Te Rau Hinengaro: The New Zealand Mental Health Survey

Chapter 9: Māori

Joanne Baxter, Te Kani Kingi, Rees Tapsell, Mason Durie

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9 Māori

Key results

- Te Rau Hinengaro surveyed 2,595 Māori individuals, and captured the diversity of Māori across a range of demographic, social, economic and cultural indices.
- The prevalence of mental disorders in Māori was 50.7% over their lifetime (before interview), 29.5% in the past 12 months and 18.3% in the previous month.
- The most common 12-month disorders among Māori were anxiety disorders (19.4%), mood disorders (11.4%) and substance use disorders (8.6%). The most common lifetime disorders among Māori were anxiety disorders (31.3%), substance use disorders (26.5%), mood disorders (24.3%) and eating disorders (3.1%).
- Lifetime prevalence of any disorder was highest in Māori aged 25–44 (58.1%) and lowest in those aged 65 and over (22.7%). The lifetime prevalence of disorder among Māori females was 52.7% and among Māori males was 48.4%.
- In Māori with any 12-month disorder, 55.5% had only one disorder, 25.7% had two disorders and 18.8% had three or more disorders.
- Among Māori with any 12-month disorder, 32.5% had some contact with a provider of services. This was divided among mental health specialist services (14.6%), general medical services (20.4%) and non-healthcare providers (9.1%).
- Of Māori with any mental disorder, 29.6% had serious disorders, 42.6% moderate disorders and 27.8% mild disorders. Health care contact increased with severity. Of Māori with serious disorder 47.9% had some contact with health services compared with 25.4% of those with moderate disorder and 15.7% of those with mild disorder.
- Lifetime suicidal ideation was reported by 22.5% of Māori, with 8.5% making suicidal plans and 8.3% making suicide attempts. Māori females reported higher rates of suicidal ideation, suicide plans and suicide attempts compared with Māori males across lifetime and 12-month periods.
- Compared with Pacific people and the Other composite ethnic group (ie, non-Māori non-Pacific), a higher proportion of Māori had 12-month anxiety, mood, substance use and eating disorders. After adjusting for age, sex and socioeconomic correlates, differences remain between Māori and Pacific people for mood disorders and substance use disorders and between Māori and Others for substance use disorders.

9.1 Introduction

9.1.1 Purpose of this chapter

This chapter provides a summarised picture of the extent, patterns and characteristics of mental disorders among Māori, according to Te Rau Hinengaro: The New Zealand Mental Health Survey.

9.1.2 Content of this chapter

A total of 2,595 Māori participated in interviews as part of the study, and this chapter brings together the key findings of particular importance for Māori.

This chapter provides information for Māori on:

- participation in the study (see 9.2)
- the epidemiology of mental disorders (see 9.3)
- the profiles of participants (see 9.5)
- the prevalence of mental disorders (see 9.6)
- comorbidity (see 9.7)
- the severity and impact of aggregated disorders (see 9.8)
- health service use (see 9.9)
- severity, days out of role and treatment in the past 12 months (see 9.10)
- suicidal behaviour (see 9.11)
- key findings compared with Pacific people and the Other composite ethnic group (see 9.12).

Section 9.4 defines mental disorders and Māori.

Additional findings will be available as further analyses are undertaken.

9.2 Māori participation in the study

Māori participation in the study occurred at three levels:

- as researchers
- in the Kaitiaki Group
- as survey participants.

9.2.1 Māori participation as researchers

A team of Māori researchers from Auckland, Massey and Otago universities with experience in mental health research and kaupapa Māori research provided input into all phases of the research, including design, survey, analysis and report writing.

In addition, the Māori research team oversaw those sections of the questionnaire that focused on Māori identity and Māori use of health services. An important methodological task was to ensure the research was consistent with both tikanga Māori and scientific paradigms.

9.2.3 Kaitiaki Group

A kaitiaki group was established to provide cultural guardianship over the research, especially relating to Māori values and to make sure participants were afforded respect and privacy. The Kaitiaki Group included experts in Māori custom who had some experience in health services and Māori population surveys. They developed processes to safeguard the information collected and minimise any risks to participants.

To assist the researchers, the Kaitiaki Group recommended the research team adopt 11 principles to guide the study and to ensure an appropriate framework for the research was established (see Appendix C).

9.2.4 Māori survey participants

Ensuring a high level of participation by Māori as survey participants was a crucial component of this survey. In the 2001 New Zealand Census of Population and Dwellings (the Census), Māori made up about 15% of the total population and 11% of the population aged 16 and over (see 12.11). To obtain sufficient numbers of Māori for estimating the prevalence of mental disorders a higher proportion of Māori were required within this survey. This was achieved by making it more likely that Māori (and Pacific people) would be sampled. This survey technique (called 'oversampling') is described in chapter 12 (see 12.5). The use of weights (see 12.9) takes into account this method of sampling when estimating the total population prevalence.

By the end of the study period 2,595 Māori aged 16 and over had been surveyed. This constitutes about 20% of the total survey sample. The Māori survey participants represent the diversity of Māori, and their characteristics are described in 9.5.

9.3 Epidemiology of mental disorders in Māori

9.3.1 Mental disorders and Māori: current knowledge

Knowledge about mental health in Māori has considerable gaps. Before this survey no other mental health prevalence surveys had used standardised mental health diagnostic measures in a community sample of Māori spanning all adult ages. Information on mental disorders and Māori had been gathered from routine data analyses, surveys and research. This section briefly overviews the findings.

9.3.2 Hospital and health setting data and research

The New Zealand Health Information Service routinely collects and reports on hospital admission data (New Zealand Health Information Service 2005) (see 1.8.6). Until recently, much of what was recorded about mental disorders in Māori stemmed from analyses of hospitalisation data. Several published reports have described mental disorder hospitalisation rates and patterns in Māori.

Differing analyses of this data show that before 1970 Māori admissions to psychiatric hospitals were significantly less than those for non-Māori (Pomare and de Boer 1988). However, patterns of admissions during the 1980s and 1990s show increased rates of psychiatric hospitalisation for Māori. Two reports by Te Puni Kōkiri (the Ministry of Māori Development) indicate increasing Māori psychiatric admission rates, especially for young men and women, and particularly for those with substance use disorders, schizophrenia and bipolar disorder (Te Puni Kōkiri 1993, 1996). The reports note differing patterns of sources of referral for admission, with Māori being more likely to be hospitalised through a 'justice' doorway than a primary care entry point.

More recently, the data routinely made available as part of the Mental Health Information National Collection (MHINC) have been expanded to include outpatient and community mental health services. Published analyses of MHINC data from 2002 show that Māori rates of hospitalisation were higher than those for non-Māori. However, the data also suggest comparatively less access by Māori to child and youth mental health services (New Zealand Health Information Service 2004).

A more recent analysis of mental health service data, including both hospitalisation and other outpatient and community services, was undertaken as part of the Mental Health Classification and Outcomes Study (Gaines et al 2003). This was a pilot study designed to develop a first version of a national case-mix classification for specialist mental health services in New Zealand in order to better understand the relationship between resource use (cost) and service user (or related) characteristics. This analysis found ethnic differences in scores for measures of outcome in mental health service users. Māori males had higher scores on psychotic symptoms and lower scores on depressive symptoms than non-Māori male service users. Analysis of these data showed that among those living in areas of a similar level of deprivation, Māori consumers of mental health services had, on average, higher levels of severity and lower levels of functioning than non-Māori service users.

The Mental Health and General Practice Investigation (the MaGPIe study) (see 1.8.3) measured mental disorders in people attending primary healthcare and found that rates of attendance at general practices did not differ between Māori and non-Māori. However, Māori general practice attendees had higher rates of mental disorder than non-Māori. This was particularly so for Māori women. Māori had higher rates of all common mental disorders (anxiety, depression and substance abuse) and exhibited more severe symptoms. These findings persisted even when differences in age and socioeconomic status were taken into account (MaGPIe 2003, 2005).

9.3.3 Population, community and non-health sector settings

Hospital and health-setting data alone do not provide a comprehensive picture of mental health status. Other research offers insights into the wider dimensions of mental health. Using standard diagnostic instruments a Christchurch-based birth cohort study, the Christchurch Health and Development Study (CHDS) (see 1.8.2), found the prevalence of mental disorders among a youth cohort at age 18 years was high. Fifty-five percent of Māori included in the cohort study met criteria for at least one mental disorder within the previous three years compared with 41% of non-Māori youth in the cohort (Horwood and Ferguson 1998). Rates for substance use disorders were especially high, with over 33.9% of young Māori having a substance use disorder.

A further source of information on health and mental health is the New Zealand Health Survey 2002/03 (see 1.8.5) (Ministry of Health 2004b). This survey of 12,929 New Zealanders aged 15 and over was undertaken in 2002/03 and included a Māori sample of 4,369 participants. Survey participants were asked about known chronic diseases, including any history of known serious mental disorders. The age-standardised prevalence rate in Māori males who had a known mental disorder was 2.2%. This rate was similar to the overall male rate in the survey (2.1%). Findings for Māori females,

however, differed, with reported age-standardised rates of known mental disorder (1.8%) being lower than for the overall female sample (3.2%). This finding contrasts with measures of self-reported health status within the same New Zealand Health Survey, where the SF-36 measurement instrument was used. Māori females scored lower on many measures of self-reported health than other females including for social functioning, emotional health and mental health. These findings thus suggest that although Māori women may be experiencing more poor health (self-reported), this is not reflected in the likelihood of their having had a mental health problem recognised within a healthcare setting.

The New Zealand National Prison Study (see 1.8.4) was a study of 1,287 prisoners conducted in 1997/98. It revealed high levels of mental disorders among both Māori and non-Māori inmates (Brinded et al 2001; Simpson et al 1999). Only 10% of participants did not have a mental disorder diagnosis and 6%–8% had had a schizophrenic disorder in their lifetime before the survey. Māori are overrepresented in the prison population and comprised 48.4% of the sample in this survey. A paper reporting ethnicity comparisons from the survey found no differences in the prevalence of individual mental disorders among Māori, Pacific and European/Other ethnic groups (Simpson et al 2003). Despite a similar prevalence of mental disorders, treatment for mental disorders (past and current) was less common among Māori and Pacific inmates than among European/Other inmates.

9.3.4 Suicide and attempted suicide

Considerable concern was raised in the 1980s and 1990s about increasing rates of suicide among the young and Māori. In response to this concern a youth suicide prevention strategy was developed and implemented in 1998 (Ministry of Youth Affairs et al 1998). Recently there has been a move to an all-age strategy, recognising that suicide occurs across all age groups and youth suicide among the total population has reduced. The picture of high relative suicide rates remains for Māori youth.

Before the 1980s, Māori suicide rates were lower than those for non-Māori. However, Māori suicide rates increased markedly over the 1980s and 1990s, and disparities between Māori and non-Māori have emerged, particularly among the young. Suicide mortality data for 2002 show that the Māori male age-standardised rate of suicide was 19.7 deaths per 100,000 population compared with a non-Māori male rate of 15.6 per 100,000. The Māori female age-standardised suicide rate was also higher, with 5.9 deaths per 100,000 population compared with a non-Māori female rate of 4.8 per 100,000 (Ministry of Health 2005a). Youth suicide rates remain high for Māori, with analysis of the 2002/03 New Zealand Child and Youth Mortality Database showing Māori mortality for suicide in those aged 15–24 as twice the rate for non-Māori in this

age group (31.8 per 100,000 population compared with 14.4 per 100,000) (Sargent and Baxter 2005).

9.3.5 Summary

Although existing data provide some indication of the prevalence and patterns of mental disorders in Māori, there have been insufficient community prevalence studies to provide a comprehensive picture of prevalence within the community. Nonetheless, existing data suggest overall increased rates of disorders for Māori, both compared with non-Māori and compared with earlier generations of Māori. Some groups appear to be especially vulnerable, including youth and prisoners, and some disorders such as alcohol and other substance use disorders have contributed to this increase.

An increase in suicide rates over recent decades further reinforces concerns about Māori mental health.

Te Rau Hinengaro complements existing information. Because the survey included sufficient numbers of Māori adults sampled from across a range of communities, prevalence data are now more comprehensive than previously available and provide a wider context for understanding health service use by Māori.

Te Rau Hinengaro is not able to report on the prevalence of psychotic disorders such as schizophrenia. The reasons for this are described in 11.3 and 12.4.1. In summary, there are limitations in both the sampling frame (the frame involves households and does not include institutions) and the diagnostic instruments (other survey instruments are better suited to detecting conditions such as schizophrenia). Although hospitalisation rates are not an accurate proxy for the prevalence of these disorders, health sector utilisation data remain the best source of information about the prevalence of schizophrenia and other psychotic disorders.

9.4 Defining terms

9.4.1 Defining mental disorders

From consultation with Māori communities during the pilot project for this study it was clear Māori were keen for comprehensive information about mental health and especially for data that could assist with planning. During the pilot, many Māori focus group members questioned the use of the DSM-IV as the most relevant classification of mental health problems and voiced a concern that the associated research instrument (CIDI 3.0) was too blunt to allow any meaningful interpretation of cultural norms or to accommodate Māori understandings of mental incapacity. (For information about the DSM and CIDI, see 1.10.1 and 1.10.2.)

The criticisms are important to consider and Te Rau Hinengaro is essentially a survey of mental health disorders as defined by DSM-IV criteria that is designed to make national and international comparisons possible. This study has not specifically addressed the alternative ways of conceptualising and measuring mental ill health; that would constitute another study with quite different goals and methods.

9.4.2 Defining Māori

Over recent decades several methods for defining Māori within official statistics have been used. Until the 1980s the five-yearly Census used a 'biological' approach to define Māori, so a Māori person was defined as someone who had 50% or more Māori blood. From 1991 the Census has allowed for ethnic self-identification as well as Māori descent to be recorded and participants may identify multiple ethnicities. As a result the mixed ethnic backgrounds of many Māori have become apparent as well as the sole Māori ethnic identity of others.

In Te Rau Hinengaro it was important to use a definition of Māori that was consistent with the Census (ie, ethnicity self-identification). Therefore, data on both Māori descent and ethnic self-identification have been collected using the 2001 Census ethnicity self-identification and Māori descent questions. Those people who self-identified as Māori (either solely or with another ethnic group) comprise the Māori sample referred to in this chapter and throughout the wider report (see Appendix B).

While this survey has adopted the same ethnicity question as the Census, it has also included additional questions for those of Māori descent, so cultural identity can be investigated with greater levels of meaning. The key items in this Māori section of the survey included self-identification, ancestry, tribal knowledge, marae participation, whānau involvement and te reo Māori (Māori language) proficiency. These questions were derived from three main sources: Te Hoe Nuku Roa (a longitudinal study of Māori households) (Te Hoe Nuku Roa 1999); the 2001 Health of the Māori Language Survey (Statistics New Zealand 2002); and the consultations with various interest groups (eg, representatives from the Ministry of Health, the Kaitiaki Group, Māori researchers and academics, and Māori language experts).

9.5 Profiles of participants

This section describes the characteristics of the 2,595 Māori who participated in the survey. The data have been weighted to ensure they reflect the appropriate age and sex representation in the population and to take into account aspects of the study design and methods (eg, sampling methods). This weighting process is discussed in more detail in chapter 12 (see 12.9).

9.5.1 Characteristics of Māori participants, by sociodemographic correlates

Table 9.1 shows the characteristics of Māori participants, weighted and unweighted, across sociodemographic correlates including sex, age, social and economic measures, and locality variables. The unweighted numbers and percentages are the findings for the Māori survey participants, while the weighted percentages are those found after the Māori survey sample has been weighted so it is configured in a similar way to the total New Zealand Māori population in terms of age and sex.

The table shows how the weighting of the sample has led to a higher proportion of Māori males and young people than in the unweighted Māori sample. Within the Māori sample, a higher proportion of participants were female. This is consistent with the overall survey profile, where more females participated. A higher proportion of Māori participants were in the younger age groups. This is also consistent with the Māori population age structure. Māori participants spanned the full range of socioeconomic and education levels. However, Māori were proportionately more likely to be in groups with low levels of education and low equivalised household income and living in areas of high relative deprivation. Māori participants were also drawn from all regions, but proportionately more were likely to be urban and living in the North and Midland regions. These are both consistent with Māori population demographics.

Table 9.1: Profile of Māori participants, by sociodemographic correlates

Correlate[1]	Unweighted number	Unweighted %	Weighted %
Individual characteristics			
Sex			
Male	1,048	40.4	46.6
Female	1,547	59.6	53.4
Age group (years)			
16–24	414	16.0	24.5
25–44	1,290	49.7	47.6
45–64	703	27.1	22.4
65 and over	188	7.2	5.6
Educational qualifications			
None	876	33.7	31.8
School or post-school only	1,011	39.0	41.5
Both school and post-school	708	27.3	26.7
Equivalised household income			
Under half of median	892	34.4	31.8
Half median to median	791	30.5	32.2
Median to one and a half times median	502	19.3	19.9
One and a half times median and over	410	15.8	16.1

Correlate[1]	Unweighted number	Unweighted %	Weighted %
Area characteristics			
NZDep2001 deciles			
9 and 10 most deprived	1,190	45.9	43.7
7 and 8	527	20.3	21.3
5 and 6	413	15.9	15.7
3 and 4	265	10.2	11.3
1 and 2 least deprived	200	7.7	8.0
Urbanicity			
Main	1,753	67.6	66.8
Secondary	196	7.6	7.6
Minor	361	13.9	14.0
Other (rural)	285	11.0	11.6
Region			
North	930	35.8	34.0
Midland	838	32.3	34.4
Central	507	19.5	18.5
South	320	12.3	13.1

1 Sociodemographic correlates are defined in 12.12.1.

9.5.2 Characteristics of Māori participants by Māori cultural and participation variables

Table 9.2 shows the profile of Māori based on selected Māori cultural and participation variables showing the unweighted numbers and percentages and weighted percentages. The weighting process made very little difference to the proportions found for each variable. Findings are described for the weighted sample.

The table shows that 62.9% of Māori identified their ethnicity solely as Māori and 37.1% identified as Māori in addition to another ethnic group or groups.

The iwi (tribe) was known by 89.7% of Māori, 64.3% knew their waka (the canoe in which tribal ancestors arrived in New Zealand) and 50.9% could name three generations of whakapapa (genealogy).

The degree of contact with marae (an iwi's traditional meeting place) varied, with 32.6% of Māori participants having no visits to a marae in the past year, 31.0% having one or two visits, 11.9% having three or four visits, and 24.6% having five or more visits.

Te reo Māori was spoken very well by 7.6%, well by 7.6%, fairly well by 17.5%, and not very well by 30.4%, with no more than a few words spoken by 37.0%. A greater proportion of Māori could understand te reo Māori.

Table 9.2: Profile of Māori participants, by selected cultural variables

Variable	Unweighted number	Unweighted %	Weighted %
Total	2,595	100.0	100.0
Māori self-identity (from Census question)			
Sole Māori identification	1,605	61.8	62.9
Māori and other ethnic group(s)	990	38.2	37.1
Knowledge			
Of iwi	2,341	90.2	89.7
Of waka	1,658	63.9	64.3
Of three generations of whakapapa	1,331	51.3	50.9
Marae (number of visits in past year)			
No visits	871	33.6	32.6
One or two visits	797	30.7	31.0
Three or four visits	299	11.5	11.9
Five or more visits	627	24.2	24.6
Te reo Māori proficiency			
Ability to speak Māori day to day			
Very well	202	7.8	7.6
Well	173	6.9	7.6
Fairly well	435	16.8	17.5
Not very well	770	29.7	30.4
No more than a few words	1,008	38.9	37.0
Ability to understand spoken Māori			
Very well	314	12.1	12.0
Well	304	11.7	12.0
Fairly well	572	22.1	22.4
Not very well	694	26.8	28.0
No more than a few words	710	27.4	25.6

9.5.3 Summary of Māori participants' profile

Overall, Tables 9.1 and 9.2 show that Te Rau Hinengaro captured the diversity of Māori across demographic, social, economic and cultural indices.

9.6 Prevalence of mental disorders in Māori

9.6.1 Period prevalence and severity of mental disorders across aggregated data

Table 9.3 summarises findings for the prevalence of mental disorders in Māori, across their lifetime, within the past 12 months, and over the past month.

Table 9.3: Lifetime, 12-month and one-month prevalences of mental disorder groups for Māori

Disorder group[1]	Lifetime prevalence % (95% CI)	Twelve-month prevalence % (95% CI)	One-month prevalence % (95% CI)
Anxiety disorders[2]	31.3 (28.4, 34.3)	19.4 (17.2, 21.8)	13.4 (11.6, 15.4)
Mood disorders	24.3 (22.4, 26.3)	11.4 (10.0, 13.1)	4.1 (3.3, 5.1)
Substance use disorders	26.5 (24.3, 28.7)	8.6 (7.1, 10.4)	4.2 (3.3, 5.4)
Eating disorders[2]	3.1 (2.3, 4.1)	1.0 (0.5, 1.6)	0.5 (0.2, 1.0)
Any disorder[2]	50.7 (47.0, 54.4)	29.5 (26.7, 32.5)	18.3 (16.2, 20.6)

1 DSM-IV CIDI 3.0 disorder groups.

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

Table 9.3 shows that 1 in 2 (50.7%) Māori had experienced at least one disorder at some time in their life before the interview. At least one disorder was experienced by 29.5% (around 1 in 3) of Māori in the past 12 months and 18.3% (over 1 in 6) of Māori had experienced at least one disorder in the past month. The most commonly reported lifetime disorders were anxiety disorders (31.3%), then substance use disorders (26.5%) followed by mood disorders (24.3%). Eating disorders were less common, but were reported by 3.1% of Māori over their life before the interview.

Anxiety disorders were also the most common disorders experienced in the past 12 months (19.4%), with mood disorders (11.4%) being slightly more prevalent than substance use disorders (8.6%). Over the past month the most common disorders were anxiety disorders (13.4%), substance use disorders (4.2%) and mood disorders (4.1%).

9.6.2 Prevalence of individual disorders: lifetime and 12-month prevalences

Table 9.4 shows the prevalences of individual mental disorders in Māori over their life until the interview and in the 12-month period before the interview.

Table 9.4: Lifetime and 12-month prevalence of individual disorders for Māori

Individual disorders[1]	Lifetime prevalence % (95% CI)	Twelve-month prevalence % (95% CI)
Anxiety disorders		
Panic disorder	3.9 (3.1, 4.9)	2.6 (2.0, 3.5)
Agoraphobia without panic	1.8 (1.2, 2.7)	1.0 (0.6, 1.5)
Specific phobia	15.3 (13.7, 17.1)	11.0 (9.6, 12.6)
Social phobia	11.4 (9.9, 13.0)	6.2 (5.1, 7.4)
Generalised anxiety disorder	5.9 (4.9, 7.0)	2.2 (1.6, 2.9)
Post-traumatic stress disorder[2]	9.7 (8.2, 11.4)	4.5 (3.6, 5.7)
Obsessive–compulsive disorder[2]	2.6 (1.8, 3.7)	1.0 (0.6, 1.6)
Any anxiety disorder[2]	31.3 (28.4, 34.3)	19.4 (17.2, 21.8)
Mood disorders		
Major depressive disorder	15.7 (14.2, 17.4)	6.9 (5.8, 8.1)
Dysthymia	2.1 (1.5, 2.8)	1.2 (0.8, 1.7)
Bipolar disorder	8.3 (7.1, 9.7)	4.6 (3.7, 5.7)
Any mood disorder	24.3 (22.4, 26.3)	11.4 (10.0, 13.1)
Substance use disorders		
Alcohol abuse	24.4 (22.3, 26.7)	6.7 (5.5, 8.1)
Alcohol dependence	10.1 (8.7, 11.7)	3.9 (3.0, 5.0)
Drug abuse	14.3 (12.6, 16.1)	3.7 (2.8, 4.8)
Drug dependence	6.3 (5.2, 7.6)	1.9 (1.3, 2.8)
Marijuana abuse[3]	12.8 (11.2, 14.6)	3.0 (2.3, 4.0)
Marijuana dependence[3]	5.3 (4.3, 6.5)	1.5 (1.0, 2.3)
Any alcohol disorder	24.5 (22.3, 26.7)	7.4 (6.2, 8.9)
Any drug disorder	14.3 (12.6, 16.1)	4.0 (3.1, 5.1)
Any substance use disorder	26.5 (24.3, 28.7)	8.6 (7.1, 10.4)

Individual disorders[1]	Lifetime prevalence % (95% CI)	Twelve-month prevalence % (95% CI)
Eating disorders		
Anorexia[2]	0.7 (0.2, 1.6)	0.0 (0.0, 0.2)
Bulimia[3]	2.4 (1.8, 3.2)	1.0 (0.5, 1.6)
Any eating disorder[2]	3.1 (2.3, 4.1)	1.0 (0.5, 1.6)
Any disorder[2]	50.7 (47.0, 54.4)	29.5 (26.7, 32.5)

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

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

3 Those with marijuana disorder are a subgroup of those with drug use disorder. They may or may not have met criteria for abuse or dependence on other drugs.

Anxiety disorders

Anxiety disorders were the most prevalent disorder group among Māori: 31.3% (or one in three) had experienced an anxiety disorder in their life up to the interview and 19.4% (almost one in five) over the past 12 months. Specific phobia, social phobia and post-traumatic stress disorder were the most common anxiety disorders in Māori over both periods.

Mood disorders

Mood disorders were also common among Māori, and 24.3% (one in four) had experienced a mood disorder over their life before interview. The most common lifetime mood disorders in Māori were major depressive disorder (15.7%) followed by bipolar disorder (8.3%).

Over the 12 months before the interview, 11.4% (over one in 10) of Māori experienced a mood disorder, with major depressive disorder the most common (6.9%). Bipolar disorder was also present in 4.6% of Māori. Dysthymia was less common over the lifetime (2.1%) and in the past 12 months (1.2%).

Substance use disorders

Over one in four (26.5%) Māori experienced a substance use disorder in their life before the interview. Alcohol disorders were most prevalent (24.5%), followed by drug disorders (14.3%). Findings suggest marijuana disorders (which are a subgroup of drug disorders) contribute strongly to the overall drug disorder prevalence in Māori, with lifetime marijuana abuse in 12.8% of Māori and marijuana dependence in 5.3%.

One in 12 (8.6%) Māori experienced a substance use disorder in the past 12 months, with alcohol disorders being the most prevalent (7.4%), then drug disorders (4.0%). Marijuana abuse was prevalent in 3.0% and marijuana dependence in 1.5%.

9.6.3 Twelve-month disorders: prevalence by sociodemographic correlates

Table 9.5 describes findings for the prevalence of 12-month disorder in Māori, by demographic, social and economic variables.

The table shows 33.6% (one in three) of Māori females and 24.8% (one in four) of Māori males had a mental disorder. Mental disorders were more common in younger age groups, with 33.2% (one in three) of Māori aged 16–24 and 32.9% (one in three) aged 25–44 experiencing a 12-month disorder compared with 23.7% (under one in four) Māori aged 45–64 and 7.9% (about one in 12) aged 65 and over.

Table 9.5: Sociodemographic correlates of 12-month prevalence of mental disorders in Māori

Correlate[1]	Twelve-month prevalence of any disorder[2] % (95% CI)
Individual characteristics	
Sex	
Male	24.8 (20.9, 29.2)
Female	33.6 (30.1, 37.3)
Age group (years)	
16–24	33.2 (27.1, 40.1)
25–44	32.9 (28.9, 37.1)
45–64	23.7 (19.2, 28.8)
65 and over	7.9 (3.2, 15.6)
Educational qualifications	
None	34.2 (29.3, 39.4)
School or post-school only	28.8 (24.6, 33.4)
Both school and post-school	25.0 (20.5, 30.1)

Correlate[1]	Twelve-month prevalence of any disorder[2] % (95% CI)
Equivalised household income	
Under half of median	40.9 (35.7, 46.4)
Half median to median	26.9 (22.3, 32.0)
Median to one and a half times median	23.7 (18.5, 29.8)
One and a half times median and over	19.7 (14.9, 25.4)
Area characteristics	
NZDep2001 deciles	
9 and 10 most deprived	32.5 (27.8, 37.5)
7 and 8	28.7 (23.6, 34.3)
5 and 6	32.3 (25.6, 39.8)
3 and 4	26.3 (18.9, 35.5)
1 and 2 least deprived	14.1 (8.1, 22.4)
Urbanicity	
Main	29.8 (26.4, 33.4)
Secondary	21.9 (14.6, 30.7)
Minor	33.6 (25.3, 43.0)
Other (rural)	28.0 (20.6, 37.0)
Region	
North	31.4 (26.3, 36.8)
Midland	29.7 (25.0, 35.0)
Central	24.2 (19.4, 29.8)
South	32.2 (24.2, 41.4)

1 Sociodemographic correlates are defined in 12.12.1.

2 DSM-IV CIDI 3.0 disorders.

The table also shows a pattern associated with socioeconomic level. The prevalence of disorder is highest in those with the lowest equivalised household incomes compared with those with higher equivalised household incomes, and in those with fewer educational qualifications compared with those with more educational qualifications. Of note, with regards to deprivation, those living in the least deprived areas (deciles 1 and 2) had the lowest rates of disorder, but only a small difference existed in rates between those in deprivation deciles 3–10. Although some differences exist across urbanicity and region, the overlap of confidence intervals indicates differences are not significant statistically.

9.6.4 Lifetime disorders: prevalence by age and sex

Table 9.6 shows the lifetime prevalence of aggregated mental disorders in Māori, by sex and age group.

The lifetime prevalence of disorder differed significantly between age groups ($p < .0001$). The age group with the highest lifetime prevalence of any disorder was Māori aged 25–44 (58.1%; 52.9, 63.2). The lifetime prevalences in Māori aged 16–24 (47.7%; 40.0, 55.4) and 45–64 (45.0%; 38.2, 52.1) were similar. The lowest lifetime prevalence was in Māori aged 65 and over (22.7%; 13.9, 33.7). Māori aged 25–44 had the highest rate for anxiety disorders (37.6%; 33.2, 42.2) and mood disorders (27.5%; 25.0, 30.1). For substance use disorders the lifetime prevalence rate was greatest in those aged 16–24 (33.7%; 28.6, 39.2).

The lifetime prevalence of any mental disorder was 52.7% (48.0, 57.3) in Māori females and 48.4% (42.8, 54.0) in Māori males. However, this difference was not statistically significant ($p = .2$). The pattern between disorders varied between males and females. The Māori female rate for anxiety disorders (36.7%; 32.9, 40.7) was significantly higher than the Māori male rate (25.0%; 20.9, 29.5; $p < .0001$). Rates were also higher in Māori females for mood disorders (29.3%; 26.8, 32.0; $p < .0001$) and eating disorders (4.4%; 3.1, 6.1; $p = .003$) compared with Māori males (18.5 %; 15.3, 21.7 and 1.6%; 0.8, 3.0 respectively). Māori male rates were higher than Māori female rates for lifetime prevalence of substance use disorders (31.8%; 28.4, 35.5 compared with 21.8%; 19.3, 24.4; $p < .0001$).

Table 9.6: Lifetime prevalence of mental disorders for Māori, by age and sex

Disorder groups[1]	Total % (95% CI)	Age group (years) % (95% CI)				Sex % (95% CI)	
		16–24	25–44	45–64	65 and over	Male	Female
Any anxiety disorder[2]	31.3 (3.1, 4.9)	26.3 (21.2, 32.3)	37.6 (33.2, 42.2)	27.3 (22.6, 32.5)	14.5 (7.9, 23.7)	25.0 (20.9, 29.5)	36.7 (32.9, 40.7)
Any mood disorder	24.3 (22.4, 26.3)	23.8 (19.2, 29.1)	27.5 (25.0, 30.1)	22.1 (18.8, 25.7)	7.8 (4.2, 13.0)	18.5 (15.6, 21.7)	29.3 (26.8, 32.0)
Any substance use disorder	26.5 (24.3, 28.7)	33.7 (28.6, 39.2)	28.3 (25.3, 31.5)	17.3 (14.2, 20.9)	16.0 (9.8, 25.1)	31.8 (28.4, 35.5)	21.8 (19.3, 24.4)
Any eating disorder[2]	3.1 (2.3, 4.1)	3.0 (1.3, 5.7)	3.6 (2.4, 5.4)	2.9 (1.5, 5.0)	0.4 (0.0, 4.9)	1.6 (0.8, 3.0)	4.4 (3.1, 6.1)
Any disorder[2]	50.7 (47.0, 54.4)	47.7 (40.0, 55.4)	58.1 (52.9, 63.2)	45.0 (38.2, 52.1)	22.7 (13.9, 33.7)	48.4 (42.8, 54.0)	52.7 (48.0, 57.3)
No disorder	49.3 (45.6, 53.0)	52.3 (44.6, 60.0)	41.9 (36.8, 47.1)	55.0 (47.9, 61.8)	77.3 (66.5, 85.4)	51.6 (46.0, 57.2)	47.3 (42.7, 52.0)
One disorder[2]	19.7 (17.5, 22.2)	13.9 (10.3, 18.6)	23.2 (19.7, 27.0)	20.2 (15.8, 25.4)	14.4 (7.8, 23.5)	19.0 (15.5, 23.0)	20.4 (17.5, 23.6)
Two or more disorders[2]	13.8 (12.0, 15.8)	17.3 (12.9, 22.7)	13.5 (11.3, 16.2)	12.5 (9.3, 16.5)	6.3 (2.2, 13.6)	15.8 (12.8, 19.4)	12.0 (10.1, 14.3)
Three of more disorders[2]	17.1 (15.2, 19.2)	16.5 (12.5, 21.4)	21.5 (18.6, 24.6)	12.4 (9.6, 15.9)	2.0 (0.1, 8.4)	13.5 (11.0, 16.6)	20.3 (17.6, 23.2)

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

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

9.6.5 Lifetime risk

In addition to lifetime prevalence, the study also investigated lifetime risk. The calculation of lifetime risk takes into account the possibility that many people interviewed have not yet experienced mental disorder, but might do so later in their lives.

Prediction of lifetime risk until the age of 75 in the total population is presented in chapter 4. For Māori the lifetime risk of developing a disorder (ie, the proportion of Māori who will develop any disorder over their life until the age of 75) was found to be 59.9%. This is higher than the lifetime prevalence (50.7%) and takes into account that some Māori are yet to develop a mental disorder. The lifetime risk for Māori of developing an anxiety disorder is 37.3%, a mood disorder is 36.1%, a substance use disorder is 32.3% or an eating disorder is 4.1%.

9.7 Comorbidity

This section summarises the findings of the extent and patterns of comorbidity (ie, multiple disorders) in Māori. Information on physical and mental health was gathered.

9.7.1 Prevalence and distribution of multiple mental disorders in Māori

Table 9.7 shows the lifetime, 12-month and one-month prevalence of multiple disorders in Māori.

Table 9.7: Lifetime, 12-month and one-month prevalence of multiple mental disorders in Māori

Disorder[1]	Lifetime prevalence % (95% CI)	Twelve-month prevalence % (95% CI)	One-month prevalence % (95% CI)
No disorder	49.3 (45.6, 53.0)	70.5 (67.5, 73.3)	81.7 (79.4, 83.8)
One disorder[2]	19.7 (17.5, 22.2)	16.4 (14.4, 18.6)	12.7 (11.0, 14.7)
Two disorders[2]	13.8 (12.0, 15.8)	7.6 (6.4, 9.0)	3.6 (2.8, 4.6)
Three or more disorders[2]	17.1 (15.2, 19.2)	5.5 (4.5, 6.8)	2.0 (1.5, 2.8)

1 DSM-IV CIDI 3.0 disorder groups.

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

Among the Māori sample, levels of lifetime comorbidity are high, with 19.7% of Māori with one disorder, 13.8% with two disorders and 17.1% with three or more disorders. Over the past 12 months 16.4% of Māori had one disorder, 7.6% had two disorders and 5.5% had three or more disorders.

Table 9.8 presents the pattern of distribution of multiple disorders in those with 12-month disorders (see 5.2.2). Within Māori who had any mental disorder in the past 12 months, 55.5% (one in two) had only one disorder, 25.7% (one in four) had two disorders and 18.8% (almost one in five) had three or more disorders.

The 'Diagnoses' column in Table 9.8 shows the total number of diagnoses made in Māori who had one disorder, two disorders or three or more disorders. The table shows 31.2% of diagnoses were in Māori with one disorder, 28.9% in those with two disorders and 39.9% in those with three or more disorders. This highlights that a significant portion of the burden of mental disorder in Māori falls on a small number with multiple disorders and 39.9% of all diagnoses occurred in the 5.5% of all Māori participants who had three or more disorders.

Table 9.8: Distribution of comorbid 12-month disorders among Māori[1]

Number of mental disorders	Participants % (95% CI)	Cases % (95% CI)	Diagnoses %
No disorder	70.5 (67.5, 73.3)		
One disorder	16.4 (14.4, 18.6)	55.5 (51.3, 59.7)	31.2
Two disorders	7.6 (6.4, 9.0)	25.7 (22.1, 29.6)	28.9
Three or more disorders	5.5 (4.5, 6.8)	18.8 (15.6, 22.5)	39.9

1 Assessed in the long form subsample who were assessed for all disorders, see 12.4.2.

9.7.2 Comorbidity between mental disorders

Table 9.9 shows the pattern of comorbidity between mental disorders (ie, the proportion of Māori who have one kind of mental disorder who also have another kind of disorder). The findings are presented by aggregated disorder groups.

This table shows considerable overlap between mental disorders, particularly between mood and anxiety disorders and between substance use disorders and anxiety disorders. Among Māori with 12-month anxiety disorders, 30.2% also had a mood disorder. Among Māori with mood disorders, 51.4% also had an anxiety disorder. For Māori with any substance use disorder 39.7% also had an anxiety disorder and 26.4% also had a mood disorder.

Table 9.9: Percentage of Māori with a 12-month comorbid mental disorder, by mental disorder group

Twelve-month mental disorder group[1]	Comorbid mental disorders % (95% CI)		
	Any anxiety disorder[2]	Any mood disorder	Any substance use disorder
Any anxiety disorder[2]		30.2 (25.6, 35.2)	17.6 (13.9, 22.1)
Any mood disorder	51.4 (44.3, 58.4)		20.6 (15.7, 26.6)
Any substance use disorder	39.7 (31.3, 48.6)	26.4 (20.0, 34.0)	
Any disorder[2]	65.8 (61.1, 70.2)	38.7 (34.5, 43.0)	29.2 (25.1, 33.8)

1 DSM-IV CIDI 3.0 disorder groups.

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

9.7.3 Comorbidity between substance use disorders

Substance use disorders include alcohol abuse and dependence and drug abuse and dependence. Table 9.10 shows the extent and pattern of substance use disorder comorbidity among Māori with substance use disorders.

Overall the table shows considerable overlap between alcohol disorders and drug disorders. Of Māori with any alcohol use disorder 31.2% also had a drug use disorder and 58.3% with a drug use disorder also had an alcohol disorder. There were high prevalences of dependence disorders among those with abuse disorders with 46.8% of Māori with alcohol abuse, also having alcohol dependence and 45.1% of Māori with drug abuse, also having drug dependence.

Table 9.10: Percentage of Māori with 12-month comorbid substance use disorders[1]

Twelve-month disorder	Comorbid drug use disorder % (95% CI)					
	Alcohol abuse	Alcohol dependence	Any alcohol disorder	Drug abuse	Drug dependence	Any drug use disorder
Alcohol abuse		46.8 (37.7, 56.1)		28.0 (19.6, 38.3)	15.6 (9.2, 25.2)	30.7 (21.8, 41.3)
Alcohol dependence	80.6 (70.2, 87.9)			34.3 (23.0, 47.6)	28.6 (18.1, 42.3)	36.3 (24.8, 50.0)
Any alcohol use disorder	89.9 (83.9, 93.8)	52.2 (43.4, 60.8)		28.8 (20.8, 38.2)	17.0 (10.8, 25.8)	31.2 (22.8, 50.0)
Drug abuse	50.4 (37.0, 63.9)	35.8 (24.1, 49.5)	57.6 (43.7, 70.3)		45.1 (32.1, 58.9)	
Drug dependence	53.7 (35.1, 71.4)	57.3 (38.3, 74.3)	65.2 (45.9, 80.5)	86.3 (69.6, 94.6)		
Any drug use disorder	51.6 (38.4, 64.5)	35.4 (24.3, 48.3)	58.3 (44.9, 70.6)	93.3 (84.4, 97.3)	48.8 (36.1, 61.6)	
Any substance use disorder	73.5 (65.6, 80.1)	42.7 (35.1, 50.6)	81.8 (74.1, 87.5)	40.8 (32, 6, 49.6)	21.3 (15.1, 29.2)	43.7 (35.3, 52.6)

1 DSM-IV CIDI 3.0 substance use disorder.

9.7.4 Comorbidity between chronic physical conditions and mental disorders

Table 9.11 shows how common chronic physical conditions (12-month) were in Māori overall and in Māori who had mental disorders (presented by mental disorder group and any disorder). The table also shows how common chronic physical conditions were in Māori who did not have 12-month mental disorders.

In the Māori sample overall, the most common physical disorders were chronic pain (37.1%) and respiratory conditions (27.5%). They were also the most common among Māori with any 12-month disorder, with chronic pain reported by 46.4% (almost half) and respiratory conditions reported by 31.2% (almost one in three) Māori with 12-month disorder. The prevalence of each chronic health condition is higher in Māori who have any mental disorder compared with Māori who have no mental disorder. Differences were particularly marked for chronic pain. However, for all other conditions the differences were not significant statistically.

Table 9.12 shows how common mental disorders are in Māori with chronic physical conditions. In Māori with no chronic physical disorder, rates of any mental disorder in the past 12 months was 24.3%, whereas in those with chronic physical disorders the prevalence of having any mental disorder was higher, ranging from 31.3% in Māori with high blood pressure to 37.3% in Māori reporting chronic pain.

Table 9.11: Prevalence of chronic physical conditions among Māori with 12-month mental disorder[1], adjusted for age and sex

	Chronic physical health condition % (95% CI)					
	Chronic pain[2]	**Cardiovascular disease[3]**	**High blood pressure**	**Respiratory conditions[4]**	**Diabetes**	**Cancer**
Total	37.1 (33.8, 40.6)	6.8 (5.2, 8.9)	11.3 (9.2, 13.8)	27.5 (24.3, 31.0)	5.2 (3.8, 7.0)	3.8 (2.7, 5.4)
Disorder groups						
Any anxiety disorder	49.5 (44.4, 54.5)	10.2 (6.4, 13.9)	12.2 (8.8, 15.5)	30.9 (25.7, 36.1)	6.6 (3.7, 9.4)	7.4 (4.5, 10.3)
Any mood disorder	47.6 (41.0, 54.2)	8.0 (4.4, 11.6)	14.4 (9.4, 19.3)	33.4 (26.7, 40.1)	7.6 (3.3, 11.9)	6.2 (2.4, 10.0)
Any substance use disorder	47.4 (38.1, 56.7)	6.0 (0.7, 11.3)	11.0 (4.6, 17.3)	30.9 (22.0, 39.8)	4.3 (0.0, 8.6)	2.4 (0.0.9, 5.7)
Any disorder	46.4 (41.9, 50.9)	8.7 (5.8, 11.6)	12.0 (9.0, 15.0)	31.2 (27.1, 35.4)	6.5 (3.9, 9.0)	6.0 (3.7, 8.3)
No disorder	33.3 (29.0, 37.5)	6.2 (4.1, 8.4)	11.0 (8.4, 13.7)	26.0 (21.6, 30.3)	4.8 (3.0, 6.6)	4.7 (2.5, 6.9)

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

2 Chronic pain: arthritis or rheumatism; chronic back or neck pain; frequent or severe headaches; any other chronic pain.

3 Cardiovascular disease: stroke; heart attack; heart disease.

4 Respiratory conditions: asthma; chronic obstructive pulmonary disease; emphysema; other chronic lung disease.

Table 9.12: Prevalence of mental disorders[1] among Māori with selected chronic physical conditions, adjusted for age and sex

Chronic physical conditions	Any anxiety disorder % (95% CI)	Any mood disorder % (95% CI)	Any substance use disorder % (95% CI)	Any disorder % (95% CI)
Chronic pain[2]	26.1 (22.2, 30.0)	14.9 (12.0, 17.8)	11.4 (8.2, 14.6)	37.3 (32.3, 42.2)
Cardiovascular disease[3]	28.2 (17.3, 39.1)	12.8 (6.3, 19.4)	8.6 (1.0, 16.3)	36.9 (24.2, 49.5)
High blood pressure	20.8 (14.4, 27.2)	14.8 (9.1, 20.5)	8.9 (3.4, 14.3)	31.3 (23.2, 39.4)
Respiratory conditions[4]	21.6 (17.2, 26.1)	13.8 (10.3, 17.4)	9.3 (6.3, 12.4)	33.4 (27.8, 39.0)
Diabetes	23.9 (13.9, 33.9)	16.5 (7.3, 25.7)	7.8 (0.0, 15.7)	35.7 (23.1, 48.3)
Cancer	29.4 (16.9, 41.8)	14.1 (5.2, 23.0)	4.0 (0.0, 9.5)	35.8 (21.6, 50.0)
No condition	15.2 (12.3, 18.2)	8.7 (6.6, 10.8)	7.2 (5.1, 9.3)	24.3 (20.5, 28.0)

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

2 Chronic pain: arthritis or rheumatism; chronic back or neck pain; frequent or severe headaches; any other chronic pain.

3 Cardiovascular disease: stroke; heart attack; heart disease.

4 Respiratory conditions: asthma; chronic obstructive pulmonary disease; emphysema; other chronic lung disease.

9.7.5 Comorbidity and physical health risk factors

Table 9.13 shows how common selected physical health risk factors (current smoking, overweight or obese, high blood pressure and hazardous drinking) are in Māori males and females, Māori who have mental disorders and Māori who have no mental disorders. The table shows that the risk factors are common among both Māori males and females.

Table 9.13: Prevalence of selected chronic physical condition risk factors, by 12-month mental disorder groups among Māori[1,2,3]

	Risk factors for chronic physical conditions % (95% CI)			
	Smoking[4]	Overweight[5]	High blood pressure	Alcohol[6]
Sex				
Male	43.8 (38.2, 49.4)	75.8 (71.0, 80.6)	12.9 (9.1, 16.6)	47.2 (39.5, 54.8)
Female	52.6 (48.0, 57.3)	59.6 (54.9, 64.2)	9.9 (7.6, 12.2)	22.0 (17.1, 26.8)
Total	48.5 (44.7, 52.3)	67.1 (63.7, 70.4)	11.3 (9.2, 13.8)	33.5 (28.9, 38.4)
Disorder group				
Any anxiety disorder[2]	58.4 (52.3, 64.5)	65.5 (60.2, 70.8)	12.2 (8.8, 15.5)	43.0 (36.0, 50.0)
Any mood disorder	61.3 (54.5, 68.0)	67.8 (61.6, 73.9)	14.4 (9.4, 19.3)	37.9 (30.1, 45.7)
Any substance use disorder	67.5 (59.3, 75.6)	61.6 (52.2, 71.0)	11.0 (4.6, 17.3)	90.9 (82.7, 99.0)
Any disorder[2]	57.5 (52.6, 62.4)	66.6 (62.3, 71.0)	12.0 (9.0, 15.0)	47.6 (41.7, 53.5)
No disorder	44.7 (40.0, 49.4)	67.4 (63.0, 71.7)	11.0 (8.4, 13.7)	27.2 (21.4, 33.0)

1 DSM-IV CIDI 3.0 disorder groups.

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

3 Sex-stratified estimates are adjusted for age; 'total' estimates are adjusted for age and sex.

4 Smoking: current smoker.

5 Overweight and obesity: body mass index of 25 or over.

6 Alcohol: Alcohol Use Disorders Identification Test score of 8 or more, described as 'potentially hazardous drinkers'.

Māori who have any mental disorder have higher prevalences of smoking (57.5%) and hazardous alcohol use (47.6%) compared with Māori with no mental disorder (44.7% and 27.2% respectively). Most Māori with a substance use disorder met criteria for hazardous alcohol use (90.9%). Differences in the prevalence of being overweight or having high blood pressure did not differ between Māori with and without mental disorders.

9.8 Severity and impact of disorders

This section describes the findings related to severity of disorder and the impact of health and mental health disorders on the lives of Māori participants.

9.8.1 Severity of aggregated disorders in Māori

Table 9.14 shows findings for 12-month prevalence of mental disorders in Māori described by severity (serious, moderate, mild). Severity is defined in 12.12.3. Of Māori with any mental disorder, 29.6% had serious disorders, 42.6% had moderate disorders and 27.8% had mild disorders. This pattern of severity was similar for anxiety and substance use disorders. Of Māori with anxiety disorders, 33.3% had a disorder that was considered serious and 40.9% had a moderate disorder. For substance use disorders, 33.5% of Māori with a substance use disorder had a serious disorder and a slightly higher proportion (40.6%) had a moderate disorder. The pattern differed for mood disorder, with 51.4% of all Māori with a mood disorder having a serious disorder and 37.4% having a moderate disorder. Eleven percent of Māori with mood disorders were considered to have a mild disorder.

The severity of disorder is strongly associated with the number of disorders. Of Māori with three or more disorders, 69.2% were considered serious, whereas 14.4% with one disorder were considered serious.

Table 9.14: Twelve-month prevalence of mental disorders among Māori, by severity

Disorder group[1]	Severity %		
	Serious	Moderate	Mild
Any anxiety disorder[2]	33.3	40.9	25.8
Any mood disorder	51.4	37.4	11.2
Major depressive disorder	45.2	41.6	13.2
Dysthymia	70.7	21.7	7.5
Bipolar disorder	60.0	31.5	8.5
Any substance use disorder	33.5	40.6	26.0
Any alcohol disorder	33.2	41.7	25.1
Any drug disorder	43.2	31.5	25.3
Any disorder	29.6	42.6	27.8
Number of disorders			
One disorder	14.4	43.9	41.7
Two disorders	33.4	50.6	16.0
Three or more disorders	69.2	27.9	2.9

1 DSM-IV CIDI 3.0 disorders with hierarchy, see 12.4.1. Severity is defined in 12.12.3.

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

9.8.2 Impact of mental disorders in Māori

Chapter 6 describes the measures used, and findings related to, the impact of mental disorders on people's health and functioning. Tables 9.15 and 9.16 present findings for the level of impairment in performing day-to-day roles experienced by Māori with mental disorders.

Table 9.15 shows the impact of health problems on Māori by measuring the impairment of role in the past 1–30 days. Just under one in six Māori reported one or more days out of role (12.1% reported 1–5 days and 5.5% reported 6 or more days) due to health reasons over the past 30 days. About one in three of these days out of role (4.9%, 1–5 days; 1.4%, 6 or more days) was attributed to mental health reasons, so a total of 6.3% of Māori reported days out of role because of mental health reasons over the past 30 days.

Table 9.15: Number of days in past 30 days with role impairment due to health problems, in total and specifically attributed to mental health problems, among Māori[1,2]

Type of impairment	Cause	Days with impairment in past 30 days % in each category (95% CI)		
		Zero days	One to five days	Six or more days
Days completely out of role	All health	82.3	12.1	5.5
	Mental health	93.8	4.9	1.4
Days cut down amount accomplished	All health	78.7	13.8	7.5
	Mental health	90.6	7.8	1.7
Days cut back on quality[3]	All health	82.8	11.0	6.3
Days it took extreme effort	All health	79.7	13.5	6.8
	Mental health	90.4	7.3	2.3

1 Mental health problems included those resulting from use of alcohol or drugs.

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

3 This question did not ask the respondent to specify whether the impairment was due to mental health problems.

Table 9.16 shows the relationship between impairment in role in the past 30 days and the number of disorders in Māori. (For more about the impairment in role measure, see chapter 6.)

Table 9.16 shows increasing role impairment with increasing number of mental disorders. Māori with three or more disorders reported some form of role impairment on 42.5% of their days over the past month. This is over twice that for Māori with one disorder (17.1%) and over seven times greater than for Māori with no disorder (6.0%). A considerable amount of the impairment in role is attributed to health, but not specifically attributed to mental health problems.

Table 9.16: Role impairment in past 30 days, in total and attributed to mental health, by the number of one-month mental disorders among Māori[1,2]

Number of disorders	Mean role impairment domain score[3] % (SE)	
	Total[4]	Attributed to mental health[5]
No disorder	6.0 (0.7)	1.1 (0.1)
One disorder	17.1 (2.0)	5.3 (0.9)
Two disorders	26.5 (4.2)	11.4 (2.6)
Three or more disorders	42.5 (6.3)	27.5 (6.4)
Total	8.8 (0.7)	2.5 (0.2)

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

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

3 Uses an integrated measure that combines days out of role and days when performance in role was reduced in quantity or took extreme effort.

4 Role impairment score is calculated from four role impairment items (see Table 6.1).

5 Role impairment score is calculated from the three items that allow attribution to mental health problems; the sum of days out of role plus half of days cut down on amount and half of days of extreme effort, divided by 30 and multiplied by 100. Scores range from 0 to 100; the higher the score, the greater the impairment. (See chapter 6 for more details.)

9.9 Health service use

9.9.1 Probability of 12-month use of mental health service by Māori

Participants were questioned about their contact with a range of services, both health and non-healthcare services, for meeting their mental health needs. The measures and overall findings are summarised in chapter 8. A specific section of the survey was also asked of Māori about their use of Māori-specific services such as Māori mental health providers and tohunga. The findings from this part of the survey will be the subject of a future report. This section presents selected findings for health service use by Māori with mental disorders.

Table 9.17 shows the nature of service use by Māori and presents service contact by disorder group (anxiety, mood, substance use and eating disorders), by presence of disorder (having any disorder, having no disorder and overall) and by measures of severity (serious, moderate and mild). Service contact is divided between health services (mental health specialist and general medical services) and non-health services (human services and complementary or alternative medicine services). The following is a summary of key findings from this analysis.

Type of disorder

The level and pattern of service contact varied between disorder groups. Māori with mood disorders were most likely to have contact with services (20% mental health specialist, 30.3% general medical care, 10.6% non-healthcare and 43.1% overall). Māori with substance use disorders were the disorder group least likely to have had service contact for their mental health (15.5% mental health specialist, 15.8% general medical care, 6.4% non-healthcare provider and 27.8% overall).

Overall sample, any disorder and no disorder

Of the total Māori sample, 13.5% had some kind of service contact for mental health reasons spanning across the range of providers (6.0% mental health specialist, 8.1% general medical care, 3.8% non-healthcare provider).

Of Māori with any disorder, 32.5% had some contact with a provider of services. This was divided between mental health specialist services (14.6%), general medical services (20.4%) and non-healthcare providers (9.1%).

A small proportion of Māori with no mental disorder (5.6%) also had contact with some form of service.

Severity of disorders

There is a pattern of increased service contact with increased severity of disorders. Whereas 51.5% of Māori with serious disorder were seen in some form of service (28.6% mental health specialist, 33.8% general medical care, 12.8% non-healthcare provider), a smaller proportion of Māori with mild disorder (17.5%) had some form of contact (5.3% mental health specialist, 11.2% general medical care, 4.3% non-healthcare provider).

9.9.2 Satisfaction with care

Table 9.18 shows that for Māori who had contact with some form of provider (health or non-healthcare) to address their mental health needs, across each of the health providers, most Māori reported being very satisfied or satisfied.

For each provider group it appears the majority of Māori were satisfied (either very satisfied or satisfied). As the numbers of Māori were quite small for contact with some professional groups, take great care when making detailed comparisons between providers. However, there were differences between providers in levels of satisfaction. Satisfaction ranged from those who saw a psychiatrist (32.3% very satisfied, 30.8%

satisfied) to those who saw a spiritual practitioner (76.3% very satisfied, 17.3% satisfied).

Table 9.17: Prevalence of 12-month mental health service use in separate service sectors, by 12-month disorders among Māori

	Healthcare % (95% CI)					Non-healthcare % (95% CI)			Any service use % (95% CI)
	Mental health specialty			General medical	Any healthcare provider	Human services	Complementary or alternative medicine	Any non-healthcare provider	
	Psychiatrist	Other mental health specialist	Any mental health specialist						
Disorder group[1]									
Anxiety disorders[2]	5.8 (3.9, 8.6)	13.3 (10.0, 17.5)	16.4 (12.7, 20.8)	22.7 (18.4, 27.6)	31.9 (27.1, 37.3)	7.1 (4.5, 10.8)	5.3 (3.4, 7.8)	10.4 (7.5, 14.3)	35.3 (30.3, 40.5)
Mood disorders	7.9 (4.8, 12.0)	16.4 (12.5, 21.3)	20.0 (15.6, 25.3)	30.3 (24.7, 36.5)	39.1 (32.9, 45.8)	7.4 (4.8, 10.9)	6.9 (4.4, 10.3)	10.6 (7.6, 14.5)	43.1 (36.7, 49.9)
Substance use disorders	4.6 (2.1, 8.6)	13.3 (8.6, 19.4)	15.5 (10.6, 22.1)	15.8 (11.2, 21.9)	25.3 (19.2, 32.6)	2.0 (0.5, 5.1)	4.8 (1.9, 9.5)	6.4 (3.1, 11.5)	27.8 (21.6, 35.0)
Eating disorders[2]	7.7 (0.8, 26.2)	20.2 (4.7, 47.4)	20.5 (4.9, 47.6)	14.7 (3.1, 37.3)	27.5 (8.8, 54.6)	0.0 (0.0, 11.7)	7.3 (0.7, 25.6)	7.3 (0.7, 25.6)	32.0 (12.3, 58.1)
Any disorder[2]	4.7 (3.2, 6.8)	11.9 (9.4, 15.0)	14.6 (11.7, 18.0)	20.4 (16.9, 24.4)	29.3 (25.3, 33.7)	5.9 (4.0, 8.7)	5.0 (3.5, 6.9)	9.1 (6.8, 12.1)	32.5 (28.4, 36.8)
No disorder	0.9 (0.4, 1.8)	2.4 (1.5, 3.6)	2.8 (1.8, 4.1)	3.2 (2.0, 4.7)	5.0 (3.7, 6.7)	0.9 (0.4, 1.8)	0.8 (0.3, 1.7)	1.6 (0.9, 2.6)	5.6 (4.3, 7.4)
Total	1.9 (1.4, 2.6)	4.9 (4.1, 5.9)	6.0 (5.0, 7.1)	8.1 (7.0, 9.5)	11.7 (10.4, 13.3)	2.2 (1.7, 2.9)	2.3 (1.8, 3.0)	3.8 (3.1, 4.7)	13.5 (12.1, 15.1)
Severity[3]									
None	0.9 (0.4, 1.8)	2.4 (1.5, 3.6)	2.8 (1.8, 4.1)	3.2 (2.0, 4.7)	5.0 (3.7, 6.7)	0.9 (0.4, 1.8)	0.8 (0.3, 1.7)	1.6 (0.9, 2.6)	5.6 (4.3, 7.4)
Serious	11.9 (7.6, 17.4)	22.3 (16.8, 28.9)	28.6 (22.4, 35.6)	33.8 (27.3, 41.0)	47.9 (40.3, 55.7)	7.7 (4.4, 12.2)	7.8 (4.4, 12.7)	12.8 (8.7, 18.6)	51.5 (43.7, 59.2)
Moderate	1.5 (0.4, 4.1)	10.0 (6.1, 15.9)	11.0 (6.9, 17.0)	17.1 (12.5, 22.9)	25.4 (19.7, 32.0)	6.6 (3.0, 12.1)	4.8 (2.6, 8.0)	9.7 (6.0, 15.2)	29.1 (23.3, 35.7)
Mild	1.8 (0.1, 8.0)	3.8 (1.4, 7.9)	5.3 (2.0, 11.1)	11.2 (4.9, 21.1)	15.7 (9.1, 25.6)	3.2 (0.7, 8.7)	2.2 (0.7, 5.4)	4.3 (1.5, 9.4)	17.5 (10.7, 27.1)

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

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

3 For severity, see 2.3 and 12.12.3.

Table 9.18: Māori participant rating of satisfaction with care, perceived helpfulness of the care received, and average duration of visit, by professional group

Satisfaction with care	Psychiatrist % (SE)	Psychologist % (SE)	Other mental health professional % (SE)	General practitioner or any other medical doctor % (SE)	General nurse, occupational therapist or other health professional % (SE)	Social worker % (SE)	Counsellor % (SE)	Religious or spiritual advisor % (SE)	Any other healer % (SE)
Very satisfied	32.3 (8.7)	41.8 (4.5)	40.0 (9.5)	33.7 (8.6)	43.0 (5.5)	33.0 (14.0)	39.1 (13.5)	76.3 (6.6)	62.0 (9.3)
Satisfied	30.8 (8.1)	35.1 (4.4)	36.3 (10.2)	41.0 (9.2)	46.2 (5.6)	51.0 (14.4)	41.3 (13.2)	17.3 (5.0)	30.9 (9.4)
Neither satisfied nor dissatisfied	20.8 (6.9)	12.9 (3.2)	18.7 (7.2)	10.0 (4.9)	6.6 (2.7)	15.9 (8.9)	9.8 (5.5)	3.5 (2.6)	5.1 (3.0)
Dissatisfied	11.6 (5.3)	5.3 (1.6)	3.3 (3.3)	8.0 (4.4)	4.3 (2.2)	0.0 (0.0)	9.8 (7.2)	0.0 (0.0)	0.0 (0.0)
Very dissatisfied	4.5 (3.2)	4.9 (1.8)	1.6 (1.6)	7.3 (6.3)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	2.9 (2.8)	1.9 (1.9)

9.10 Severity, days out of role, and health service visits in the past 12 months

In combining prevalence, severity, role impairment and health service contact data it is possible to show the relationship between mental health need and healthcare. Table 9.19 shows the prevalence and impact of disorder by severity and the proportion who had contact of some form within the healthcare sector.

This table shows a strong relationship between the severity of disorder and the mean days out of role. Whereas Māori with a serious disorder reported a mean 82.7 days out of role, Māori with mild disorders reported a mean 1.1 days out of role. A relationship also exists between severity and visits to some form of healthcare, with 47.9% of Māori with serious disorder making some visits. Some form of contact with health services for mental health needs was made by 25.4% of Māori with moderate disorder and 15.7% with mild disorder. Thus 52.1% (just over half) of Māori with serious disorder and 74.6% (three in four) of Māori with moderate disorder had no contact with health services for their mental health.

Table 9.19: Severity, days out of role and percentage of Māori with a mental health visit in the past 12 months[1]

	Twelve-month disorder[2] % (95% CI)			
	Serious	**Moderate**	**Mild**	**None**
Prevalence (%)	8.7 (7.5, 10.1)	12.6 (10.7, 14.7)	8.2 (6.8, 9.9)	70.5 (67.5, 73.3)
Mean days out of role due to disorder	82.7 (65.3, 100.2)	18.2 (10.1, 26.4)	1.1 (0.3, 2.0)	
Percentage with at least one mental health visit in the healthcare sector (%)	47.9 (40.3, 55.7)	25.4 (19.7, 32.0)	15.7 (9.1, 25.6)	5.0 (3.7, 6.7)

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

2 DSM-IV CIDI 3.0 disorder with hierarchy, see 12.4.1. Severity is defined in 12.12.3.

9.11 Suicidal behaviour

In addition to measuring the prevalence of mental disorders, survey participants were asked about suicidal behaviour; ie, the presence of suicidal ideation (thoughts), suicide plan or suicide attempt. These measures are described in detail in chapter 7.

The findings for the prevalence of lifetime and 12-month suicidal ideation, suicide plan and suicide attempt over the past 12 months are shown for Māori, by sex, in Table 9.20 (see 9.11.1) and by age group and sex in Table 9.21 (see 9.11.2).

9.11.1 Lifetime and 12-month prevalences

At some time over their lifetime suicidal ideation was reported by 22.5% of Māori, with 8.5% making suicide plan and 8.3% making suicide attempt. Over the past 12 months, 5.4% of Māori reported suicidal ideation, with a smaller proportion reporting suicide plan (1.8%) and suicide attempt (1.1%).

Across the lifetime and over the past 12 months, Māori females reported higher rates of suicidal ideation, suicide plan and suicide attempt than Māori males. Over their lifetime 11.7% of Māori females reported suicide attempt.

Table 9.20: Twelve-month and lifetime prevalence of suicidal ideation, suicide plan and suicide attempt in Māori, by sex

	Lifetime prevalence % (95% CI)			Twelve-month prevalence % (95% CI)		
	Male	Female	Total	Male	Female	Total
Suicidal ideation	17.2 (14.6, 20.1)	27.2 (24.5, 30.1)	22.5 (20.6, 24.5)	3.4 (2.3, 5.1)	7.1 (5.6, 9.0)	5.4 (4.4, 6.6)
Suicide plan	5.7 (4.2, 7.8)	10.9 (9.1, 12.9)	8.5 (7.2, 9.9)	1.4 (0.7, 2.5)	2.3 (1.5, 3.3)	1.8 (1.3, 2.5)
Suicide attempt	4.5 (3.3, 6.1)	11.7 (9.9, 13.8)	8.3 (7.2, 9.7)	0.8 (0.3, 1.8)	1.5 (0.9, 2.5)	1.1 (0.7, 1.8)

9.11.2 Prevalence of suicidal ideation, suicide plans and suicide attempts, by age and sex

Suicidal ideation

Lifetime prevalence rates of suicidal ideation were similar among Māori aged 16–24 (24.4%) and 25–44 (26.0%), with rates decreasing with increasing age for both males and females (see Table 9.21). Māori female rates (27.2%) were higher than Māori male rates (17.2%) overall. Female rates were also higher in all age groups apart from the group aged 65 and over.

Patterns of lifetime suicidal ideation differed between males and females, with the highest rates for Māori females in those aged 16–24 (33.3%). For Māori males, the highest rates were in those aged 25–44 (22.8%).

Twelve-month prevalence rates of suicidal ideation again were highest among females and in younger age groups. Overall 9.0% of Māori aged 16–24 reported suicidal ideation in the past 12 months and Māori females aged 16–24 had the highest rates of suicidal ideation among Māori (13.4%).

Suicide plans

Of Māori aged 25–44, 11.2% reported having made a suicide plan over their lifetime.

Lifetime rates of suicide plans were higher in Māori females than Māori males across all age groups, with the highest rates in both males and females aged 25–44 followed by those aged 16–24.

Māori females were also more likely to report suicide plans in the past 12 months than Māori males across all age groups. Rates were highest in those aged 25–44 (2.4%) followed by those aged 16–24 (1.6%).

Suicide attempts

Lifetime rates of suicide attempts for Māori females were higher than rates for Māori males for all age groups and were highest among Māori females aged 16–24 (15.2%). For Māori males, lifetime rates of suicide attempts were highest in those aged 25–44 (6.9%). Lifetime rates of suicide attempts reduced with increasing age from this age group.

With regard to the 12-month prevalence of suicide attempts, rates for Māori females were higher than for Māori males in all age groups, with rates in both males (1.4%) and females (2.9%) being highest in those aged 16–24.

Overall, in Māori participants aged 16–24, 2.2% reported making a suicide attempt in the previous 12 months.

Table 9.21: Prevalence of suicidal ideation, suicide plans or suicide attempts over lifetime and in past 12 months among Māori, by sex and age

	Lifetime prevalence % (95% CI)			Twelve-month prevalence % (95% CI)		
	Male	Female	Total	Male	Female	Total
Suicidal ideation						
16–24	14.9 (9.9, 21.7)	33.3 (26.4, 41.0)	24.4 (20.1, 39.4)	4.3 (1.9, 9.3)	13.4 (8.8, 19.9)	9.0 (6.2, 12.8)
25–44	22.8 (18.8, 27.4)	28.7 (25.0, 32.6)	26.0 (23.2, 29.0)	3.8 (2.3, 6.4)	6.9 (5.2, 9.1)	5.5 (4.3, 7.1)
45–64	10.7 (7.4, 15.2)	22.6 (18.0, 27.9)	16.9 (13.9, 20.3)	2.1 (0.9, 4.9)	2.3 (1.2, 4.3)	2.2 (1.3, 3.7)
65 and over	7.2 (3.3, 14.9)	7.0 (3.5, 13.5)	7.1 (4.3, 11.6)	1.0 (0.1, 6.7)	1.3 (0.2, 8.3)	1.1 (0.3, 4.5)
All ages	17.2 (14.6, 20.1)	27.2 (24.5, 30.1)	22.5 (20.6, 24.5)	3.4 (2.3, 5.1)	7.1 (5.6, 9.0)	5.4 (4.4, 6.6)
Suicide plan						
16–24	5.5 (2.6, 11.3)	9.4 (6.2, 14.0)	7.5 (5.2, 10.8)	0.8 (0.1, 5.1)	2.4 (1.0, 5.4)	1.6 (0.7, 3.4)
25–44	7.9 (5.4, 11.4)	13.9 (11.1, 17.2)	11.2 (9.2, 13.4)	2.0 (1.0, 4.2)	2.8 (1.7, 4.5)	2.4 (1.6, 3.6)
45–64	2.8 (1.4, 5.7)	8.2 (5.6, 11.7)	5.6 (4.0, 7.8)	1.0 (0.3, 3.1)	1.3 (0.5, 3.0)	1.1 (0.6, 2.3)
65 and over	0.0	1.7 (0.4, 7.5)	0.9 (0.2, 4.2)	0.0	1.3 (0.2, 8.3)	0.7 (0.1, 4.7)
All ages	5.7 (4.2, 7.7)	10.9 (9.1, 12.9)	8.5 (7.2, 9.9)	1.4 (0.7, 2.5)	2.3 (1.5, 3.3)	1.8 (1.3, 2.5)
Suicide attempt						
16–24	3.8 (1.7, 8.1)	15.2 (10.5, 21.6)	9.7 (7.1, 13.3)	1.4 (0.3, 5.5)	2.9 (1.1, 7.0)	2.2 (1.0, 4.6)
25–44	6.9 (4.9, 9.7)	12.1 (9.7, 15.0)	9.7 (8.1, 11.7)	0.4 (0.1, 2.2)	1.5 (0.8, 2.9)	1.0 (0.5, 1.9)
45–64	1.4 (0.5, 3.6)	9.5 (6.5, 13.8)	5.6 (3.9, 8.0)	1.0 (0.3, 3.3)	0.2 (0.0, 1.7)	0.6 (0.2, 1.7)
65 and over	0.0	2.5 (0.7, 7.8)	1.3 (0.4, 4.3)	0.0	0.0	0.0
All ages	4.5 (3.2, 6.1)	11.7 (9.9, 13.8)	8.3 (7.2, 9.7)	0.8 (0.3, 1.8)	1.5 (0.9, 2.5)	1.1 (0.7, 1.8)

9.12 Findings for Māori compared with Pacific people and Others

Throughout chapters 2–4, 7 and 8 ethnicity comparisons have been included in the findings. Some key findings from these comparisons are summarised here, but it is recommended that specific sections in the other chapters are also read for more detailed comparative findings.

9.12.1 Twelve-month prevalence and ethnicity

Findings related to ethnicity comparisons for 12-month prevalence are presented in chapter 3 (see 3.5). Table 9.22 summarises those key findings. The unadjusted figure

represents the prevalence within the populations by ethnic group, so is a measure of burden or need within the population.

The table shows that any 12-month disorder was present in 29.5% of Māori, 24.2% of Pacific people and 19.3% of the Other composite ethnic group (ie, non-Māori non-Pacific people). Anxiety disorders were the most common across all ethnicities (19.4% of Māori, 16.3% of Pacific people and 14.1% of Others). Mood disorders followed by substance use disorders were the next most prevalent disorders across ethnic groups. In all groups the prevalence of disorder was highest in Māori compared with the Pacific and Other groups.

Adjustment takes into account the differences between ethnic populations for demographic variables. Table 9.22 shows the impact of adjustment on the basis of age and sex and on the basis of age, sex and socioeconomic correlates. Adjustment reduces ethnicity differences, indicating that some of the differences between ethnic groups is due to different population characteristics such as age and socioeconomic position. When fully adjusted for age, sex and socioeconomic correlates, although Māori rates of disorder remain higher, some differences are no longer significant. Differences between ethnic groups for anxiety disorders are not significant and differences between Māori and Others for mood disorders are not significant. For substance use disorders, however, differences remain significant even when adjusted for all of these factors: rates in Māori are about twice those for Pacific people and Others.

Table 9:22: Twelve-month disorders in the Māori, Pacific and Other ethnic groups

	Unadjusted % (95% CI)	Adjusted for age and sex % (95% CI)	Adjusted for age, sex, educational qualifications[1] and household income[1] % (95% CI)
Any disorder[2]			
Māori	29.5 (26.6, 32.4)	26.4 (23.7, 29.0)	23.9 (21.3, 26.4)
Pacific	24.2 (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)
Any anxiety disorder[2]			
Māori	19.4 (17.1, 21.7)	17.6 (15.4, 19.7)	15.6 (13.6, 17.6)
Pacific	16.3 (13.8, 18.9)	14. 8 (12.4, 17.3)	12.9 (10.6, 15.1)
Other	14.1 (13.0, 15.1)	14.4 (13.3, 15.5)	14.8 (13.7, 15.9)
Any mood disorder			
Māori	11.6 (10.1, 13.2)	10.1 (8.8, 11.5)	9.3 (8.0, 10.6)
Pacific	8.3 (6.6, 10.0)	7.2 (5.8, 8.7)	6.4 (5.1, 7.8)
Other	7.5 (6.8, 8.2)	7.7 (6.9, 8.4)	7.9 (7.1, 8.6)
Any substance use disorder			
Māori	9.1 (7.6, 10.6)	7.1 (6.0, 8.3)	6.0 (5.0, 7.1)
Pacific	4.9 (3.6, 6.1)	3.8 (2.8, 4.8)	3.2 (2.3, 4.0)
Other	2.7 (2.3, 3.2)	2.9 (2.9, 3.4)	3.0 (2.5, 3.6)

1 Sociodemographic correlates are defined in 12.12.1.

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

9.12.2 Ethnicity difference in severity and health service contact

Findings presented in chapter 2 included analyses showing the relationship between severity of disorder and contact with health services by ethnic group. Table 9.23 (also presented in Table 2.4) shows findings for severity by ethnicity and health sector contact when severity is controlled for.

The table shows that the prevalence of serious disorder is higher in Māori (8.4%) than in the Pacific (5.9%) and Other (4.0%) groups. Although differences are reduced after adjusting for age, sex, education and equivalised household income, Māori rates of serious disorder remain higher than those for the Pacific and Other groups.

When health service contact is considered, taking into account the severity of disorder the pattern that emerges is that the Other group is most likely to have contact with health services (12.6%), followed by Māori (9.4%) then Pacific people (7.9%). Further adjustment for sociodemographic factors does not change this pattern.

Table 9.23: Ethnicity and 12-month prevalence of any disorder, severity and mental health visits

Prioritised ethnicity	Unadjusted % (95% CI)	Adjusted for age and sex % (95% CI)	Adjusted for age, sex, educational qualifications[4] and equivalised household income[4] % (95% CI)
Prevalence of serious disorder[1,2]			
Māori	8.4 (7.2, 9.7)	7.4 (6.2, 8.5)	6.0 (5.0, 7.0)
Pacific	5.9 (4.6, 7.2)	5.2 (4.0, 6.4)	4.1 (3.1, 5.0)
Other	4.0 (3.5, 4.5)	4.1 (3.6, 4.6)	4.3 (3.8, 4.9)
Percentage with a mental health visit to the healthcare sector, adjusted for severity[3]			
Māori	9.4 (8.0, 10.8)	11.4 (9.6, 13.2)	9.5 (8.1, 11.0)
Pacific	7.9 (6.2, 9.6)	8.3 (6.4, 10.1)	8.1 (6.3, 9.8)
Other	12.6 (11.5, 13.6)	12.2 (11.1, 13.1)	12.5 (11.5, 13.6)

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

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

3 For severity, see 2.3 and 12.12.3.

4 Sociodemographic correlates are defined in 12.12.1.

9.12.3 Lifetime risk

Chapter 4 presents findings for lifetime prevalence and lifetime risk of disorder. Section 4.4 describes hazard ratios for the development of disorders in the Māori, Pacific and Other ethnic groups. A summary of the findings from that analysis is provided in Table 9.24. The table shows overall and for each disorder group the risk (unadjusted) of developing a disorder is greater for Māori when compared with Pacific people and when compared with the Other group. Following adjustment for age and sex, statistical analyses shown in chapter 4 show that when comparisons are made between Māori and Others, Māori have significantly higher hazard ratios for anxiety ($p < .0001$), mood ($p = .0008$), substance use ($p < .0001$) and eating disorders ($p = .003$). Comparisons with Pacific people, when adjusted, show Māori have significantly higher hazard ratios for mood ($p = .0004$) and substance use disorders ($p < .0001$).

Table 9.24: Hazard ratios for lifetime disorders, by age, sex and ethnicity (unadjusted and adjusted for the influence of age and sex)

	Unadjusted % (95% CI)	Adjusted for age and sex % (95% CI)
Any disorder		
Māori	1.7 (1.5, 1.9)	1.4 (1.3, 1.6)
Pacific	1.4 (1.3, 1.6)	1.2 (1.1, 1.4)
Other[1]	1.0	1.0
Any anxiety disorder		
Māori	1.5 (1.3, 1.7)	1.3 (1.2, 1.5)
Pacific	1.3 (1.1, 1.5)	1.1 (1.0, 1.3)
Other[1]	1.0	1.0
Any mood disorder		
Māori	1.5 (1.4, 1.7)	1.2 (1.1, 1.4)
Pacific	1.1 (1.0, 1.3)	0.9 (0.8, 1.0)
Other[1]	1.0	1.0
Any substance use disorder		
Māori	3.1 (2.7, 3.5)	2.6 (2.3, 3.0)
Pacific	1.8 (1.6, 2.2)	1.5 (1.3, 1.8)
Other[1]	1.0	1.0

1 Reference population (ie, the population against which Māori and Pacific people are compared).

9.12.4 Suicidal behaviour

Analyses undertaken for chapter 7 found that rates of suicidal ideation, suicide plan and suicide attempt vary with ethnicity. Māori and Pacific people reported higher rates than the Other group for suicidal ideation (Māori, 5.4%; Pacific, 4.5%; Other, 2.8%); suicide plan (Māori, 1.8%; Pacific, 2.6%; Other, 0.8%); and suicide attempts (Māori, 1.1%; Pacific, 1.2%; Other, 0.3%). After adjusting for sociodemographic correlates, there were no ethnic variations in suicidal ideation. However, Māori and Pacific people continued to have higher rates of making suicide plans and suicide attempts.

9.13 Conclusions

Te Rau Hinengaro includes the first population survey of mental disorders in a representative population of Māori, spanning adults aged from 16.

Chapter 9 presents findings of particular relevance to Māori. Findings described are aligned with Te Rau Hinengaro's aims, which are to describe: the prevalence and pattern of mental disorder among Māori; the impact and severity of disorder among Māori; and Māori patterns of health service use for mental disorders. In addition this chapter presents findings for suicidal behaviour and summarises a range of comparisons by ethnic group. A range of other analyses describing aspects of Māori mental health could be described, but this chapter represents the first analyses related to the survey's aims pertaining to Māori. Further analyses will be reported in the future.
Findings show that mental disorders, as defined and measured in Te Rau Hinengaro, are common, with 50.7% of Māori with at least one disorder over their life until the interview, 29.5% with at least one disorder in the past 12 months and 18.3% with one disorder over the past 30 days. Multiple disorders were also common. In the past 12 months, among Māori who had at least one disorder, 55.5% had only one disorder, 25.7% had two disorders and 18.8% had three or more disorders.

Analyses of severity and impairment of role have helped to describe the impact of mental disorder among Māori. With regards to severity, a high proportion of Māori with disorders met criteria for a serious disorder (29.6%) or moderate disorder (42.6%). Mood disorders in particular were found to have high levels of severity, with 51.4% considered serious and a further 37.4% moderate. These findings indicate that the high prevalence rates among Māori are not predominantly attributed to mild disorders.

The nature and level of role impairment are also consistent with findings that suggest mental disorders are not only common among Māori, but have considerable impact on Māori with disorder.

As a cross-sectional survey, it is not possible to determine what factors cause mental disorders among Māori. However, Te Rau Hinengaro has investigated some associations with mental disorder. Findings for demographic correlates are consistent with findings for the total population, with higher rates of disorder in females, the young and those with low incomes. The relationship between mental disorders and chronic physical conditions provides a foundation to consider the impact of physical health on mental ill health in Māori.

Analyses of health service use provide information about how need associated with poor mental health is being addressed in the health and non-health sectors. Among Māori with any disorder in the past 12 months, 32.5% had some contact with a service provider. This was divided among mental health specialist services (14.6%), general medical services (20.4%) and non-healthcare providers (9.1%).

Investigation of the relationship between severity of disorder and service contact or visits provides additional evidence for considering unmet mental health need among Māori with mental disorders. It has been possible to calculate the proportion of Māori who were considered to have a disorder in the past 12 months but who had not visited any health service for their mental health needs. Of Māori with serious disorder, 52.1% had no contact within the health sector. Of Māori with moderate disorders, 74.6% had no contact, and of Māori with mild disorder 84.3% also had no contact.

Findings for suicidal behaviour among Māori have a consistent pattern compared with those for prevalence of disorders, with higher rates of suicidal behaviour among younger age groups (16–24 and 25–44 years) and females compared with older groups and males.

The samples of Māori and Pacific populations within Te Rau Hinengaro have allowed comparisons to be made between the Māori, Pacific and Other groups. The analyses undertaken reinforce the view that Māori rates of mental disorder overall and for specific disorder groups are comparatively high. At least one 12-month disorder was present in 29.5% of Māori, 24.2% of Pacific people and 19.3% of the Other group and reinforces evidence of a disproportionate burden of mental disorder among Māori.

Adjusting for age, sex and socioeconomic correlates has been important for understanding factors that may contribute to ethnic differences. Although these differences decreased after adjustment, it has been an important finding that differences often remained (see 9.12). For example, ethnicity comparisons for 12-month disorder found for substance use disorders that ethnicity differences remain significant when adjusted for age, sex and socioeconomic correlates. Analyses of lifetime risk adjusted (for age and sex) showed when comparisons are made between Māori and Others, Māori have significantly higher hazard ratios for anxiety, mood, substance use and eating disorders. Comparisons with Pacific people show Māori have significantly higher hazard ratios for mood and substance use disorders.

Ethnic comparisons for suicidal behaviour show higher Māori and Pacific rates for suicide plans and attempts (unadjusted and adjusted) compared with rates for Others.

The range of findings from Te Rau Hinengaro, describing aspects of Māori mental health, suicidal behaviour and service use, have wide-ranging implications across a range of sectors including policy, service planning and delivery, clinical practice and research.

With regards to mental health promotion and prevention in Māori, there is no single causative factor for mental disorder and this study was not primarily designed to investigate causation. The data do enable association to be made between a range of variables so the relative significance of educational qualifications or household income can be assessed. In addition, these may be assessed alongside cultural variables such as proficiency in te reo Māori, access to marae and the extent of cultural knowledge. Investigating the pattern of the relationship between ethnicity and socioeconomic circumstances will further guide options for prevention. Analyses exploring these relationships are planned.

A key finding has been the important role of general medical services and primary care in providing services for Māori with mental disorders. These data provide a platform for further exploration for enhancing public health and primary care services to address Māori mental health needs.