

The prevalence of depression among Maori patients in Auckland general practice

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ABSTRACT

INTRODUCTION: There has been concern over high rates of mental illness in Maori. Previous studies in general practice have had small sample sizes.

AIM: To determine the prevalence of major depression among Maori patients in Auckland general practice using the CIDI and the PHQ as measurement tools.

METHODS: This prevalence study is part of a larger randomised trial. The patients were recruited from 77 general practitioners from around Auckland who could provide a private room for interviewing. The patients were invited to participate in the waiting room and all consecutive patients were approached. For this study all patients received a computerised CIDI examination and one third received a PHQ assessment prior to getting the CIDI. The interviewer was blind to the questionnaire results when the patient did the CIDI.

RESULTS: There were 7994 patients approached from whom there were data on 7432. The prevalence of Maori in the study was 9.7%. The overall 12-month prevalence of major depression based on the CIDI was 10.1% 95%CI (8.8 to 11.4). For Maori the prevalence was 11.5% 95%CI (8.8 to 14.2) and for non-Maori 10.1% 95%CI (8.6 to 11.3). For Maori men and Maori women the prevalence was 8.5% and 13.4% and for non-Maori men and non-Maori women it was 8.3% and 11.1%. The prevalence of depression over at least the previous two weeks on the PHQ ≥ 9 for all participants was 12.9% 95%CI (11.2 to 14.5).

DISCUSSION: The prevalence of depression among Maori is high, but not as high as earlier studies. This may be due to the bigger sample size of this study.

KEYWORDS: Maori, prevalence, depression, primary care, general practice, New Zealand

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Introduction

Maori have had poorer mental health for decades while clear evidence has been collected in the last 20 years.^{1,2} In particular, a concern about high rates of depression among Maori has been suggested, with few confirming studies. Increasingly, differences in mental health service use and clinical characteristics between different ethnic groups have been reflected in the official statistics, while recent studies have found positive evidence of disparities between Maori

and non-Maori populations at both primary and secondary levels of care.^{3,4}

The most recent investigation on mental health in general practice found higher rates of major depression among Maori general practice attenders (46.4% in Maori while 15.4% in non-Maori in the last 12 months)⁵ with the highest rates of depression in female Maori patients (55.2%) and the greatest ethnological disparity between Maori and non-Maori women. However, these findings

were based on a small number ($n=81$) of Maori respondents; therefore it is not clear how generalisable this information is. The New Zealand Mental Health survey was a national study which included 2595 Maori. The results from this community sample reported a mood disorder in Maori of 11.4% (12-month prevalence) versus 7.4% in the general population.⁶

Our study looks at the prevalence of depression among Maori patients in Auckland general practices in participants recruited as part of a randomised trial.

Methods

This paper uses data from a randomised control trial of the Patient Health Questionnaire (PHQ),⁷ the Two Question With Help Questionnaire (TQWHQ)⁸ and no screening in general practice. The PHQ has nine questions based on the DSM-IV. The TQWHQ is a three-question screening tool. This paper reports the prevalence of depression as detected in recruited participants. All participants completed the computerised CIDI (Composite International Diagnostic Interview) to evaluate the presence of depression as a gold standard.^{9,10} The PHQ was administered to one third of the sample. RCT methodology and results will be reported in mid-2009.

Recruitment of general practitioners

All general practitioners in Auckland who worked greater than four-tenths in practice were eligible for the study. All eligible patients who gave informed consent were enrolled. A fee of \$9 per patient was paid to each GP to compensate for time spent asking the patient to meet with the interviewer, and reassessing patients found to be suicidal on the questionnaires. General practices in Auckland had to be able to provide a separate room for patient interviews. The study took place from 2006 to 2009.

Recruitment of patients/index consultation

Patients were eligible for the study if they were able to communicate in English, were aged over 16 years, and were not suffering from any brain injury, dementia, terminal illness or intoxication.

WHAT GAP THIS FILLS

What we already know: Based on small studies, the prevalence of depression in Maori patients is high compared to non-Maori.

What this study adds: The rates of depression in a larger group of Maori are high, but lower than previously estimated.

Consecutive patients were approached in the waiting room and asked to participate in the study. Patients were recruited consecutively in order to obtain an adequate spectrum of disease as part of screening and diagnostic test studies. After providing written informed consent they were asked to go to a private room to complete the study procedures. The interviewer was blind to the screening questionnaire results when the patients did the CIDI. The study was conducted according to the principles of the STARD statement.¹¹

Ethnicity was determined by self-selection as part of the screening questionnaire based on the 2006 New Zealand census. Individuals could pick more than one ethnicity. Those who chose Maori only or Maori in addition to other ethnicities were considered Maori and those who did not choose Maori at all were considered to be non-Maori. A subgroup analysis was conducted of those who chose only Maori.

Ethics approval

The methods and procedures used in this study were approved by the Northern Y Regional Ethics Committee, Ministry of Health. (Ethics approval number NTY/06/09/080).

Statistical methods

All statistical analyses were carried out using STATA data analysis and statistical software version. The analysis was done using STATA v3 to take into account the effect of clustering by GP.

Results

The number of patients approached was 7994 from whom there were 337 refusals (4.2%) and 225 incomplete interviews (either patients did not complete the screening questionnaire or did not

get the CIDI). On average, 96 participants (range 4–228) were recruited from each of 77 general practitioners and 67 of the GPs contributed Maori patients (average of 11 Maori per GP, range 1–48). The demographics are shown in Table 1 which shows that 9.7% of the sample were Maori and Maori patients were younger than non-Maori patients. Table 2 shows the major depression in the previous 12 months in terms of a Diagnostic and Statistical Manual (DSM) IV diagnosis reported on the CIDI computer and for PHQ score ≥ 9 , 12 and 14 (available on one third of participants).¹² The prevalence of depression as recorded by the PHQ for more than two weeks is higher than the CIDI for the previous 12 months. A PHQ score ≥ 9 indicates major depression. A sensitivity analysis was conducted using those who chose Maori as their only ethnic group. This resulted

in a slightly lower prevalence for only Maori (on CIDI) 9.6% versus 11.5% for all Maori for overall depression; 11.9% versus 13.4% for Maori women and 5.9% versus 8.4% for Maori men respectively.

Discussion

Our results show that depression is a significant issue for Maori and consistent with the New Zealand Mental Health survey and the MaGPIe study, although the differences between Maori and non-Maori were not significantly different in our study.

Qualitatively our results were lower than those reported in the MaGPIe study. A sensitivity analysis using those who chose Maori as their only ethnicity had a slightly lower prevalence of depression than with those who chose Maori and at least one other. The numbers are too small for interpretation to be made.

The strengths of this study include the high response rate and the large number of Maori recruited from general practice. The methodology was simple with recruitment followed immediately by a computerised gold standard CIDI interview. Thus the PHQ findings and the CIDI findings are from the same day.

A weakness of this study is that the GPs were not chosen randomly. However it was necessary

Table 1. Demographic characteristics of general practice attenders by ethnicity

	Overall n = 7432	Maori n = 721	Non-Maori n = 6711
Mean age	49	39	50
Median age	48	37	49
Age range	16–99	16–82	16–99
Gender			
Female	4460 (60%)	449 (62%)	4208 (63%)
Male	2973 (40%)	272 (38%)	2504 (37%)

Table 2. Prevalence of depression according to CIDI-DSM-IV major depressive disorder and PHQ scores among general practice attenders by gender and ethnicity. Proportion (95% confidence interval)

	Overall	All non-Maori	All Maori	Non-Maori men	Maori men	Non-Maori women	Maori women
CIDI	N = 7432	N = 6711	N = 721	N = 2697	N = 272	N = 4014	N = 449
CIDI +ve*	10.1% (8.8, 11.4)	10.1% (8.6, 11.3)	11.5% (8.8, 14.2)	8.3% (6.9, 9.8)	8.5% (4.7, 12.2)	11.1% (9.5, 12.7)	13.4% (10.2, 16.5)
PHQ**	N = 2497	N = 2240	N = 257	N = 903	N = 84	N = 1337	N = 173
> 9	12.9% (11.2, 14.5)	12.6% (10.9, 14.2)	15.2% (10.3, 20.0)	10.2% (8.3, 12.1)	11.9% (5.9, 17.9)	12.7% (9.2, 16.2)	16.8% (10.7, 22.7)
≥ 12	9.2% (7.7, 10.7)	9.0% (7.5, 10.5)	11.3% (6.6, 15.9)				
>14	5.2% (4.2, 6.2)						

* Positive for major depression in the last 12 months.

** Sub-sample assessed with the PHQ depression screen—relates to at least the past two weeks.

() = 95% confidence interval adjusted for clustering by GP.

to have practices with a spare room available to conduct the gold standard interviews. The other weakness is that this study may be underpowered to find true differences. The CIDI has been criticised for use in surveys other than those wanting an epidemiological estimate. In one review of the PHQ it was thought that a cut point of ≥ 12 for the PHQ may give a closer estimate to the CIDI.¹³ In our study a cut point of ≥ 12 would make a prevalence of 9.2% (on PHQ) versus 10.1% (CIDI) versus 12.9% with a cut point of ≥ 9 . The PHQ relates to at least the previous two weeks while the CIDI can be the previous month to the previous year. It is not clear which is the better gold standard and further work may be required.

The other NZ general practice study is the MaGPIe study.⁵ It reported 12-month major depression prevalence rates for Maori women as 55.2% (95%CI 33%–77.4%) and for Maori men as 21.3% (95% CI 2.3%–40.3%). While the confidence interval estimates for Maori men in the MaGPIe study include our point estimate, the rate for women does not. The difference may lie in the different location (Wellington versus Auckland) or in the different sample sizes (MaGPIe $n=81$) and our study (721). There have also been a number of national depression initiatives which may have reduced the burden of depression and the national unemployment rate was dropping until the final quarter of 2008. The other issue is that of the methodology. The MaGPIe study screened patients with the GHQ (General Health Questionnaire) and then required the patient to return for a second interview. This more complicated methodology may have biased the results toward a higher prevalence estimate.

These findings on prevalence of depression were consistent with other studies investigating similar issues overseas, as minority populations in other countries, including native Americans and US Hispanics, have higher rates of mental disorders^{14,15} and the disparities were also shown in migrant populations in the United Kingdom.¹⁶

The picture of depression among Maori patients in general practice suggests that it is at least as high as that in non-Maori and most likely to be higher, particularly for women. The previous estimates may have overestimated the prevalence

but it may be better to research interventions acceptable to and effective for Maori rather than obtaining a more precise estimate of the problem.

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COMPETING INTERESTS

None declared.