CSC card§	18	67

*p=0.007 Fisher's exact. †Chi squared statistic p= 0.43. ‡t test 0.55. §Chi squared statistic p=0.28.

A weakness in this study was the use of the BDI as the measuring tool, whereas the gold standards are interviews with psychiatrists. However, the BDI is a validated, short self-administered instrument feasible to use in GP settings for research.

The prevalence of depression in this study, as measured by the BDI, is similar to that in other studies. In one Australian study in a primary care clinic they found 25.1% of women and 16.6% of men were depressed when the cut point of >10 was used.[15] Our study found 34% of women and 20% of men would be depressed at that cut–point. A Health Maintenance Organisation in middle class Wisconsin found 18.3% of patients were suffering from depression when they used the cut-point of >13[15] while in our study the figure is 23%. Our findings are very similar to those in a World Health Organisation study of 25 916 primary care patients using ICD-10 criteria which found 10.4% of patients had depression and 2.1% had dysthymia.[17] This suggests that the WaiMedCa study underestimated mental health conditions in general and depression in particular.[8]

The fact that many depressive illnesses were missed by their GPs is a common finding in overseas studies of screening/case finding for depression in primary care.[18] Other studies have found similar figures to ours for rates of missed depression.[18,19] There is evidence that missed depression does not have adverse consequences but in view of the poor prognosis of depression (60% still meet the criteria for caseness at one year) improving compliance with treatment may be a more important aim.[11] This is controversial as another study found a greater reduction in symptoms on the GHQ at three months but not at twelve months in a World Health Organisation study of Psychological Problems in General Health Care.[19] There are many reasons why primary care physicians and psychiatric diagnostic instruments may differ in assessment of depression. These include physician factors such as beliefs in the effectiveness of treatment, comfort with psychological views, perceived time and role responsibility and skills in acquiring information and assessing non-verbal skills. Patient factors include absence of self -awareness, co-morbid medical illness, physical symptoms, and degree of somatisation, sub-threshold depression and factors such as shame, guilt and hopelessness. Certain key skills in the consultation have been identified that are both teachable and associated with increased rates of recognition. However, teaching better consultations skills leads to only a modest increase in detection rates[20] yet primary care physicians who are better at detection also have better management skills.[21] The patient initiates most consultations in primary care. The content of the typical primary care consultation and its outcome will be influenced by what the patient chooses to present and how he or she chooses to present it. Many patients with psychological disorders present to their GP with common somatic symptoms – which are the currency of general practice.

While the BDI is a useful research tool, it is too cumbersome and time consuming for routine use, and requires a copyright fee of about $5.00 to be paid each time it is used.[22] The BDI Fast Scan, a short (seven question) version requires a copyright fee of about $1. Validated in at least four different studies, it asks only psychological questions, which facilitates its use in a medical environment where appetite and sleep disturbance may be due to medical disorders.[23] Our choice of one instrument was out of concern that patients may find additional questionnaires tedious and hence not consent or not complete all the questions. This was not the case and in other and future studies we are using more than one questionnaire. Our choice in future would be the short BDI for Primary Care now known as the BDI Fast Scan rather than the 21 question BDI.[23] It has seven questions and has been validated in a number of settings including general practice and medical outpatients.[23] This makes a point of focusing on psychological aspects of depression in a primary care setting so that issues of appetite loss, weight loss and sleep disturbance, which can be symptoms of physical illness, do not cloud the picture.

A number of studies have shown benefit from treatment in primary care settings. They have usually involved some process such as psychological treatment in addition to the usual pharmaceutical management of depression.[24-27] At least 80% of the New Zealand population visit their GP each year.[28] GPs see the majority of patients with depressive conditions. There is evidence that if GPs make the diagnosis themselves the patients are more likely to be given antidepressants.[29]

There is a need to improve detection of depression in primary care in order to ensure appropriate patients are offered treatment. Improved understanding of the prevalence and prognosis of depression in general practice is also necessary. Given the degree of undetected depression uncovered by our study, the utility of very short screening tools requires further evaluation. Further work is also required on the discrepancies in antidepressant use between Maori and non-Maori.

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