Te Rau Hinengaro: The New Zealand Mental Health Survey

Chapter 2: Prevalence and Severity across Aggregated Disorders

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2 Prevalence and Severity across Aggregated Disorders

Key results

- The prevalence of disorder depended on the time period involved: 39.5% of the population had met criteria for a DSM-IV mental disorder at some time in their life before interview, 20.7% had experienced disorder within the past 12 months and 11.6% in the past month.

- Those with disorder in the past 12 months (20.7%) were classified by severity of disorder during that period. The prevalence of serious disorder was 4.7%, moderate disorder 9.4% and mild disorder 6.6%, with the remaining 79.3% of the population not diagnosed with a disorder.

- A mental health visit in the healthcare sector (mental health and general health) was made in the past 12 months by 58.0% of those with a serious disorder, 36.5% with a moderate disorder, 18.5% with a mild disorder and 5.7% of those not diagnosed with a disorder.

- The prevalence of disorder and serious disorder in the past 12 months was higher for younger people, people with less education, people with less income and people who lived in more deprived areas.

- In contrast, the sociodemographic correlates had little relationship to the percentage who made a mental health visit in the health sector in the past 12 months, after adjustment for severity. Differences were generally small and non-significant, with no clear gradients across age, income or deprivation.

- Māori and Pacific people had a higher prevalence of disorder and serious disorder in the past 12 months than was found for the Other composite ethnic group, but these differences were much reduced, particularly for Pacific people, after adjustment for sociodemographic correlates (the adjusted prevalence of disorder for Māori, Pacific and Others was 23.9%, 19.2% and 20.3% respectively). Both Māori and Pacific people were less likely than the Other group to access treatment when severity was taken into account (9.4%, 8.0% and 12.6% respectively).

2.1 Introduction

In 1977 the then United States (US) first lady, Rosalynn Carter, was authorised to assemble a mental health commission. She asked how many people had mental disorders, who was affected and what treatment they received (Freedman 1991). No comprehensive information was available, and to fill this gap the Epidemiologic Catchment Area Study (ECA) was set up with fieldwork conducted in the early 1980s. Chapter 1 describes how the ECA (Myers et al 1984; Robins et al 1984; Robins and Regier 1991) and subsequent community surveys in the US (Kessler et al 2004b;

Kessler et al 1994; Kessler and Merikangas 2004) and in other countries (Demyttenaere et al 2004; Weissman et al 1996; WHO International Consortium of Psychiatric Epidemiology 2000) have attempted to answer the questions asked by Rosalynn Carter. They have ascertained the prevalence of mental disorder, the correlates of disorder and the percentage of people with disorders who have received treatment.

In these surveys, as in clinical practice, a history of disorder is taken in addition to an assessment of current state. An important difference is that in clinical practice patients turn up when they are unwell. In community surveys interviewers turn up at a time dependent on the roll-out of the survey, not because of the potential participant's current state. Consequently in many interview schedules (Robins et al 1981; Robins et al 1988) more emphasis is placed on a history of disorder and less on current state than in clinical practice. For each disorder, participants are asked if they have ever experienced symptoms, and then about onset and recency, namely when they first experienced symptoms and when they last experienced symptoms. Reports of recency are used to calculate period prevalences, which are required to understand the course of disorder and the possible need for treatment within certain periods. Mental disorders appear at different times throughout the lifespan. Some disorders often persist for years, some disappear completely and others are recurrent. Disorders differ across individuals in severity, chronicity and recurrence. To capture this variable course it is necessary to report period prevalences: lifetime prevalence, 12-month prevalence and, sometimes, six-month prevalence or one-month prevalence.

As described in chapter 1, lifetime prevalence is the percentage of the population with a disorder at any time in their life until the time of interview (see 1.10.4). It is not lifetime risk, which is the risk of disorder over a lifetime up to some particular age such as 75 years. For surveys using the Diagnostic Interview Schedule (Robins et al 1981), the CIDI (Robins et al 1988) and the WMH-CIDI/CIDI 3.0 (Kessler and Ustun 2004) used in New Zealand, 12-month prevalence is the percentage who have ever met criteria for disorder and who have reported an episode or symptoms in the past 12 months. One-month prevalence is defined similarly. Full criteria for disorder may not have been met within the restricted period in these interviews. While one-month prevalence is the least subject to recall problems, it is imprecise. Even in large surveys the small numbers of participants with current disorder mean upper confidence limits for disorders may be several times greater than lower confidence limits.

The ECA found that 32% of American adults had met criteria in their lifetime before interview for one or more of the DSM-III mental disorders assessed and 20% had an active disorder (12-month prevalence) (Robins et al 1991). These high prevalences were accompanied by low rates of inpatient or outpatient treatment: only 21% of those with disorder in the last six months received treatment in that time. Results like these

have led to debates about definitions of disorder and the need for treatment. DSM-IV (APA 1994) has added a clinical significance criterion to many disorders, requiring clinically significant distress or impairment in functioning for diagnosis. Some healthcare professionals such as Mechanic (2003) have argued that meeting criteria for disorder does not itself necessitate treatment; many cases may be mild, self-limiting and non-disabling, as often occurs for instance with viral infections. Hence it is essential that severity is assessed in order to better understand the extent of unmet need. The WMH-CIDI/CIDI 3.0 (Kessler and Ustun 2004) has extended the assessment of impairment and the World Mental Health (WMH) Survey Initiative has produced a composite measure across disorders to classify the severity of a case (APA 1994; Demyttenaere et al 2004; Kessler et al 2005c).

This chapter presents results for Te Rau Hinengaro: The New Zealand Mental Health Survey for:

- period prevalences (see 2.2)

- the distribution of severity and the percentage with a mental health visit in the past 12 months (see 2.3)

- correlates of the prevalence of any disorder, serious disorder and a mental health visit in the past 12 months (see 2.4)

- ethnic comparisons (see 2.5).

It serves as a summary of much of the rest of this report. Other chapters go into much more detail. For example, in this chapter disorders are aggregated across all disorders assessed, or at least across major disorder groups such as mood disorders. In contrast, in chapters 3 and 4 results are presented for each disorder separately. Chapter 8 investigates the different sectors people visited for treatment, the numbers of visits they made and self-reported outcomes; this chapter condenses all this down to whether or not someone made a visit in the healthcare sector for a mental health problem.

2.2   Period prevalences

The period prevalences shown in Table 2.1 are based on ever meeting criteria for disorder (lifetime prevalence) and having symptoms or an episode within the relevant period. A full list of the disorders assessed in New Zealand is given in chapters 3, 4 and 12 (see 12.4.1). There were seven anxiety disorders, including phobias, panic disorder and post-traumatic stress disorder, and three mood disorders, including major depressive disorder. Substance use disorders included abuse of or dependence on alcohol or other drugs. The number of disorders is a count of individual disorders such as social phobia, not a count of disorder groups.

Table 2.1: Lifetime, 12-month and one-month prevalences of mental disorders

	Lifetime prevalence % (95% CI)	Twelve-month prevalence % (95% CI)	One-month prevalence % (95% CI)
Disorder group			
Any anxiety disorder[2]	24.9 (23.6, 26.2)	14.8 (13.9, 15.7)	9.3 (8.6, 10.1)
Any mood disorder	20.2 (19.3, 21.1)	7.9 (7.3, 8.7)	2.3 (2.1, 2.7)
Any substance use disorder	12.3 (11.6, 13.1)	3.5 (3.0, 4.0)	1.5 (1.3, 1.8)
Any eating disorder[2]	1.7 (1.5, 2.1)	0.5 (0.3, 0.6)	0.2 (0.1, 0.4)
Individual disorders[1,2,3]			
No disorder	60.5 (58.8, 62.1)	79.3 (78.1, 80.5)	88.4 (87.6, 89.3)
One disorder	20.0 (18.8, 21.3)	13.0 (12.1, 14.0)	8.5 (7.8, 9.2)
Two disorders	9.9 (9.2, 10.6)	4.4 (3.9, 4.8)	2.0 (1.7, 2.3)
Three or more disorders	9.7 (9.0, 10.4)	3.3 (2.9, 3.7)	1.1 (0.9, 1.3)
Any disorder[2]	39.5 (37.9, 41.2)	20.7 (19.5, 21.9)	11.6 (10.7, 12.4)

1   DSM-IV CIDI 3.0 disorders with hierarchy, see 12.4.1.

2   Assessed in the subsample who did the long form interview, see 12.4.2.

3   See 12.4.1 (marijuana diagnoses are subsumed under drug diagnoses).

Table 2.1 shows how common it is for New Zealanders to experience mental disorder: 39.5% reported sufficient symptoms to meet criteria for at least one disorder at some time in their lives before interview. It is likely that mild episodes, or those a long time ago, may have been completely or partially forgotten, as Andrews and colleagues (1999b) and Wells and Horwood (2004) have shown for depression. Therefore, the lifetime prevalences in Table 2.1 will, to some extent, be underestimated. This may also have affected other prevalences; participants who had previously met criteria but who were not diagnosed because they had failed to recall enough symptoms, would not have been counted for other period prevalences even though they reported some symptoms.

The 12-month prevalence of any disorder was 20.7%, which implies that about half of those who have ever experienced disorder no longer had disorder in the past 12 months. Sometimes the ratio of 12-month to lifetime prevalence is called the non-recovery rate (Oakley Browne et al 1989). By this measure anxiety disorders, with a non-recovery rate of 59.4%, are seen to be more persistent than mood or substance use disorders (39.1% and 28.5%).

Overall the one-month prevalence of any disorder was 11.6%. Comparison of one-month and 12-month prevalences shows the highest ratio for anxiety disorders, which again implies greater chronicity for these disorders than for mood disorders, which are mostly episodic, or for substance use disorders. The one-month prevalence is the closest estimate of point prevalence. In interpreting this, though, it must be remembered that participants can delay interviews and may do so until they are feeling better. In addition, refusal rates may be higher in those with current disorder.

Comorbidity is also common. Of those who had ever experienced disorder 49.4% (almost half) had met criteria for more than one disorder at some time before interview. Even in the last year 37.1% of those with disorder had more than one disorder. Chapter 5 provides a more extensive report on comorbidity between mental disorders.

2.3 Severity, days out of role and mental health visits in the past 12 months

Participants who experienced any disorder in the last 12 months were classified into three levels of severity for that period: serious, moderate or mild. This composite measure of severity was based on all disorders experienced by an individual in that period and took account of the impairment associated with those disorders, and the presence of bipolar I disorder or substance dependence or a suicide attempt in conjunction with any disorder. An extended description of the classification is given in 12.12.3. The classification used in New Zealand was that derived for the WMH Survey Initiative (Demyttenaere et al 2004). The only change made was that in New Zealand the definition of serious disorder for substance dependence was that developed for the US WMH survey, the National Comorbidity Survey Replication (NCS-R) (Kessler et al 2005c). Not all WMH countries had collected the impairment data needed for the NCS-R definition, which required substantial impairment in the past 12 months, not just physiological symptoms ever. In New Zealand this modification reduced the proportion whose substance dependence was classified as serious from 90.4% to 25.7%, leaving the remainder with dependence classified as moderate. Any composite measure of severity is slightly arbitrary, even when based on extensive analyses, but without such a measure it is not possible to relate treatment access to severity. As noted in chapter 1 (see 1.10.7) this classification of 12-month severity is somewhat different from that sometimes used in policy and for resource allocation, which has been based on international estimates of the one-month prevalences of certain disorders.

For each disorder, other than alcohol and drug disorders, individuals with disorder were asked how many days out of 365 in the past 12 months they were totally unable to carry out their normal daily activities because of that disorder. A conservative overall

estimate for individuals with more than one disorder was obtained by using the highest number of days out of role reported for any single disorder.

A mental health visit is defined as a visit to a professional for help with problems about emotions, nerves, mental health or use of alcohol or drugs. It is a visit for a mental health problem, not just a visit to a mental health professional. Mental health visits within the past 12 months were asked about within each disorder section and in the services section of the interview. The list of professionals provided to participants included mental health professionals (eg, psychiatrist, psychologist, other mental health worker), general medical professionals (eg, general practitioner, other doctor, general nurse, physiotherapist), religious counsellors (eg, minister, tohunga) and traditional and alternative healers (eg, herbalist, homeopath). In this chapter mental health visits are reported only for the healthcare sector, including both the mental health sector and the general healthcare sector. A full breakdown of professionals contacted is given in chapter 8.

Table 2.2 shows the prevalence of the levels of severity in the past 12 months aggregated across all disorders, the mean days out of role for serious, moderate and mild cases, and the percentage with a mental health visit in the healthcare sector.
Of those with disorder in the past 12 months, 22.7% were classified as serious, 45.6% as moderate and 31.7% as mild. Therefore, the prevalences of serious, moderate and mild disorder were 4.7%, 9.4% and 6.6%. As expected, severity was strongly related to days out of role. For example, those with serious disorder had on average nearly two months completely out of role in the past 12 months (60.1 days), whereas those with mild disorder were seldom totally unable to carry out their normal activities (1.4 days).

The percentage who made a mental health visit to the healthcare sector varied appropriately with severity from 58.0% for those classified as serious, to 36.5% for those classified as moderate, 18.5% for those classified as mild, and 5.7% for those without disorder in the last 12 months. Nonetheless, 42.0% of those with serious disorder did not make any mental health visits to the health sector.

Table 2.2: Severity, days out of role and percentage with a mental health visit in the past 12 months[1]

	Twelve-month disorder[2] (95% CI)			
	Serious	**Moderate**	**Mild**	**None**
Prevalence (%)	4.7 (4.2, 5.2)	9.4 (8.7, 10.2)	6.6 (6.0, 7.2)	79.3 (78.1, 80.5)
Mean days out of role due to disorder	60.1 (50.9, 69.3)	10.3 (8.2, 12.4)	1.4 (0.5, 2.4)	NA
Percentage with at least one mental health visit in the healthcare sector (%)	58.0 (53.3, 62.6)	36.5 (32.9, 40.4)	18.5 (15.3, 22.3)	5.7 (5.0, 6.6)

1   Assessed in the subsample who did the long form interview, see 12.4.2.

2   DSM-IV CIDI 3.0 disorder with hierarchy, see 12.4.1. For severity, see 2.3 and 12.12.3.

While only a small proportion of those without disorder made mental health visits to the health sector (5.7%), because they are 79.3% of the population they constituted 38.2% of those reaching this sector for help with mental health problems. Part of this may be explained by other disorders not included in our version of the interview such as impulse control disorders other than bulimia or adult separation disorder. In addition, it is likely that many of those apparently without disorder who made mental health visits were subthreshold, had residual symptoms or were symptom free while on prophylactic treatment such as a mood stabiliser for bipolar disorder or antidepressants prescribed following recurrent depression.

It is possible some of those apparently without disorder who made mental health visits had schizophrenia or other non-affective psychoses. These disorders are extremely important but are not diagnosed in the WMH core assessment because previous validation studies have shown that they are markedly overestimated in lay-administered interviews like the CIDI (Demyttenaere et al 2004). However, these studies have also shown that nearly all participants with clinician-diagnosed non-affective psychoses meet criteria for CIDI mood, anxiety or substance use disorders, so they are still diagnosed as cases even though non-affective psychoses have not been assessed sufficiently to produce a diagnosis.

Both the probability of receiving treatment for any level of severity and the proportion of treatment users who are at each level of severity provide information on how treatment resources are utilised. When many people apparently without disorder are treated whereas 42.0% of those with serious disorder are not, this suggests a misallocation of resources or barriers to care. These are investigated briefly in the next section on correlates of disorder, severity and mental health visits, with further results in chapter 8.

2.4 Correlates of disorder, severity and treatment visits in the past 12 months

To allocate resources in relation to need it is necessary to know what groups within New Zealand experience higher or lower rates of disorder. It is also important to consider the distribution of severity and to discover which groups are reaching treatment, taking account of severity. Table 2.3 describes 12-month prevalence, the prevalence of serious disorder and the percentage with a mental health visit in the healthcare sector, adjusted for severity. It shows associations, not causes.

Many surveys have shown that the prevalence of disorder is higher, the lower the income, or education, or any other measure of social advantage. Psychiatric epidemiology has a long history of attempts to distinguish between social causation and social selection explanations of these socioeconomic gradients (Kohn et al 1998). To summarise, there is evidence for both processes. More difficult environments produce higher rates of disorder, but disorder, particularly severe disorder, interferes with usual life course and opportunities and can result in low levels of education, employment and income. As a cross-sectional study this survey adds little to this debate. There are limited data on family background and reports of onset of disorder are retrospective. Publications from the two internationally well-known longitudinal birth cohort studies in New Zealand, the Dunedin Multidisciplinary Health and Development Study (Silva 1990) (http://dunedinstudy.otago.ac.nz/) and the Christchurch Health and Development Study (Fergusson and Horwood 2001) (http://www.chmeds.ac.nz/research/chds/), provide much more information on causal pathways (see 1.8.1 and 1.8.2).

All four individual-level correlates in Table 2.3 were significantly associated with 12-month disorder (p ≤ .002) and the same pattern was seen for serious 12-month disorder (p < .001). Females were more likely than males to experience any 12-month disorder (24.0% compared with 17.1%), and had a higher prevalence of serious disorder (5.4% compared with 3.9%). However, this finding is not consistent across disorder groups. As shown in chapter 3 (see Table 3.1) females had higher prevalences of anxiety and mood disorders but a lower prevalence of substance use disorders. There was a clear gradient for age from the group aged 16–24, who had the highest prevalence of any disorder and serious disorder, down to the oldest age group (aged 65 years and over), who had the lowest prevalences. People with the highest level of educational qualification had lower prevalences of disorder. Twelve-month disorder and serious disorder were more common in lower income groups. Of the area-level characteristics, deprivation showed the clearest association with prevalence: those living in more deprived areas had higher prevalences (p < .0001). People living in secondary centres and rural areas (the Other region) had a lower prevalence of any disorder than those in main or minor centres (p = .008 overall) and a similar non-significant pattern for serious

disorder (p = .3 overall). The Central region had lower prevalences of disorder than the other regions (p = .02 for any disorder, p = .05 for serious disorder over all regions).

Table 2.3: Sociodemographic correlates and 12-month prevalence of any disorder, severity and mental health visits

Correlate	Twelve-month prevalence of any disorder[1,2] % (95% CI)	Prevalence of serious disorder[1,2] % (95% CI)	Percentage with a mental health visit to the healthcare sector, adjusted for severity[2,3] % (95% CI)
Individual characteristics			
Sex			
Male	17.1 (15.5, 18.8)	3.9 (3.3, 4.6)	10.1 (8.9, 11.3)
Female	24.0 (22.4, 25.6)	5.4 (4.7, 6.1)	13.4 (12.2, 14.6)
Age group (years)			
16–24	28.6 (25.1, 32.3)	7.2 (5.7, 9.0)	9.9 (7.9, 11.8)
25–44	25.1 (23.2, 27.1)	5.8 (5.0, 6.6)	12.1 (10.8, 13.4)
45–64	17.4 (15.7, 19.2)	3.8 (3.1, 4.5)	13.8 (12.3, 15.3)
65 and over	7.1 (5.7, 8.8)	1.1 (0.5, 2.0)	9.9 (7.8, 12.1)
Educational qualifications[4]			
None	21.9 (19.7, 24.3)	6.1 (5.1, 7.2)	11.2 (9.6, 12.8)
School or post-school only	22.7 (20.8, 24.8)	5.5 (4.7, 6.4)	11.2 (9.9, 12.4)
Both school and post-school	18.5 (16.8, 20.2)	3.4 (2.9, 4.1)	12.9 (11.6, 14.3)
Equivalised household income[4]			
Under half of median	27.6 (25.0, 30.4)	8.1 (6.9, 9.4)	11.5 (10.2, 12.8)
Half median to median	20.7 (18.8, 22.7)	5.1 (4.3, 6.1)	11.5 (10.1, 12.9)
Median to one and a half times median	19.6 (17.4, 22.0)	3.7 (2.9, 4.6)	12.4 (10.5, 14.4)
One and a half times median and over	16.6 (14.7, 18.8)	2.8 (2.1, 3.6)	12.4 (10.6, 14.2)
Area characteristics			
NZDep2001 deciles[4]			
9 and 10 most deprived	26.3 (23.7, 29.0)	6.9 (5.9, 8.1)	10.8 (9.3, 12.2)
7 and 8	21.4 (18.6, 24.5)	5.2 (4.1, 6.5)	12.0 (10.1, 13.9)
5 and 6	21.5 (19.0, 24.1)	5.1 (4.0, 6.3)	11.9 (10.1, 13.8)
3 and 4	19.4 (17.0, 22.1)	3.5 (2.6, 4.5)	14.0 (11.7, 16.3)
1 and 2 least deprived	15.7 (13.6, 18.0)	3.2 (2.4, 4.2)	11.0 (9.1, 12.9)

Correlate	Twelve-month prevalence of any disorder[1,2] % (95% CI)	Prevalence of serious disorder[1,2] % (95% CI)	Percentage with a mental health visit to the healthcare sector, adjusted for severity[2,3] % (95% CI)
Urbanicity[4]			
Main	21.5 (20.1, 23.0)	4.9 (4.3, 5.5)	11.9 (10.9, 13.0)
Secondary	15.2 (12.2, 18.8)	3.8 (2.2, 6.0)	10.8 (8.3, 13.3)
Minor	21.1 (17.6, 25.1)	4.9 (3.3, 7.1)	11.9 (9.5, 14.3)
Other (rural)	18.2 (15.5, 21.2)	3.8 (2.6, 5.5)	12.5 (10.1, 14.8)
Region[4]			
North	21.5 (19.5, 23.7)	4.8 (4.1, 5.7)	11.6 (10.1, 13.1)
Midland	21.8 (19.5, 24.4)	5.3 (4.3, 6.5)	11.2 (9.6, 12.9)
Central	17.2 (15.2, 19.5)	3.5 (2.7, 4.5)	11.5 (9.7, 13.2)
South	21.5 (19.1, 24.1)	5.0 (4.0, 6.2)	13.3 (11.4, 15.3)

1 DSM-IV CIDI 3.0 disorders with hierarchy, see 12.4.1.

2 Assessed in the subsample who did the long form interview, see 12.4.2.

3 Standardised to the distribution of severity across the population, see 12.10.2.

4 Sociodemographic correlates are defined in 12.12.1.

The percentage with a mental health visit in the healthcare sector in the past 12 months is reported for the whole population (Table 2.3), adjusted for severity across the full range of serious, moderate, mild and no disorder (see 12.10.2). Adjustment is used to ensure comparisons are made across comparable levels of need. The advantage of including the whole population is that it includes those apparently without disorder who reported a mental health visit (Table 2.2). However, because 79.3% did not have disorder, and just 5.7% of these contacted treatment, only small differences in the percentage making a mental health visit can be seen for sociodemographic correlates across the whole population.

Nonetheless, the pattern seen after adjustment for severity is often different from that for prevalence. Females were more likely than males to make a mental health visit (p < .0001), even taking account of their higher prevalence of disorder. However, after adjustment for severity the youngest and oldest age groups were equally likely to make a mental health visit, in contrast to the large differences in prevalences for these two age groups, whereas the group aged 45–64 had the highest percentage making a mental health visit (p = .002 overall). Those with the highest level of educational qualifications were only slightly and non-significantly more likely to make a mental health visit (p = .07 overall). Similarly, there was only a small non-significant trend for those with

more income to be more likely to make a mental health visit (p = .7). The pattern for the small area descriptor of socioeconomic deprivation (NZDep2001) was not significant (p = .1) and without the gradient seen for prevalences; instead the most deprived and the least deprived quintiles had almost the same percentage making a mental health visit, which was slightly lower than for other quintiles. There were no significant differences for urbanicity or region (p = .8 and p = .3).

In summary, with the exception of the results for males and females, the patterns seen across sociodemographic correlates for prevalence differed from those seen for mental health visits.

2.5 Ethnic comparisons of disorder, severity and mental health visits in the past 12 months

To compare ethnic groups a sequence of comparisons is presented. This sequence is used throughout the report. It is described below for comparisons of prevalence but also applies to comparisons of the percentage making a mental health visit. A more technical explanation is given in chapter 12 (see 12.10.2).

The first comparison considers the prevalence of disorder, without any form of adjustment. This shows the burden for each ethnic group. The subsequent comparisons take account of various sociodemographic correlates of disorder.

The second set of comparisons takes account of age and sex. This is important for comparisons of prevalence. As shown in Table 2.3, the prevalence of mental disorder was higher in younger age groups. Prevalence also varied with sex, with females being more likely to experience disorder than males. The three main ethnic groups differ little in terms of sex ratio (see Table 12.2), but both the Māori and Pacific populations are considerably younger than the Other population. By adjustment for different age and sex distributions it is possible to see if any ethnic differences in prevalence still remain, unaccounted for by these correlates.

There are also socioeconomic correlates of prevalence: disorder was more common in people with less education and less income and who lived in more deprived areas (Table 2.3). Māori and Pacific people are worse off on all of these correlates (Table 12.2). Therefore, it is informative to see if differences in prevalence remain after taking account of socioeconomic correlates. In other words, are some ethnic groups experiencing more mental health problems even allowing for age, sex and socioeconomic correlates? Is a Māori or Pacific person more or less likely to experience disorder than a person from the Other group, even if they are of the same age and sex and have the same level of education and income? Socioeconomic correlates

are defined in chapter 12 (see 12.12.1). Note that the socioeconomic correlates used are current; histories of advantage or disadvantage are not known and are not taken into account.

Each type of comparison can be thought of as answering a different question.

- Unadjusted comparisons answer the question, 'Do the ethnic groups differ in prevalence?'.

- Age- and sex-adjusted comparisons answer the question, 'Would the prevalence differ across the ethnic groups if age and sex distributions were the same for all three groups?'.

- Fully adjusted comparisons answer the question, 'Would prevalences differ if all three groups had the same distributions of age, sex, education and household income?'.

In Table 2.4, as in Table 2.3, the prevalence of any disorder is reported, then the prevalence of serious disorder, then the percentage with a mental health visit in the healthcare sector, adjusted for severity.

Māori are more likely than Pacific people to experience any disorder ($p = .02$) and serious disorder ($p = .004$), and both ethnic groups have higher prevalences than the remainder of the population, the Other group ($p < .0001$ for Māori, $p \leq .03$ for Pacific). Some of these differences arise because of the youthfulness of the Māori and Pacific populations. When educational qualifications and equivalised household income are also taken into account Māori still have the highest prevalences, but these have been reduced by adjustment: 29.5% reduced to 23.9% for the prevalence of any disorder and 8.7% reduced to 6.1% for the prevalence of serious disorder, although these are still significantly above the prevalences for the Other group ($p = .01$ and $p = .003$) and for Pacific people ($p = .01$ and $p = .002$). Pacific people have similar prevalences to those for the Other group once sociodemographic levels are taken into account ($p = .5$ and $p = .5$).

Māori and Pacific people are both significantly less likely than the Other population to make a mental health visit to the health sector, after adjustment for severity ($p < .0004$). This finding holds whether or not there is adjustment for sociodemographic correlates. These ethnicity differences are in contrast to the small or non-existent differences found with the sociodemographic correlates.

Simply comparing the percentage making a mental health visit without considering severity ignores the need for help. Overall Māori and the Other population are equally likely to make a mental health visit (12.2% compared with 12.1%) but Māori have a higher prevalence of disorder so have more need for treatment. Pacific people are the least likely to make a mental health visit (8.8%) and have higher prevalence than the Other population. Only analysis of those with disorder, as in chapter 8, or with adjustment for severity, as in Table 2.4, relates the percentage with mental health visits to the prevalence of disorder.

Table 2.4: Ethnicity and 12-month prevalence of any disorder, severity and mental health visits

Prioritised ethnicity[1]	Unadjusted % (95% CI)	Adjusted for age and sex % (95% CI)	Adjusted for age, sex, educational qualifications[1] and equivalised household income[1] % (95% CI)
Twelve-month prevalence of any disorder[2,3]			
Māori	29.5 (26.6, 32.4)	26.4 (23.7, 29.0)	23.9 (21.3, 26.4)
Pacific	24.4 (21.2, 27.6)	21.8 (18.8, 24.7)	19.2 (16.4, 22.1)
Other	19.3 (18.0, 20.6)	19.8 (18.4, 21.1)	20.3 (18.9, 21.6)
Prevalence of serious disorder			
Māori	8.7 (7.4, 10.0)	7.6 (6.4, 8.8)	6.1 (5.2, 7.1)
Pacific	6.0 (4.7, 7.4)	5.3 (4.1, 6.5)	4.1 (3.1, 5.0)
Other	4.1 (3.6, 4.6)	4.2 (3.7, 4.7)	4.5 (3.9, 5.0)
Percentage with a mental health visit to the healthcare sector, adjusted for severity[4]			
Māori	9.3 (7.9, 10.7)	9.3 (7.9, 10.7)	9.4 (7.9, 10.8)
Pacific	7.8 (6.1, 9.5)	7.9 (6.3, 9.6)	8.0 (6.3, 9.8)
Other	12.6 (11.5, 13.7)	12.6 (11.5, 13.7)	12.6 (11.5, 13.6)

1 Sociodemographic correlates are defined in 12.12.1.
2 DSM-IV CIDI 3.0 disorders with hierarchy, see 12.4.1.
3 Assessed in the subsample who did the long form interview, see 12.4.2.
4 Standardised to the distribution of severity across the population, see 12.10.2.

2.6   Conclusions

A 2004 paper on the prevalence and severity of mental disorders in the first 15 surveys in the WMH Survey Initiative project (Demyttenaere et al 2004) showed very marked differences in prevalence across countries, differences in the distribution of severity and very marked differences in the percentage treated. Nonetheless, in all countries more severe disorder was more likely to be treated. In comparison with these developed and underdeveloped countries New Zealand has high prevalences for anxiety, mood and substance use disorders, which are exceeded only by the US for anxiety and mood, and the Ukraine and the US for substance use disorders.

It is difficult to compare the distribution of severity across countries because not all disorders were used in every country. In addition, the surveys in Europe, which were the first to be carried out, were not able to produce diagnoses of bipolar disorder or drug dependence, which may partially account for the high proportion of cases reported to be mild in those countries.

The New Zealand results are broadly similar to those for other developed countries for the percentage of those with serious disorder making a mental health visit and for the percentage of those with no disorder making a mental health visit. People with serious disorder often do not make treatment contact, whereas many without disorder do so.

The correlates of disorder in New Zealand are those commonly reported in the literature (Kohn et al 1998). Younger people and those with more disadvantage are more likely to experience disorder. However, the pattern of service use is quite different from that for prevalence, in as much as this can be measured by the percentage making at least one mental health visit. Differences in the percentage making a mental health visit are small after severity is accounted for. This suggests fairly equitable access across different socioeconomic groups, although women and the middle aged are more likely to seek help.

Māori and Pacific people had higher prevalences of disorder and serious disorder in the past 12 months than the Other group, but much of this was accounted for by sociodemographic differences, particularly for Pacific people. Considering their need for treatment, Māori and Pacific people were less likely to seek help for their mental health problems. Ethnicity is related to access to treatment, whereas socioeconomic correlates are not.