

Te Rau Hinengaro: The New Zealand Mental Health Survey

Chapter 10: Pacific People

Siale Foliaki, Jesse Kokaua, David Schaaf, Colin Tukuitonga

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10 Pacific People

Key results

- A total of 2,374 Pacific people were interviewed: 49.2% were Samoan; 20.7% were Cook Island Māori; 16.5% were Tongan; and 17.5% were other Pacific peoples.
- Pacific people experience mental disorders at higher levels than the general population. Twenty-five percent of Pacific people had experienced a mental disorder in the past 12 months and 46.5% had experienced a disorder at some stage during their lifetime.
- In the 12 months before the survey, 16.6% of Pacific people experienced a single disorder, 5.1% experienced two disorders and 3.3% experienced three or more disorders.
- Of Pacific people who experienced a mood disorder, 34.9% also experienced an anxiety disorder and 16.8% a substance use disorder. Of Pacific people who had a substance use disorder, 27.6% also had a mood disorder and 41.8% an anxiety disorder.
- Within the past 12 months, 5.9% of Pacific people had a serious disorder, 11.6% had a moderate disorder and 7.6% had a mild disorder.
- Pacific people had lower rates of mental health visits compared with other ethnic groups. Within the past 12 months, 25.0% of Pacific people with serious disorder had a mental health visit in the healthcare sector. The total New Zealand population with serious disorder was twice as likely to have had a mental health visit in the healthcare sector (58.0%).
- Of Pacific people aged 16–24 and 25–44, 21.1% and 20.4% respectively reported suicidal ideation over their lifetime. A suicide attempt within their lifetime was reported by 4.8% (almost 1 in 20) of Pacific people. In the past 12 months, 4.5% of Pacific people reported suicidal ideation, with 1.2% of Pacific people having made a suicide attempt.
- Of New Zealand-born Pacific people, 31.4% had a 12-month prevalence of any mental health disorder compared with 15.0% of Pacific people who migrated after the age of 18.

10.1 Introduction

10.1.1 Purpose of this chapter

This chapter analyses the results of Te Rau Hinengaro: The New Zealand Mental Health Survey with specific reference to Pacific people. It provides current epidemiological information about Pacific people that has not been previously available. In total, 2,374 Pacific people were interviewed.

To obtain sufficient numbers of Pacific people for estimating the prevalence of mental disorders a higher proportion of Pacific people were required for this survey. This was achieved by making it more likely that Pacific people would be sampled. This survey technique (called ‘oversampling’) is described in chapter 12 (see 12.5). In addition, the use of weights takes into account this method of sampling when estimating the total population prevalence. The large number of Pacific people surveyed also allowed for comparisons between the different Pacific Island groups now resident in New Zealand.

10.1.2 Content of this chapter

This chapter provides information for Pacific people on:

- Pacific participation (see 10.2)
- methodological issues for the Pacific analysis (see 10.3)
- the prevalence of mental disorders for Pacific people (see 10.4)
- comorbidity (see 10.5)
- the use of health services by Pacific people (see 10.6)
- disability related to mental disorder and Pacific people (see 10.7)
- correlates of mental disorder relevant to Pacific people (see 10.8)
- findings from intra-Pacific comparisons (see 10.9)
- findings for suicidal behaviour among Pacific people (see 10.10)
- findings for Pacific people compared with Māori and the Other composite ethnic group (see 10.11).

10.1.3 Demography of Pacific people

Pacific people make up 6.5% of the New Zealand population (Statistics New Zealand 2003). The Pacific population is growing rapidly and it is projected to increase by over 59% by 2018 (Statistics New Zealand 2003). One child in 10 is a Pacific child, but it is predicted that by 2051 this will have risen to one in five (Statistics New Zealand 2003).

The six main Pacific ethnic groups in New Zealand (ordered by size of population) are Samoan, Cook Island Māori, Tongan, Niuean, Fijian and Tokelauan, while the Tuvaluan, Society Islander and I-Kiribatian populations are increasing (Ministry of Pacific Island Affairs 2003). A growing proportion of Pacific people are descended from more than one ethnic group.

Historically, the Pacific population has grown through migration to New Zealand from neighbouring Pacific nations. However, as migration policies have changed, the continued rapid escalation is attributed to ‘natural increase’ (Cook et al 1999). Consequently, six in 10 Pacific people are born in New Zealand and Pacific people can no longer accurately be considered an ‘immigrant population’ (Tertiary Education Commission 2004).

Pacific people living in New Zealand share some important commonalities. However, it must be recognised there are disadvantages in treating the Pacific population as if it were a single, homogeneous entity (Macpherson 1996). This chapter provides information about Pacific people as a total population, known as a ‘pan-Pacific’ approach. However, ethnic comparisons are also made, providing specific information about Pacific ethnic groups and acknowledging intra-Pacific differences.

10.1.4 Mental health of Pacific people

It has long been recognised in New Zealand that a significant gap exists not only in national information about mental health disorders in the general population (Finau and Tukuitonga 1999), but more specifically in the Pacific populations now resident here (Foliaki 1997).

Previous epidemiological studies in New Zealand have had too few Pacific people to generate reliable prevalence estimates for major mental disorders (Oakley Browne et al 1989; Wells et al 1989a). The international literature, however, points towards migrants having a lower lifetime prevalence of mental disorders (Vega et al 1998), but immigrants have higher rates of hospitalisation for psychotic disorders, demonstrated in the United Kingdom (Harrison et al 1997), the Netherlands (Selten et al 1997; Selten et al 2001) and Sweden (Zolkowska et al 2001). National data on acute admissions of Pacific people to psychiatric and forensic institutions support these findings. In 2005, the Ministry of Health reported that Pacific people used community mental health services less, but had higher rates of admission to adult acute inpatient mental health units and forensic services (Ministry of Health 2005b).

What little is known about the prevalence of mental disorders among Pacific people in New Zealand has been drawn from the few prevalence studies performed in the Island nations (Allen and Laycock 1997) or from Pacific people’s use of mental health services in New Zealand (Bridgeman 1996; Ministry of Health 2005b). In the absence of community data, admission rates to inpatient facilities have been relied on to estimate the burden of mental disorder in the Pacific population (Bridgeman 1996).

Before 1999 utilisation rates of mental health services by ethnic groups were seriously undercounted, because of the poor recording of ethnicity in official data sets. This led to inaccurate reporting of mental health service use among Pacific people, and also contributed to the perception that Pacific people do not use mental health services as much as other people. This encouraged the widely held view that Pacific people experience lower rates of mental illness compared with other groups in New Zealand (Bridgeman 1996).

Pacific people are characterised by a history of migration to New Zealand from Pacific Island nations. This has resulted in experiences of rapid acculturation and sociocultural change. Significantly, rapid sociocultural change has also been linked to concerns about mental illness among Pacific people and linked to the increase of risk-taking behaviour, such as drug and alcohol abuse (Bridgeman 1996; Ministry of Health 2005b).

The international literature indicates that social adversity is commonly associated with increased risk for psychiatric disorders (Dohrenwend 2000). It is well established that the relatively low socioeconomic status of Pacific people is an important determinant of poor health outcomes (Corbett 1999). Pacific people tend to be geographically clustered in low socioeconomic areas, often living in households with extended families and low incomes. In 2003 Pacific people were reported to have a real median annual income of \$14,600, with 61% earning less than \$20,000 (Statistics New Zealand 2003).

Evidence demonstrates health disparities between Pacific people and non-Pacific populations of New Zealand (Mental Health Commission 2004a; Ministry of Health 2005b).

Community studies in the United States (US) have not found higher rates of psychiatric disorders among disadvantaged racial and ethnic minority groups (Kessler et al 1994; Somervell et al 1989). In addition, in New Zealand rates of mental health service use appear to be lower in areas of relative wealth than in areas of high socioeconomic deprivation (Ministry of Health 2005b).

10.1.5 Te Rau Hinengaro: providing Pacific mental health information

Information about Pacific people and their mental health is lacking in New Zealand. Te Rau Hinengaro provides an important opportunity to analyse the prevalences of the major mental disorders and correlates of mental health among Pacific people. Importantly, the oversampling of Pacific people has also allowed ethnic-specific differences in psychiatric disorders among the major Pacific groups to be established. (For detailed information about oversampling, see 12.5.3.)

Te Rau Hinengaro also allows for analysing the severity and impact of mental disorders on Pacific individuals and their resulting service utilisation. This information will greatly enhance the capacity for improved planning and delivery of health services to address the various unmet mental health needs of Pacific people and their families.

10.2 Pacific participation

10.2.1 Pacific participation in the survey

An important feature of Te Rau Hinengaro was a decision at the outset to provide reliable estimates of the prevalence of mental disorders among Pacific people living in New Zealand. To ensure valid input from Pacific people four levels of active involvement occurred:

- a team of Pacific researchers
- a Pacific reference group to provide community input into the work undertaken
- Pacific interviewers included in the interviewing team
- Pacific people as survey participants: an oversample of Pacific participants was planned to ensure the sample would be large enough to provide reasonably precise estimates of prevalence and service use (see 12.5.3) and several community-level actions were taken to encourage participation by Pacific people.

10.2.2 Profiles of Pacific participants

In total 2,374 Pacific people were interviewed in Te Rau Hinengaro: 49.2% were Samoan; 20.7% were Cook Island Māori; 16.5% were Tongan; and 17.5% were from other Island groups. (Some participants were counted in each Island group they indicated.) Twenty-one percent (21.2%) of Pacific people spoke only English, 74.2% were multilingual and 4.4% spoke only their native language. The demographic characteristics of the Pacific sample closely reflect those of the Pacific groups in the wider New Zealand population.

There were slightly more female (52.0%) than male participants. The Pacific population was also younger than the total New Zealand population: 26.7% were aged 16–24 (compared with 15.7% for the total New Zealand population). The Pacific sample also had very few older people (5.5% compared with 15.1% for the total sample). Forty-two percent (42.1%) of the Pacific sample were New Zealand born and 11.8% were aged under 12 when they migrated to New Zealand.

Under half the median income was earned by 28.7% of Pacific people compared with 18.5% of the total New Zealand population. No educational qualification was held by 24.6% (almost one-quarter) of Pacific people compared with 18.5% of the total New Zealand population. Conversely, 28.7% of Pacific people had both a school and post-school qualification compared with 44.4% of the total New Zealand population.

Pacific people tended to live in larger households than other participants. One-quarter (23.8%) of Pacific households had more than seven people, compared with 3.6% overall. Pacific people surveyed lived in areas designated as being of high deprivation according to the small area descriptor of socioeconomic deprivation (NZDep2001). Fifty-nine percent of Pacific people lived in areas of high deprivation (ie, NZDep2001 deciles 9 and 10) compared with 18.0% overall.

10.3 Methodological issues for the Pacific analysis

10.3.1 Prioritisation of ethnic groups

In total 2,374 Pacific people were interviewed in Te Rau Hinengaro. Of these, 138 people were of mixed Pacific and Māori ethnic groups. In ethnic group comparisons in all other chapters of this report these 138 people have been excluded from the Pacific group and included in the Māori group. This is consistent with the priority ethnic group methodology used in official New Zealand statistics since 1991 (Statistics New Zealand 1997). For more information about prioritised ethnicity, see 12.12.1. Except for the analysis in 10.11, the analyses in the other sections of this chapter include all 2,374 Pacific participants. Section 10.11 compares Pacific, Māori and the Other composite ethnic group combined, as in the other chapters.

10.3.2 Adjusting for confounding variables

In 10.11 comparisons are made between Pacific, Māori and the Other group.

It is important to note that prevalences are presented here in three ways:

- the ‘unadjusted’ or actual prevalence rates for each group
- the prevalences as they would look if each ethnic group had the same age and sex structures (ie, the prevalences adjusted for age and sex)
- the prevalences as they would look if each ethnic group had the same age and sex structures and education and income levels (ie, the prevalences adjusted for age, sex, equivalised household income and educational qualifications).

Thus, the analyses look first at how much of the difference between ethnic groups is due to differences in the age and sex structure and, secondly how much is due to socioeconomic correlates. For more information about the method of adjustment, see 12.10.2.

10.4 Prevalence of mental disorders for Pacific people

This section begins with an analysis of prevalence rates of mental disorders among Pacific people, focusing on two time periods: prevalence over the past 12 months and prevalence over the lifetime. This is followed by an examination of the severity of disorders as well as an analysis of lifetime risk. Information about comorbidity, suicidal behaviour, use of mental health services, disability and correlates of mental illness for Pacific people is provided. The analyses are completed with comparisons of intra-Pacific ethnic differences.

10.4.1 Period prevalences of mental disorders for Pacific people

Table 10.1 shows that 46.5% of Pacific people had experienced a DSM-IV CIDI 3.0 mental disorder (see 1.10.1 and 1.10.2.) at some stage during their lifetime compared with 39.5% of the overall New Zealand population. Over the past 12 months 25.0% of Pacific people experienced a disorder compared with 20.7% of the total New Zealand population.

The most commonly reported lifetime disorders were anxiety disorders (27.7%), followed by mood disorders (19.0%) and substance use disorders (17.7%). Eating disorders among Pacific people were much less common over the lifetime (4.4%).

In the 12 months leading up to the survey, 16.2% of Pacific people experienced an anxiety disorder compared with 14.8% of the total New Zealand population. In addition, 8.6% of Pacific people experienced a mood disorder compared with 7.9% of the total New Zealand population, and 1.5% of Pacific people had an eating disorder, which was similar to that for the total New Zealand population. Slightly over 5% (5.3%) of Pacific people had a substance use disorder compared with 3.5% for the total New Zealand population.

In the 12 months before the survey 16.6% of Pacific people had a single disorder, 5.1% had two disorders and 3.3% had three or more disorders. This compares with 13.0%, 4.4% and 3.3% respectively for the total New Zealand population. In the lifetime of Pacific people 23.4% experienced a single disorder, 12.4% two disorders and 10.7% three or more disorders. This compares with 20.0%, 9.9% and 9.7% respectively for the total New Zealand population.

Table 10.1: Lifetime and 12-month prevalences of mental disorders for Pacific people

| Disorder groups ¹ | Lifetime prevalence % (95% CI) | Twelve-month prevalence % (95% CI) |
|---|--------------------------------------|--|
| Anxiety disorders | | |
| Panic disorder | 3.0 (2.2, 4.0) | 1.7 (1.2, 2.4) |
| Agoraphobia without panic | 2.0 (1.3, 3.1) | 1.2 (0.7, 1.9) |
| Specific phobia | 12.8 (10.9, 15.0) | 8.2 (6.7, 10.0) |
| Social phobia | 10.0 (8.3, 12.0) | 5.8 (4.6, 7.5) |
| Generalised anxiety disorder | 3.6 (2.7, 4.7) | 1.4 (1.0, 2.0) |
| Post-traumatic stress disorder ² | 6.6 (5.0, 8.5) | 2.4 (1.6, 3.4) |
| Obsessive–compulsive disorder ² | 1.1 (0.6, 1.8) | 0.7 (0.3, 1.3) |
| Any anxiety disorder ² | 27.7 (24.7, 30.9) | 16.2 (13.9, 18.8) |
| Mood disorders | | |
| Major depressive disorder | 10.5 (8.6, 12.7) | 4.9 (3.6, 6.8) |
| Dysthymia | 1.1 (0.7, 1.7) | 0.5 (0.3, 0.9) |
| Bipolar disorder | 8.3 (6.6, 10.3) | 3.7 (2.8, 4.8) |
| Any mood disorder | 19.0 (16.4, 21.8) | 8.6 (6.8, 10.9) |
| Substance use disorders | | |
| Alcohol abuse | 17.0 (14.6, 19.6) | 3.7 (2.8, 5.0) |
| Alcohol dependence | 7.6 (6.1, 9.6) | 3.4 (2.4, 4.7) |
| Drug abuse | 6.1 (4.7, 8.0) | 1.1 (0.7, 1.8) |
| Drug dependence | 1.9 (1.3, 2.8) | 0.7 (0.4, 1.3) |
| Marijuana abuse ³ | 5.8 (4.5, 7.6) | 1.1 (0.6, 1.7) |
| Marijuana dependence ³ | 1.5 (1.0, 2.2) | 0.4 (0.2, 0.9) |
| Any alcohol disorder | 17.0 (14.7, 19.6) | 4.7 (3.6, 6.2) |
| Any drug disorder | 6.2 (4.7, 8.2) | 1.5 (1.0, 2.3) |
| Any substance use disorder | 17.7 (15.4, 20.4) | 5.3 (4.1, 6.8) |
| Eating disorders | | |
| Bulimia ² | 3.9 (2.7, 5.5) | 1.5 (0.7, 2.6) |
| Any eating disorder ² | 4.4 (3.1, 6.2) | 1.5 (0.7, 2.6) |

| Disorder groups ¹ | Lifetime prevalence % (95% CI) | Twelve-month prevalence % (95% CI) |
|------------------------------|--------------------------------------|--|
| Any disorder ² | 46.5 (42.5, 50.5) | 25.0 (21.8, 28.4) |
| Any disorder ² | | |
| One disorder ² | 23.4 (20.4, 26.7) | 16.6 (13.9, 19.6) |
| Two disorders ² | 12.4 (10.3, 14.9) | 5.1 (4.0, 6.5) |
| Three disorders ² | 10.7 (8.7, 13.0) | 3.3 (2.5, 4.4) |

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

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

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

10.4.2 Prevalence and severity of disorders in the past 12 months, by age and sex

Te Rau Hinengaro estimates that 25.0% of Pacific people will meet criteria for a DSM-IV mental disorder in a 12-month period. This is slightly higher than for the total New Zealand population, but lower than some prevalence estimates in overseas communities (Kessler et al 1994).

Table 10.2 indicates that younger Pacific people are more likely to experience any mental disorder compared with older Pacific people ($p = .009$). Younger Pacific people were also more likely to experience a mental disorder classified as serious than older Pacific people ($p = .04$). This is consistent with findings for the overall New Zealand population.

The survey found that 26.7% (23.0, 31.7) of Pacific females were classified as meeting criteria for disorder in the past 12 months compared with 22.0% (18.1, 28.0) of Pacific males, but this result was not statistically significant. No statistical difference existed between Pacific males and Pacific females who reported having a serious disorder (5.4% (3.8, 7.6) compared with 6.4% (4.8, 8.4)).

Table 10.2: Twelve-month prevalence of disorder and severity for Pacific people, by age group^{1,2}

| Age group (years) | Twelve-month prevalence % (95% CI) | Percentage with serious disorder % (95% CI) |
|-------------------|--|---|
| 16–24 | 29.0 (22.0, 37.0) | 7.5 (4.4, 11.9) |
| 25–44 | 27.1 (22.7, 31.9) | 6.1 (4.6, 8.0) |
| 45–64 | 17.3 (13.4, 22.1) | 4.2 (2.2, 7.0) |
| 65 and over | 16.1 (8.4, 26.9) | 2.3 (0.2, 8.4) |

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

2 For severity see 2.3 and 12.12.3.

10.4.3 Lifetime prevalence and lifetime risk

The lifetime prevalence is the prevalence of mental illness occurring in a group of people across their lifetime up to the time they were interviewed. (Overall lifetime prevalence estimates for individual disorders are presented in Table 4.1.) As shown in Table 10.1, 46.5% of Pacific people had experienced a mental illness in their lifetime at the time of interview. Similar to the findings for 12-month prevalence, age continues to be important for lifetime prevalence, with higher rates of disorders in the younger age groups ($p < .0001$).

When broken down by diagnosis there are significant differences between the sexes (Table 10.3). Pacific females have higher anxiety and mood disorders than males ($p < .0001$) and Pacific males have higher substance use disorders than females ($p < .0001$).

Table 10.3: Lifetime prevalence of mental disorders¹ for Pacific people, by age and sex

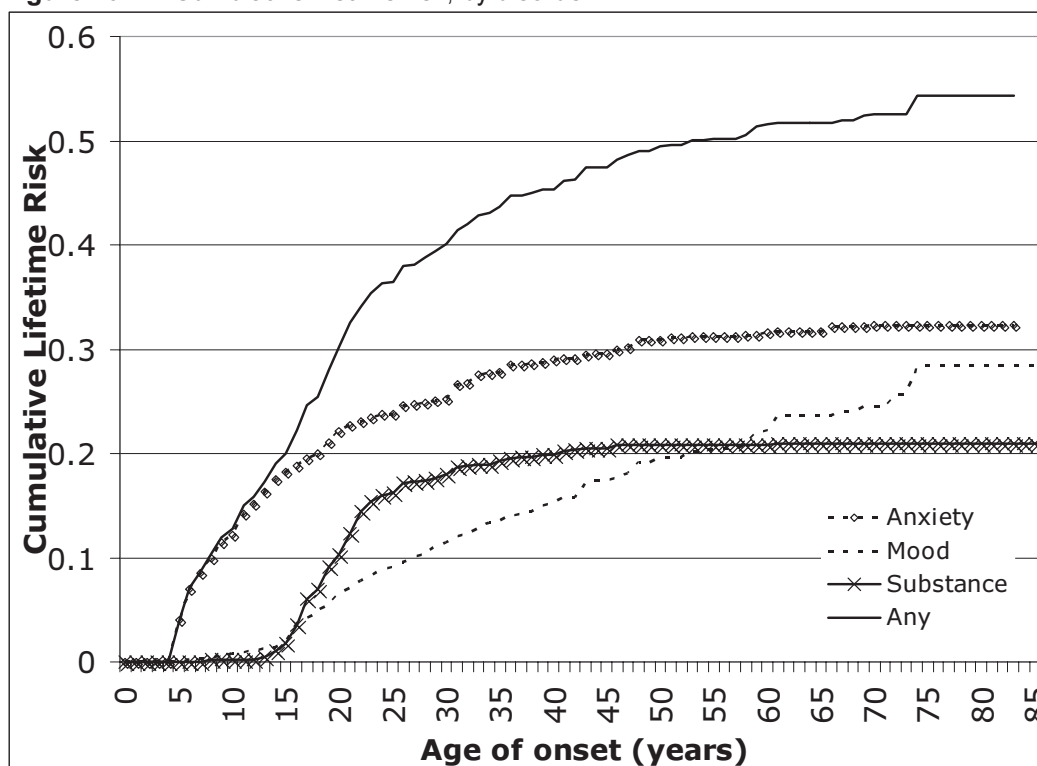
| | Total % (95% CI) | Age group (years) % (95% CI) | | | | Sex % (95% CI) | |
|--------------------------------------|------------------------|------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | | 16–24 | 25–44 | 45–64 | 65 and over | Male | Female |
| Any anxiety disorder ² | 27.7 (24.7, 30.9) | 29.1 (22.7, 36.3) | 32.3 (27.6, 37.5) | 18.6 (14.5, 23.6) | 15.7 (8.0, 26.7) | 24.6 (19.9, 29.9) | 30.7 (26.1, 35.7) |
| Any mood disorder | 19.0 (16.4, 21.8) | 18.1 (12.9, 24.8) | 22.7 (19.0, 26.9) | 13.2 (9.6, 18.0) | 13.4 (7.0, 22.3) | 14.8 (11.3, 19.2) | 22.8 (19.8, 26.1) |
| Any substance use disorder | 17.7 (15.4, 20.4) | 19.6 (15.4, 24.7) | 22.2 (18.6, 26.3) | 9.2 (6.6, 12.8) | 3.5 (1.3, 7.5) | 24.4 (20.3, 29.1) | 11.6 (9.4, 14.1) |
| Any eating disorder ² | 4.4 (3.1, 6.2) | 3.0 (1.0, 6.7) | 6.6 (4.2, 10.1) | 2.3 (0.9, 4.6) | 0.9 (0.0, 6.3) | 2.8 (1.5, 4.8) | 5.9 (3.8, 9.2) |
| Any disorder ² | 46.5 (42.5, 50.5) | 44.0 (35.8, 52.6) | 57.2 (50.5, 63.6) | 30.0 (23.9, 37.0) | 29.0 (17.3, 43.3) | 46.7 (40.3, 53.3) | 46.2 (40.4, 52.1) |
| No disorder ² | 53.5 (49.5, 57.5) | 56.0 (47.4, 64.2) | 42.8 (36.4, 49.5) | 70.0 (63.0, 76.1) | 71.0 (57.0, 81.8) | 53.3 (46.7, 59.7) | 53.8 (47.9, 59.6) |
| One disorder ² | 23.4 (20.4, 26.7) | 20.3 (14.6, 27.5) | 28.1 (23.1, 33.6) | 17.4 (12.6, 23.6) | 21.8 (12.2, 34.3) | 24.5 (19.5, 30.2) | 22.4 (18.3, 27.0) |
| Two disorders ² | 12.4 (10.3, 14.9) | 14.0 (9.5, 20.1) | 15.3 (12.0, 19.3) | 6.4 (3.9, 9.7) | 2.5 (0.3, 8.8) | 11.5 (8.4, 15.3) | 13.3 (10.2, 17.2) |
| Three or more disorders ¹ | 10.7 (8.7, 13.0) | 9.8 (5.8, 15.1) | 13.8 (10.8, 17.5) | 6.3 (3.9, 9.6) | 4.7 (1.0, 13.2) | 10.8 (7.7, 15.0) | 10.5 (8.4, 13.1) |

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.

Estimated lifetime risk is a projected estimate of the proportion of people in the population who would ever have experienced a disorder by the end of their lifetime (Kessler et al 1994) or by a specific age such as 75 years (see 4.1.3). Figure 10.1 shows the cumulative lifetime risk of mental illness occurring among Pacific people, by age. From the age of onset these curves increase as more individuals experience a disorder. They do not convey any information about continued disorder or repeated episodes.

There are clear differences in the pattern of onset between disorder groups. For example, the onset of mood disorders can occur throughout adult life, with 6.4% of Pacific people experiencing a mood disorder by age 20, 15.2% by age 40 and 22.3% by age 60. In contrast, the onset of anxiety disorders in Pacific people often occurs earlier, between ages 5 and 15. For substance use disorders, a very marked period of onset exists between 15 and 25 years with almost no further onset after age 40.

Figure 10.1: Cumulative lifetime risk, by disorder

10.5 Comorbidity

10.5.1 Comorbidity among Pacific people

The term ‘comorbidity’ refers to the co-occurrence of two or more mental disorders within one individual or the co-occurrence of a mental disorder and a physical disorder within one individual. Comorbidity, particularly among mental health service clients, has long been an issue (Andrews 1996). The most prominent is the comorbidity of clients with a mental illness and a substance use disorder, leading to the development of specialist services for dual diagnosis: substance abuse and mental illness. It is also well documented that many people experiencing a chronic physical condition also experience a mental illness (Davidson et al 2001).

Table 10.1 shows the proportion of Pacific people with one disorder (16.6%), two disorders (5.1%), three or more disorders (3.3%) over the past 12 months. Table 10.4 shows further detail about mental comorbidity among Pacific people in New Zealand. It shows that the patterns of comorbidity seen in the total New Zealand population are similar to those seen for Pacific people. Some differences exist, however, with Pacific people who have anxiety and mood disorders experiencing lower rates of comorbid substance abuse than the total New Zealand population.

Table 10.4: Percentage of comorbid mental disorder¹ for Pacific people in the past 12 months

| Disorder group | Any anxiety disorder ² % (95% CI) | Any mood disorder % (95% CI) | Any substance use disorder % (95% CI) |
|-----------------------------------|--|------------------------------------|---|
| Any anxiety disorder ² | | 18.6 (14.4, 23.7) | 13.7 (9.5, 19.4) |
| Any mood disorder | 34.9 (26.0, 44.9) | | 16.8 (10.5, 25.7) |
| Any substance use disorder | 41.8 (30.2, 54.3) | 27.6 (17.9, 40.0) | |
| Any disorder ² | 64.8 (57.9, 71.1) | 34.6 (28.5, 41.2) | 21.2 (16.5, 26.8) |

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.

10.5.2 Comorbidity between substance use disorders among Pacific people

Table 10.5 provides more detail on comorbidity within the substance use category. From this we see that comorbidity of substance use disorders is common, in particular the overlap of alcohol and drug dependence. Some 34.3% of those experiencing alcohol dependence also reported drug abuse symptoms in the past 12 months, and 28.6% met criteria for drug dependence compared with 28.1% of the total New Zealand population (see Table 5.3). For those with drug use disorders, even greater proportions had alcohol use comorbidity. Fifty-four percent (53.7%) of those with drug dependence also reported alcohol abuse symptoms in the past 12 months, and 57.3% of those with drug dependence were alcohol dependent.

Table 10.5: Percentage of Pacific people with 12-month comorbid substance use disorders¹

| | 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, 49.6) | 21.3 (15.1, 29.2) | 43.7 (35.3, 52.6) |

1 DSM-IV CIDI 3.0 substance use disorders, see 12.4.1.

10.5.3 Comorbidity between chronic physical condition and mental disorders

For New Zealand overall, Table 5.9 shows that people with chronic physical conditions experience higher rates of mental disorders than people without physical conditions. Table 10.6 shows a similar pattern among Pacific people with chronic conditions particularly for anxiety and mood disorders, although confidence intervals are wide because of the small numbers with some physical conditions.

Table 10.6: Prevalence of 12-month mental disorder¹ among Pacific people with chronic physical conditions, adjusted for age and sex

| Chronic physical condition | Any anxiety disorder ² % (95% CI) | Any mood disorder % (95% CI) | Any substance use disorder % (95% CI) | Any disorder ² % (95% CI) |
|-------------------------------------|--|------------------------------------|---|--|
| Chronic pain ³ | 23.7 (18.4, 28.9) | 12.5 (8.6, 16.5) | 6.9 (4.0, 9.8) | 35.2 (28.2, 42.1) |
| Cardiovascular disease | 26.9 (13.4, 40.4) | 11.6 (2.9, 20.3) | 4.8 (0.0, 12.4) | 36.0 (20.5, 51.5) |
| High blood pressure | 26.9 (17.1, 36.8) | 11.6 (5.0, 18.1) | 3.9 (0.0, 8.4) | 33.6 (22.8, 44.5) |
| Respiratory conditions ⁴ | 16.3 (11.2, 21.5) | 19.4 (11.3, 27.5) | 8.5 (3.9, 13.1) | 33.0 (23.1, 42.9) |
| Diabetes | 22.7 (7.0, 38.5) | 10.2 (2.7, 17.6) | 1.9 (0.0, 4.4) | 30.1 (14.1, 46.0) |
| Cancer | 24.9 (7.4, 42.3) | 23.0 (6.0, 40.1) | 4.7 (0.0, 12.0) | 44.0 (22.7, 65.4) |
| No chronic condition | 13.0 (9.8, 16.2) | 5.8 (3.9, 7.6) | 4.8 (3.1, 6.6) | 19.8 (15.9, 23.7) |

1 DSM-IV CIDI 3.0 disorders, see 12.4.1.

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

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

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

10.6 Health service use

In 2001, according to Ministry of Health reports, about 1.8% of Pacific people used a mental health service compared with 2.2% of the total New Zealand population (Ministry of Health 2005b). Compared with the total population, Pacific people used community mental health services less often, were slightly more likely to use acute inpatient services, and 70% more likely to enter forensic services (Ministry of Health 2005b). In addition, although the number of acute episodes per Pacific client tends to be less than the number per New Zealander, the length of stay in an inpatient unit per episode of illness is about four days longer (Ministry of Health 2005b).

Furthermore, while Pacific people are less likely than the total population to use alcohol or other drug services, Pacific people aged 15–19 appear to use these services as much as other New Zealanders aged 15–19.

Te Rau Hinengaro shows only small differences between Pacific people and the total New Zealand population with regard to the prevalence of serious mental disorder (5.9% compared with 4.7% (4.2, 5.2)). However, Pacific people with the most serious disorders were less likely to have had a mental health visit; that is, visited any health service for a mental health reason.

Table 10.7 shows 25.0% of Pacific people who had experienced a serious mental disorder had visited any health service for their mental health reason compared with 58.0% (53.3, 62.6) of the total New Zealand population. Of Pacific people who had experienced a moderate mental disorder, 26.5% had a mental health visit compared with 36.5% (32.9, 40.4) of the total New Zealand population.

The lower estimates of Pacific people receiving treatment for severe and moderate mental disorders support previously documented evidence showing the rate of Pacific people in New Zealand receiving treatment was 35% lower than the rate for the total New Zealand population (Ministry of Health 2005b).

The results above show that Pacific people's mental health visits are low. Chapter 9 shows that when comparing across Pacific, Māori and Other (ie, non-Māori non-Pacific) ethnic groups for any visit for a mental health reason, significant differences exist across the three ethnic groups (Baxter et al in press). Without adjustment, 25.4% (19.4, 31.4) of Pacific people with a disorder made a mental health visit compared with 32.5% (28.3, 36.7) of Māori and 41.1% (38.1, 44.1) of Others. For pairwise comparisons, Pacific people have lower percentages of visits than Others ($p < .0001$); and, while Pacific people have lower percentages of visits than Māori, this difference approaches, but does not reach, statistical significance ($p = .06$).

Adjustment by age and sex alone or by age, sex, educational qualification and equivalised household income leads to minimal changes in these percentages and no change in the significance of the difference between them. This means that, unlike the pattern for prevalence, some reason exists for Pacific people not using health services for mental health reasons that is not accounted for by the Pacific population structure.

Table 10.7: Severity, days out of role and percentage with a mental health visit in the past 12 months among Pacific people

| | Twelve-month disorder ¹ % (95% CI) | | | |
|---|---|----------------------|---------------------|----------------------|
| | Serious | Moderate | Mild | None |
| Prevalence (%) | 5.9 (4.7, 7.3) | 11.6 (9.2, 14.5) | 7.6 (6.0, 9.4) | 75.0 (71.6, 78.2) |
| Mean days out of role due to disorder | 64.0 (41.7, 86.2) | 23.4 (10.5, 36.2) | 1.3 (0.0, 3.1) | 7.5 (2.6, 12.5) |
| Percentage with at least one mental health visit in the healthcare sector (%) | 25.0 (16.9, 35.4) | 26.5 (18.0, 37.1) | 12.9 (6.1, 23.1) | 4.3 (3.1, 5.9) |

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

Table 10.8 shows the services used by Pacific people with disorder compared with Pacific people without a disorder. It also shows that Pacific people with a serious disorder were no more likely to use health services as Pacific people with a moderate disorder.

Table 10.8: Twelve-month mental health service use in separate service sectors, by 12-month anxiety, mood, substance use and eating disorders among Pacific people

| | Healthcare % (95% CI) | | | | | Non-healthcare % (95% CI) | | | Any service use % (95% CI) |
|---|-----------------------------|--------------------------------|------------------------------|------------------------------|-------------------------|---------------------------------|--|-----------------------------|----------------------------------|
| | Mental health specialty | | | General medical ¹ | Any healthcare provider | Human services | Comple-mentary and alternative medicine ² | Any non-healthcare provider | |
| | Psychiatrist | Other mental health specialist | Any mental health specialist | | | | | | |
| Type of disorder group³ | | | | | | | | | |
| Any anxiety disorder | 3.5 (1.6, 6.8) | 5.9 (2.8, 10.8) | 8.6 (5.3, 13.8) | 14.2 (10.0, 19.7) | 19.5 (14.6, 25.6) | 2.6 (1.3, 4.7) | 4.7 (2.0, 9.2) | 6.9 (3.9, 11.4) | 22.2 (17.0, 28.5) |
| Any mood disorder | 5.3 (1.5, 13.1) | 7.9 (4.2, 13.4) | 12.1 (6.4, 20.2) | 25.5 (16.5, 37.1) | 31.8 (22.3, 43.1) | 3.8 (1.7, 7.2) | 11.1 (3.0, 26.5) | 14.1 (6.4, 28.2) | 36.1 (26.4, 47.0) |
| Any substance use disorder | 9.7 (2.5, 23.7) | 8.3 (3.4, 16.2) | 16.8 (7.7, 30.0) | 17.9 (9.5, 29.5) | 31.8 (20.9, 45.1) | 5.0 (1.9, 10.5) | 6.3 (1.4, 16.9) | 10.2 (4.2, 20.0) | 35.6 (24.8, 48.2) |
| Any eating disorder | 1.0 (0.0, 15.0) | 5.0 (0.3, 21.3) | 5.0 (0.3, 21.3) | 11.0 (2.2, 29.5) | 11.0 (2.2, 29.5) | 0.0 (0.0, 10.9) | 2.9 (0.0, 18.2) | 2.9 (0.0, 18.2) | 11.0 (2.2, 29.5) |
| Composite | | | | | | | | | |
| Any disorder | 3.7 (1.8, 6.9) | 6.0 (3.7, 9.5) | 9.0 (6.1, 13.2) | 16.2 (11.8, 21.7) | 22.0 (17.1, 27.9) | 2.8 (1.6, 4.5) | 5.6 (2.8, 11.0) | 8.0 (4.8, 13.0) | 25.1 (20.0, 31.1) |
| No disorder | 0.8 (0.3, 1.7) | 0.8 (0.3, 1.6) | 1.4 (0.7, 2.4) | 3.5 (2.5, 5.1) | 4.3 (3.1, 5.9) | 1.1 (0.5, 2.1) | 0.3 (0.0, 0.9) | 1.3 (0.6, 2.3) | 5.3 (3.9, 7.0) |
| Total sample | 1.4 (0.8, 2.2) | 1.9 (1.3, 2.7) | 3.0 (2.2, 4.0) | 6.5 (5.2, 8.1) | 8.2 (6.8, 10.0) | 1.3 (0.9, 2.0) | 1.8 (1.0, 3.3) | 3.0 (2.0, 4.4) | 9.7 (8.2, 11.5) |
| Severity⁴ | | | | | | | | | |
| None | 0.8 (0.3, 1.7) | 0.8 (0.3, 1.6) | 1.4 (0.7, 2.4) | 3.5 (2.5, 5.1) | 4.3 (3.1, 5.9) | 1.1 (0.5, 2.1) | 0.3 (0.0, 0.9) | 1.3 (0.6, 2.3) | 5.2 (3.9, 7.0) |
| Serious | 8.6 (2.3, 20.8) | 8.0 (4.3, 13.4) | 15.7 (8.1, 26.4) | 13.6 (8.2, 20.7) | 25.0 (16.9, 35.4) | 4.5 (1.9, 9.0) | 8.8 (2.6, 20.5) | 12.5 (5.5, 23.3) | 29.9 (20.8, 41.1) |
| Moderate | 2.9 (1.2, 5.8) | 5.4 (2.4, 10.3) | 7.2 (3.7, 12.4) | 23.2 (15.1, 33.9) | 26.5 (18.0, 37.1) | 3.1 (1.3, 6.0) | 6.1 (1.2, 17.7) | 8.7 (2.9, 19.0) | 29.4 (20.7, 40.0) |
| Mild | 1.2 (0.1, 5.5) | 5.3 (0.7, 17.3) | 6.5 (1.4, 17.9) | 7.4 (3.6, 13.2) | 12.9 (6.1, 23.1) | 1.1 (0.1, 4.3) | 2.5 (0.6, 6.5) | 3.5 (1.2, 7.9) | 15.0 (7.8, 25.2) |

1 The general medical sector includes nurses and other healthcare professionals as well as doctors.

2 CAM includes self-help groups.

3 DSM-IV CIDI 3.0 disorders with hierarchy.

4 For severity, see 2.3 and 12.12.3.

10.7 Disability

Chapter 6 explains how the World Health Organization's Disability Assessment Scale II (WHO-DAS-II) has been used to calculate the number of days of impairment and shows how these were used to compare the number of days out of role in the past 30 days.

Table 10.9 shows the results for each of the four questions that make up the role impairment domain of the WHO-DAS-II.

The proportion of the Pacific people who reported 1–5 or six or more days completely out of role was 16.8% (11.2% plus 5.6%); 17.1% reported days when the amount accomplished was cut down, 13.2% reported days when quality was reduced and 15.4% reported days when role performance took extreme effort. A smaller proportion of the population reported days completely out of role due to mental health problems (5.2%), with at least 8.6% reporting days cut down and 8.2% days where it took extreme effort due to mental health problems. Presumably much of the impairment due to non-mental health problems is the result of the high prevalence of relatively minor physical ailments such as colds and influenza.

Table 10.9: Distribution of the number of days in the past 30 days with role impairment for Pacific people due to health problems, in total and specifically attributed to mental health problems^{1,2}

| | | 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 | 83.2 (80.2, 85.8) | 11.2 (8.9, 14.1) | 5.6 (4.4, 7.1) |
| | Mental health | 94.9 (93.2, 96.2) | 3.9 (2.8, 5.4) | 1.3 (0.7, 2.3) |
| Days cut down amount | All health | 82.9 (79.9, 85.5) | 10.7 (8.5, 13.3) | 6.4 (5.0, 8.3) |
| | Mental health | 91.5 (89.0, 93.5) | 6.7 (4.9, 9.0) | 1.9 (1.1, 3.2) |
| Days cut back on quality ³ | All health | 86.8 (84.2, 89.0) | 8.3 (6.5, 10.6) | 4.9 (3.8, 6.4) |
| Days it took extreme effort | All health | 84.6 (81.8, 87.0) | 9.7 (7.8, 12.1) | 5.7 (4.4, 7.4) |
| | Mental health | 91.8 (89.5, 93.6) | 7.0 (5.3, 9.2) | 1.2 (0.7, 2.1) |

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

10.8 Correlates of mental illness

10.8.1 Socioeconomic correlates

Education and income

Table 10.10 shows that for Pacific people neither educational qualifications nor equivalised household income had a significant impact on the prevalence ($p = .4$ and $p = .5$, respectively) or severity of mental disorder ($p = .1$ and $p = .2$). This contrasts with overseas studies that tend to support Australian findings that poorer groups in society experience higher prevalences of mental illness (Dohrenwend 2000). However, it is indirectly consistent with the results shown below by geographic deprivation.

Deprivation

In New Zealand the use of mental health services has been reported as higher among Pacific people who live in areas with low NZDep2001 scores (ie, in relatively less deprived areas). This differs from the total New Zealand population whereby people living in low NZDep2001 areas use fewer mental health services (Ministry of Health 2005b).

Te Rau Hinengaro shows that 12-month prevalence rates appear higher among Pacific people living in areas of low deprivation compared with Pacific people living in areas of high deprivation, although this result was not statistically significant ($p = .3$).

Table 10.10: Socioeconomic correlates, by 12-month prevalence, severity and mental health visits for Pacific people

| | Disorders % (95% CI) | | |
|--|---|------------------------------------|--|
| | Twelve-month prevalence ^{2,3} | Serious disorder ^{2,3} | Made a mental health visit ⁴ |
| Educational qualification¹ | | | |
| None | 25.6 (19.3, 33.1) | 5.4 (3.3, 8.1) | 4.2 (1.4, 9.5) |
| School or post-school only | 25.9 (21.7, 30.7) | 7.0 (5.1, 9.5) | 12.4 (7.4, 20.1) |
| Both school and post-school | 22.7 (17.8, 28.6) | 4.4 (2.6, 7.0) | 7.3 (3.1, 14.2) |
| Equivalent household income¹ | | | |
| Under half of median | 29.9 (23.5, 37.2) | 6.9 (4.8, 10.0) | 9.9 (4.8, 17.5) |
| Half median to median | 21.9 (17.7, 26.8) | 5.3 (3.4, 7.8) | 9.6 (4.4, 17.6) |
| Median to one and a half times median | 24.1 (17.9, 31.6) | 4.9 (2.4, 8.7) | 8.6 (2.0, 22.4) |
| One and a half times median and over | 22.2 (15.4, 31.0) | 6.0 (2.7, 11.1) | 2.9 (0.3, 11.3) |
| Total | 25.0 (21.8, 28.4) | 5.9 (4.7, 7.3) | 9.0 (6.1, 13.2) |

1 Sociodemographic correlates are defined in 12.12.1.

2 DSM-IV CIDI 3.0 disorders, see 12.4.1. For severity, see 2.3 and 12.12.3.

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

4 Visit to any mental health specialist by those with 12-month mental disorder.

10.8.2 Migration

There have been no New Zealand-based migration studies undertaken on the prevalence of mental disorder among Pacific immigrants. Most studies on the prevalence of mental illness among migrant populations have been carried out overseas. A US-based prevalence study of Hispanic migrants showed 12-month prevalence rates of 32% for any disorder, 21% for anxiety disorders, 13% for mood disorders and 11% for substance abuse and dependence. This compared with 32%, 19%, 11% and 12% respectively for the non-Hispanic white population (Breslau et al 2005).

Table 10.11 shows a significant difference between 12-month prevalence rates of Pacific people depending on whether they were born in New Zealand or migrated from the Pacific as children or adults ($p < .0001$). Of New Zealand-born Pacific people, 31.4% had a mental disorder in the past 12 months compared with 15.1% of Pacific people who migrated at age 18 and over. Age at the time of migration was significantly related to the prevalence of serious disorder: 6.7% of New Zealand-born Pacific people compared with 3.7% of Pacific people who migrated at age 18 and over had a serious mental disorder ($p = .01$).

Table 10.11 shows a significant difference between the 12-month prevalence of mental health service visits of Pacific people born in New Zealand and the age at which people migrated from the Pacific ($p = .007$). Of New Zealand-born Pacific people, 13.4% had visited a mental health service in the previous 12 months compared with 1.6% of Pacific people who had migrated when aged under 12.

A strong relationship existed between age at interview and age at migration: almost all (93.6%) of the New Zealand-born population were aged under 45 compared with 47.1% of those who had migrated at age 18 and over. Nonetheless, adjustment for age and sex had little impact on the prevalences reported for age at migration (Table 10.11) and no effect on the pattern of results. Age at migration and time since migration were also related, and in a joint analysis of any disorder in the past 12 months, age at migration remained influential while time since migration did not. This indicates that age at migration is the more important correlate.

Table 10.11: Twelve-month prevalence, severity and treatment of disorders for Pacific people, by age at migration

| Age at migration | Twelve-month prevalence % (95% CI) | Serious disorder ^{1,2} % (95% CI) | Sought mental health treatment ³ % (95% CI) |
|-------------------|--|--|--|
| New Zealand born | 31.4 (26.2, 37.1) | 6.7 (4.7, 9.5) | 13.4 (8.3, 21.3) |
| Under 12 years | 29.2 (20.4, 39.8) | 8.0 (4.6, 13.5) | 1.6 (0.4, 8.0) |
| 12–17 years | 19.5 (12.6, 29.1) | 6.7 (3.7, 12.0) | 10.8 (4.9, 24.7) |
| 18 years and over | 15.1 (12.0, 18.9) | 3.7 (2.4, 5.4) | 3.6 (1.6, 9.0) |

1 For severity, see 2.3 and 12.12.3.

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

3 Visit to any mental health specialist by those with 12-month mental disorder.

10.8.3 Language barriers to survey responses

The 2001 New Zealand Census of Population and Dwellings reported that 8% of Pacific people in New Zealand did not speak English compared with 4% of Pacific people in this survey.

Although no individual requested an interpreter, Pacific people were four times more likely to require assistance from the interviewer or a family member when responding to the survey compared with non-Pacific participants.

Cook Island Māori were more likely to be English-only speakers (46%), while Samoan and Tongan participants were more likely to be bilingual (81% and 83% respectively) (see 12.5.1).

Table 10.12 shows that Pacific people who could speak only English had a 12-month prevalence rate for any disorder of 37.5%. Pacific people who could speak more than one language had a lower 12-month prevalence rate of 21.7% ($p < .05$). There is no significant difference between English-only and multilingual Pacific people in relation to who visited a mental health service ($p = .1$). However, this will be looked at in more detail in future analyses.

Table 10.12: Twelve-month prevalence, severity and treatment of disorders for Pacific people, by language proficiency

| Language proficiency | Twelve-month prevalence ¹ % (95% CI) | Serious disorder ^{1,2} % (95% CI) | Sought mental health treatment ¹ % (95% CI) |
|-------------------------------|---|--|--|
| English-only speaker | 37.5 (29.4, 46.2) | 6.9 (4.1, 10.7) | 11.2 (5.0, 20.6) |
| Pacific language-only speaker | 29.7 (14.8, 48.6) | 0.5 (0.0, 6.3) | 1.2 (0.0, 16.4) |
| Multilingual speaker | 21.7 (18.7, 24.9) | 5.9 (4.6, 7.6) | 8.6 (5.2, 13.9) |
| Total | 25.0 (21.8, 28.4) | 5.9 (4.7, 7.3) | 9.0 (6.1, 13.2) |

1 DSM-IV CIDI 3.0 disorders, see 12.4.1. For severity, see 2.3 and 12.12.3.

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

10.9 Findings from intra-Pacific comparisons

Pacific people were oversampled in this study to enable intra-Pacific comparisons (ie, comparisons among Pacific Island groups). This section explains the composition of the Pacific sample, then looks at patterns of mental disorder among the various Pacific Island groups. The comparison by larger Pacific ethnic groups within New Zealand is performed at a general level.

The differences in the levels of prevalence in each Pacific Island group may be influenced by factors that cannot be adjusted for in this analysis, such as migration experiences, socioeconomic status and education levels. This section also examines results on suicidal behaviour by Pacific ethnic groups.

10.9.1 Composition of Pacific Island groups

The majority of the participants were Samoan (49.2%), Cook Island Māori (20.7%) and Tongan (16.5%). This reflects the pattern in the general Pacific population in New Zealand. The remaining Pacific peoples (13.5%) were grouped into an ‘Other’ Pacific group because there were insufficient numbers for each group to be analysed individually. Most people in the Other Pacific group were Niuean, with smaller numbers of Tokelauan and Fijian people. Each of the larger three Pacific Island groups had a similar age and sex profile to each other.

10.9.2 Twelve-month prevalence of disorder: comparison of Pacific Island groups

Table 10.13 shows a breakdown of 12-month prevalence by disorder for the four Island groups described above compared with the total Pacific population.

Cook Island Māori have the highest rate (29.3%) of any mental disorder, followed by Other Pacific people (25.5%), Samoans (24.5%) and Tongans (19.6%). The results are not statistically significant, but the pattern is consistent throughout the individual disorder groups.

Table 10.13: Twelve-month prevalence of disorders for Pacific people, by Pacific Island group¹

| | Island % (95% CI) | | | | Total Pacific population % (95% CI) |
|-----------------------------------|----------------------|----------------------|----------------------|----------------------|--|
| | Samoa | Cook Islands | Tonga | Other | |
| Any disorder ² | 24.5 (20.4, 29.2) | 29.3 (22.5, 37.1) | 19.6 (13.5, 27.5) | 25.5 (18.0, 34.8) | 25.0 (21.8, 28.4) |
| Any anxiety disorder ² | 15.5 (12.6, 19.0) | 18.0 (13.3, 23.9) | 13.2 (8.0, 20.3) | 18.7 (13.0, 26.1) | 16.2 (13.9, 18.8) |
| Any mood disorder | 8.3 (6.4, 10.6) | 12.1 (7.8, 18.4) | 6.7 (3.9, 10.6) | 8.8 (4.6, 16.1) | 8.7 (6.9, 11.0) |
| Any alcohol disorder | 4.6 (3.2, 6.6) | 7.8 (4.7, 12.6) | 4.9 (2.0, 9.9) | 1.4 (0.5, 3.2) | 4.7 (3.6, 6.2) |
| Any drug disorder | 1.3 (0.7, 2.4) | 2.9 (1.2, 5.9) | 1.1 (0.1, 4.0) | 0.5 (0.1, 1.8) | 1.5 (1.0, 2.3) |

1 DSM-IV CIDI 3.0 disorders, see 12.4.1.

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

10.10 Suicidal behaviour among Pacific people

Suicide is a growing problem for Pacific people in their homelands, with more people dying from suicide than from tuberculosis in the Pacific Islands (Baravilala 2001). The possible negative effects of migration and the subsequent sociocultural disintegration and low socioeconomic status have led to concern that suicidal behaviours may have increased further in Pacific people now resident here in New Zealand (Foliaki 1997).

New Zealand national data indicate that for completed Pacific suicide, the age-adjusted rate is slightly lower than the rate for non-Pacific people (8.3 per 100,000 population compared with 13.5 per 100,000) (Ministry of Health 2005b). Table 10.14 shows estimated lifetime and 12-month prevalence of suicidal ideation and suicide attempt for Pacific people, by sex.

10.10.1 Lifetime and 12-month prevalence of suicidal behaviour

The estimated lifetime prevalence of suicidal ideation for Pacific people was 16.9%, compared with an overall population rate of 15.7% (14.9, 16.6). Pacific females had higher rates of suicidal ideation than Pacific males (19.3% compared with 14.3%, $p = .03$). The difference between the sexes is consistent with findings for the total New Zealand population. Lifetime suicidal ideation decreases with age, with the group aged 16–24 having the highest rates of suicidal ideation ($p < .0001$).

The estimated 12-month prevalence of suicidal ideation for Pacific people was 4.5%, with 1.2% having attempted suicide. Again Pacific females had higher rates of suicidal ideation than Pacific males (5.2% compared with 3.7%), although this result was not statistically significant. The highest rate of suicidal ideation was observed in the group aged 16–24, which had more than twice the rate of any other Pacific age group ($p < 0.0004$).

The estimated lifetime prevalence of suicide attempt for Pacific people was 4.8%, which was marginally higher than the prevalence for the total population (4.5%). Consistent with both ideation patterns, Pacific females had a higher prevalence of suicide attempt than Pacific males (6.3% compared with 3.2%; $p = .006$).

The estimated 12-month prevalence for suicide attempts was 1.2% for Pacific people, which was three times the rate of the general population (0.4%; 0.3, 0.6). Pacific females had a prevalence rate of 1.3% for suicide attempts compared with 1.0% for Pacific males. The group aged 16–24 had the highest prevalence of suicide attempt in the previous 12 months (3.1%; 1.5, 6.5), which was five times higher than the following age cohort (25–44 years (0.6%; 0.32, 1.22)). However, age was not shown to have a statistically significant effect on the 12-month prevalence of suicide because of the

small numbers of participants who had attempted suicide and the consequent insufficient statistical power to show a statistically significant difference.

Table 10.14: Lifetime and 12-month prevalence of suicidal ideation, suicide plan and suicide attempt among Pacific people, by sex

| | Lifetime prevalence % (95% CI) | | | Twelve-month prevalence % (95% CI) | | |
|-------------------|--------------------------------------|----------------------|----------------------|--|-------------------|-------------------|
| | Male | Female | Total | Male | Female | Total |
| Suicidal ideation | 14.3 (11.2, 18.0) | 19.3 (16.3, 22.8) | 16.9 (14.6, 19.4) | 3.7 (2.2, 6.0) | 5.2 (3.6, 7.5) | 4.5 (3.3, 6.1) |
| Suicide plan | 5.7 (3.8, 8.5) | 7.0 (5.2, 9.3) | 6.4 (5.1, 8.0) | 2.7 (1.2, 5.8) | 2.3 (1.2, 4.3) | 2.5 (1.5, 4.0) |
| Suicide attempt | 3.2 (2.0, 4.9) | 6.3 (4.7, 8.3) | 4.8 (3.8, 6.1) | 1.0 (0.4, 2.8) | 1.3 (0.7, 2.5) | 1.2 (0.7, 2.0) |

10.10.2 Socioeconomic correlates

Table 10.15 shows that for Pacific people, neither education nor equivalised household income had a significant impact on the prevalence of suicidal ideation or suicide attempt ($p = .7$ for education and $p = .2$ for equivalised household income).

Te Rau Hinengaro shows that 12-month prevalence rates of suicidal ideation and suicide attempts appear higher among Pacific people living in areas of low deprivation compared with Pacific people living in areas of high deprivation, although this result was not statistically significant ($p = .4$).

Comparisons of Pacific people with Māori and Others shows Pacific participants reported significantly higher prevalence than Other (non-Māori) participants of ideation, plan and attempt. In addition, Māori had a significantly higher prevalence of suicidal ideation than Pacific participants, whereas Pacific participants had a significantly higher prevalence of plans and attempts than Māori participants. However, adjusted estimates suggest some of these ethnic differences may be sociodemographic in origin. After adjustment for sociodemographic factors, there were no ethnic variations in suicidal ideation. However, Māori and Pacific participants had a significantly higher prevalence of making plans and attempts after adjustment for sociodemographic factors.

Table 10.15: Sociodemographic correlates and prevalence of suicidal ideation, suicide plan and suicide attempt in the past 12 months for Pacific people

| Correlate | Suicidal ideation % (95% CI) | Suicide attempt % (95% CI) |
|---|------------------------------------|----------------------------------|
| Individual characteristic | | |
| Educational qualifications ¹ | | |
| None | 5.0 (2.6, 9.4) | 0.9 (0.3, 2.5) |
| School or post-school only | 4.4 (2.8, 6.8) | 1.2 (0.5, 2.9) |
| Both school and post-school | 4.2 (2.6, 6.8) | 1.3 (0.5, 3.5) |
| Equivalised household income ¹ | | |
| Under half of median | 4.4 (2.4, 7.7) | 0.5 (0.2, 1.4) |
| Half median to median | 5.6 (3.5, 8.8) | 1.7 (0.6, 4.8) |
| Median to one and a half times median | 2.3 (0.9, 5.8) | 0.3 (0.0, 2.4) |
| One and a half times median and over | 1.4 (0.5, 3.9) | 0.2 (0.0, 1.7) |
| Area characteristic | | |
| NZDep2001 deciles ¹ | | |
| 9 and 10 most deprived | 4.8 (3.1, 7.3) | 1.2 (0.7, 2.1) |
| 7 and 8 | 3.8 (2.0, 6.9) | 1.0 (0.2, 4.4) |
| 5 and 6 | 4.0 (1.8, 8.6) | 0.3 (0.1, 1.1) |
| 3 and 4 | 1.5 (0.4, 6.4) | 0.6 (0.1, 3.8) |
| 1 and 2 least deprived | 9.2 (3.0, 24.8) | 4.8 (0.7, 27.0) |

1 Sociodemographic correlates are defined in 12.12.1.

10.10.3 Migration, language and prevalence of suicidal behaviour

Table 10.16 shows that 6.5% of New Zealand-born Pacific people had suicidal ideation in the previous 12 months and this compares with Pacific people who migrated at the age of 18 and older who had a 12-month rate of 1.8%. Table 10.16 also shows that 1.8% of New Zealand-born Pacific people had a suicide attempt in the previous 12 months compared with Pacific people who migrated at the age of 18 and older who had a 12-month rate of 0.3%. There were no significant differences between 12-month rates of suicidal ideation or suicide attempt between Pacific people born in New Zealand and age of migration ($p = .2$).

As mentioned in 10.8.2 a strong relationship existed between age at interview and age at migration. Nonetheless, adjustment for age and sex had little impact on the prevalences reported in Table 10.16 and no effect on the pattern of results.

Age at migration and time since migration were also related, and in a joint analysis of any disorder in the past 12 months, age at migration remained influential while time since migration did not. This indicates that age at migration is the more important correlate.

Table 10.16: Sociodemographic characteristics and prevalence of suicidal ideation and suicide attempt in the past 12 months among Pacific people

| | Suicidal ideation % (95% CI) | Suicide attempt % (95% CI) |
|-------------------------|------------------------------------|----------------------------------|
| Age at migration | | |
| New Zealand born | 6.5 (4.1, 10.1) | 1.8 (0.9, 3.6) |
| Under 12 years | 6.0 (3.1, 11.2) | 2.0 (0.5, 7.7) |
| 12–17 years | 4.7 (2.2, 9.8) | 0.5 (0.1, 1.8) |
| 18 years and over | 1.8 (1.0, 3.2) | 0.3 (0.1, 0.7) |
| Language | | |
| English only | 6.1 (3.4, 10.6) | 2.8 (1.1, 7.0) |
| Pacific only | 0.6 (0.1, 2.5) | – |
| Multilingual | 4.4 (2.9, 6.4) | 0.8 (0.4, 1.5) |

10.10.4 Suicidal behaviour: comparison of Pacific Island groups

Table 10.17 compares the 12-month prevalences of suicidal behaviour for the major Pacific groups. Cook Island Māori had rates of suicidal ideation of 6.6%, followed by Samoans (4.4%), Other Pacific peoples (4.1%) and Tongans (1.9%). This compares with an overall rate of 4.5% for the total Pacific population, although because of the small numbers involved the results are not statistically significant.

Table 10.17: Twelve-month prevalence of suicidal ideation and suicide attempt among Pacific people, by Pacific Island group

| | Island % (95% CI) | | | | Whole sample % (95% CI) |
|-------------------|-------------------------|--------------------|-------------------|--------------------|----------------------------------|
| | Samoa | Cook Islands | Tonga | Other | |
| Suicide attempt | 1.0 (0.4, 2.0) | 2.5 (0.7, 6.0) | 0.0 (0.0, 0.8) | 1.0 (0.1, 4.2) | 1.2 (0.6, 2.0) |
| Suicidal ideation | 4.4 (2.7, 7.2) | 6.6 (4.1, 10.4) | 1.9 (0.6, 4.4) | 4.1 (1.1, 10.3) | 4.5 (3.3, 6.1) |

10.11 Findings for Pacific people compared with Māori and Others

The unadjusted rates for all mental disorders for the three ethnic groups are: 23.9% for Pacific people, 28.9% for Māori and 19.2% for the Other composite ethnic group. (Note that these figures are slightly different from those presented in the rest of this chapter as participants identifying as both Māori and Pacific are now included only as Māori, using prioritised ethnicity (see 12.12.1).)

Adjusting for age and sex reduces the differences in rates to: Pacific, 21.3%; Māori, 25.8%; and Other, 19.7%. Further adjustment for educational qualification and equivalised household income reduces the differences further to: Pacific, 19.0%; Māori, 23.5%; and Other, 20.1%. These results suggest that if the different ethnic groups had the same age and sex structures and education and income levels then Pacific people and Other people would have similar levels of mental illness.

The unadjusted rates for mood disorders were: 8.3% for Pacific people, 11.6% for Māori and 7.5% for Others. Adjusting for age and sex reduces the differences between the three groups to: Pacific, 7.2%; Māori, 10.1%; and Other, 7.7%. Further adjustment for educational qualification and equivalised household income reduces the differences further to: Pacific, 6.4%; Māori, 9.3%; and Other, 7.9%. These results suggest that if the different ethnic groups had the same age and sex structures and education and income levels then Pacific people and Other people would have similar prevalences of mood disorders.

A similar result occurs for substance use disorders. Adjusting for age and sex and education and income levels reduced the disparities, although Māori had the highest rate: Pacific, 3.2%; Māori, 6.0%; and Other, 3.0%.

Table 10.18 shows similar results to those reported above for severity (rather than presence) of disorder. The unadjusted rates for all mental disorders classified as serious were: Pacific, 6.0%; Māori, 8.7%; Other, 4.1%. After adjustment Pacific and Other groups had similar prevalences (Pacific, 4.1%; Other, 4.5%) but Māori still had significantly higher prevalence of serious disorder (6.1%).

Table 10.18: Twelve-month prevalence of any disorder and severity,¹ by prioritised ethnicity

| | Prioritised ethnicity ² % (95% CI) | | |
|---|---|----------------------|--------------------|
| | Pacific | Māori | Other |
| Unadjusted | | | |
| Serious | 6.0 (4.7, 7.4) | 8.7 (7.4, 10.0) | 4.1 (3.6, 4.6) |
| Moderate | 10.9 (8.4, 13.3) | 12.6 (10.6, 14.6) | 8.9 (8.1, 9.8) |
| Mild | 7.5 (5.7, 9.3) | 8.2 (6.6, 9.8) | 6.3 (5.6, 7.0) |
| Adjusted for age and sex | | | |
| Serious | 5.3 (4.1, 6.5) | 7.6 (6.4, 8.8) | 4.2 (3.7, 4.7) |
| Moderate | 9.6 (7.5, 11.8) | 11.2 (9.4, 12.9) | 9.2 (8.3, 10.0) |
| Mild | 6.8 (5.2, 8.5) | 7.4 (6.0, 8.9) | 6.4 (5.7, 7.1) |
| Adjusted for age, sex, educational qualifications³ and equivalised household income³ | | | |
| Serious | 4.1 (3.1, 5.0) | 6.1 (5.2, 7.1) | 4.5 (3.9, 5.0) |
| Moderate | 8.6 (6.7, 10.6) | 10.2 (8.5, 11.8) | 9.4 (8.5, 10.2) |
| Mild | 6.6 (5.0, 8.3) | 7.2 (5.8, 8.6) | 6.5 (5.7, 7.2) |

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

2 For the method of adjustment, see 12.10.2.

3 Sociodemographic correlates are defined in 12.12.1.

10.12 Conclusions

10.12.1 Mental health of Pacific people

Te Rau Hinengaro is the first major epidemiological survey able to generate specific information about the mental health of Pacific people in New Zealand. The survey incorporated a high level of Pacific involvement in the study design and implementation. Importantly, it also oversampled Pacific participants, which enabled the participation of sufficient numbers of Pacific people to provide estimates of acceptable precision.

Before this survey very little information existed about the prevalence of mental disorders among Pacific people. Te Rau Hinengaro has provided some landmark findings.

First, Te Rau Hinengaro has demonstrated that Pacific people experience mental disorders at higher levels than the general population. This is particularly significant as it is contrary to previously held beliefs that Pacific people have relatively low levels of mental illness. As reported, the unadjusted 12-month prevalence for Pacific people was 23.9% compared with 19.2% of the Other composite ethnic group. While this finding is confounded by the young age structure of the Pacific population, it provides important information for future policy planning.

In addition, Te Rau Hinengaro has provided evidence that Pacific people have higher prevalences of suicidal ideation, suicide plans and suicide attempts than the Other group. The difference remains after adjusting for sociodemographic correlates.

The study also showed that the prevalence of mental disorder was lower among Pacific people born in the Islands than among New Zealand-born Pacific people even after accounting for the young age structure of the New Zealand-born Pacific population.

Pacific people in the survey who experienced serious disorders were much less likely to access treatment (25.0%) than the total New Zealand population (58.0%). This provides a considerable challenge to the mental health sector.

Te Rau Hinengaro did not support, for Pacific people, the finding from international literature that social adversity (associated with migration) is linked to increased risk for mental disorder. Analysis of the effects of migration showed that recent migrants tended to have lower rates of mental illness compared with New Zealand-born Pacific people.

These findings have potentially serious implications for Pacific communities as the results suggest environmental factors in New Zealand may be impacting negatively on their mental health and wellbeing. It is also possible protective factors within Pacific cultures (or for migrating generations) explain the differences in the prevalences of mental disorder between New Zealand-born and Island-born Pacific people. Another possible explanation is the 'healthy migrant effect', a concept that suggests only the more robust individuals within any community can navigate the sometimes complex task of migration.

The study has provided an important opportunity to analyse the prevalence, severity and impact of mental disorders on the Pacific population. This is the first time this empirical information has been available. Importantly, the oversampling of Pacific people also allowed for investigation of ethnic-specific differences among the major Pacific groups. Although these results were not statistically significant, the differences that emerged certainly warrant further investigation.

10.12.2 Implications

Te Rau Hinengaro showed that Pacific people have high prevalence rates of mental disorders and suicidal behaviour. This fact is compounded by significant underutilisation of health services for a mental health reason. These findings combine to paint a picture of a population whose current and future mental health is particularly vulnerable and at risk.

Underutilisation of existing services, especially by those Pacific people with serious mental disorders, has significant implications for the mental health sector. For Pacific people, significant gaps in the available data remain about the acceptability of existing mental health services, availability of appropriate services, provider fit with need and other issues of accessibility for Pacific people.

The findings from Te Rau Hinengaro raise interesting questions about the position of New Zealand-born Pacific people in relation to migrant Pacific people. The results suggest that length of time exposed to the New Zealand environment may be associated with higher levels of mental disorder among Pacific people. There is a need for further research on the relationship between adverse socioeconomic conditions, the breakdown of traditional social structures, Pacific values, and mental health and wellbeing. The results also raise questions about possible Pacific ethnic-specific differences. Although the differences were not statistically significant, they warrant further study. There is generally a need for better understanding of the underlying protective and risk factors for mental health and mental illness among Pacific populations.

In conclusion, Te Rau Hinengaro provides a robust evidence base in relation to Pacific people in New Zealand for policy development and a strong platform for further research.