Te Rau Hinengaro: The New Zealand Mental Health Survey

Chapter 7: Suicidal Behaviour

Annette Beautrais

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7 Suicidal Behaviour

Key results

- Lifetime prevalences for suicidal behaviours were: suicidal ideation, 15.7%; suicide plan, 5.5%; suicide attempt, 4.5%.
- Lifetime prevalences for suicidal behaviours were consistently significantly higher in females than males (ideation: females, 17.4%; males, 14.0%); plan: females, 6.4%; males, 4.6%; attempt: females, 5.6%; males, 3.4%).
- Median ages of onset for all three behaviours were in the twenties: suicidal ideation, 25 years; making a suicide plan, 25 years; suicide attempt, 21 years.
- The prevalences for suicidal behaviour in the past 12 months were: suicidal ideation, 3.2%; suicide plan, 1.0%; suicide attempt, 0.4%.
- The risk of suicidal ideation in the past 12 months was higher in females, younger people, people with lower educational qualifications, and people with low household income, and among people living in more deprived areas (measured using the small area descriptor of socioeconomic adversity, the New Zealand Index of Deprivation) and in urban areas. The risk of making a suicide plan or attempt was more common among younger people, people with low household income and people living in more deprived areas. The risk of making a suicide attempt was higher in people in urban areas.
- The risk of suicidal ideation, suicide plan and suicide attempt varied with ethnicity, with Māori and Pacific people reporting higher rates of suicidal behaviour than the Other composite ethnic group (ideation: Māori, 5.4%; Pacific, 4.5%; Other, 2.8%; plan: Māori, 1.8%; Pacific, 2.6%; Other, 0.8%; attempt: Māori, 1.1%; Pacific, 1.2%, Other, 0.3%). However, after adjustment for sociodemographic factors there were no ethnic differences in ideation, although Māori and Pacific people still had elevated risks of suicide plans and suicide attempts.
- Individuals with a mental disorder had elevated risks of suicidal behaviour, with 11.8% of people with any mental disorder reporting suicidal ideation, 4.1% making a suicide plan and 1.6% making a suicide attempt.
- Mood disorders, anxiety disorders, eating disorders and substance use disorders were all associated with suicidal ideation, suicide plan and suicide attempt.
- Almost half of those with a 12-month history of suicidal ideation, suicide plan or suicide attempt did not report making any general medical or specialist mental health visits within the same 12-month period in which they were suicidal.

7.1 Introduction

This chapter describes the prevalence and correlates of suicidal behaviour in the New Zealand population aged 16 and older.

7.1.1 Definition of suicidal behaviour

For the purposes of this report suicidal behaviour includes the following behaviours, which were defined by the questions asked in Te Rau Hinengaro: The New Zealand Mental Health Survey:

- *Suicidal ideation:* thinking seriously about committing suicide
- *Suicide plan:* making a plan for committing suicide
- *Suicide attempt:* making a suicide attempt.

7.1.2 Reasons for including suicidal behaviour in the survey

Suicidal behaviour was included in this survey because suicide and attempted suicide are serious sources of mortality and morbidity in New Zealand (Ministry of Health 2001b). New Zealand has one of the highest rates of suicide among Organisation for Economic Co-operation and Development (OECD) countries (10.7 deaths per 100,000 population in 2002), with rates being particularly high for youth (people aged 15–24; 17 per 100,000) and young adults (people aged 25–44; 18.2 per 100,000) (Ministry of Health 2005a; WHO 2005). Almost 500 people die by suicide annually; this is higher than the number who die in road traffic accidents. Suicide (after road traffic accidents) is the second most common reason for death among people aged 15–34 (New Zealand Health Information Service 2005).

Suicidal behaviours including, in particular, suicide attempts, are strong risk factors for suicide and for further suicide attempts, and are often associated with mental illness and with significant emotional distress (Beautrais et al 2005). Almost 4,500 hospital admissions are for suicide attempt each year (Ministry of Health 2005a). While males more often die by suicide, females make more suicide attempts (Ministry of Health 2005a). Suicidal behaviours are thus a problem for both sexes. In terms of ethnic distribution, 17.0% of suicides in 2002 involved Māori, 3.9% involved Pacific people, 2.6% involved Asian people and 76.5% involved Europeans (Ministry of Health 2005a).

New Zealand has extensive data about suicidal behaviour. However, many of these data have been generated from a series of regional community-based studies and the extent to which the data from these studies are generalisable to the wider New Zealand population has often been the subject of debate. Such debate has centred on the extent to which regional studies may or may not be representative of the total New Zealand population. The data from this survey provide nationally representative information about suicidal behaviour and, in particular, about suicidal behaviour in Māori and Pacific people.

7.1.3 Previous New Zealand studies

Previous New Zealand studies have examined suicidal behaviour in the Canterbury region, in a Dunedin-born cohort and in a Christchurch-born cohort, and one national study focused on suicidal behaviour in teenagers attending high schools (Adolescent Health Research Group 2003; Beautrais 2001; Fergusson et al 2000; Nada-Raja et al 2004; Weissman et al 1993; Weissman et al 1999).

The Christchurch Psychiatric Epidemiology Study (see 1.7.2) surveyed 1,500 adults aged 18–64 in Christchurch in 1986 and reported a lifetime rate of suicidal ideation of 18.5 per 100. The lifetime rate of suicide attempt for males was 2.6 per 100 and for females was 6.2 per 100 (Weissman et al 1993; Weissman et al 1999). The Canterbury Suicide Project found that 1.0% of 984 adults aged 18 and over interviewed in a community-based study in 1991/92 reported a lifetime history of suicide attempts (Beautrais 2001). The lifetime rate of suicidal ideation in a Dunedin-born cohort (see 1.8.1), interviewed at age 26, was 13%, with 9% reporting suicide attempt (Nada-Raja et al 2004). A Christchurch-born cohort (see 1.8.2) of 1,265 young people born in 1977 tracked the development of suicidal ideation and suicide attempt throughout adolescence and young adulthood. This study found that, by age 21, 28.8% reported having thought about killing themselves and 7.5% reported having made a suicide attempt (Fergusson et al 2000). A national survey of 12,934 secondary school students aged 12–18 in 2001 found that 16.9% of males and 29.2% of females reported suicidal thoughts within the past year, and 4.7% of males and 10.6% of females reported having made a suicide attempt within the past year (Adolescent Health Research Group 2003). (It should be noted that studies of young people tend to report higher rates of ideation and attempts than studies of people of all ages. This likely occurs because, with the passage of time, people tend to forget episodes of suicidal ideation, and suicide attempts, as these events tend to get overlaid with other life experiences.)

These, and other, New Zealand studies have also examined the contribution of a series of risk factors to suicidal behaviour. Risk factors ranging from individual-level factors (eg, genes, personality, sexual orientation) to macrosocial factors (eg, unemployment rates), and spanning exposure to trauma, family factors, mental disorders, life stresses, social supports, socioeconomic factors, cultural factors, and macrosocial and macroeconomic factors, have all been shown to contribute to suicidal behaviours (Beautrais et al 2005; Collings and Beautrais 2005). In particular, risks of suicidal behaviour are increased among people from socially and educationally disadvantaged backgrounds, and among people with mental illnesses, including mood disorders in particular but also substance use disorders, anxiety disorders, psychotic disorders, and antisocial and offending behaviours. In addition, rates of suicide and attempted suicide are known to vary with age, gender and ethnicity (Beautrais et al 2005).

Findings about risk factors for suicidal behaviour from these New Zealand studies have been summarised in two reports (Beautrais et al 2005; Collings and Beautrais 2005). However, this survey is the first nationally representative survey to examine the prevalence of, and sociodemographic and mental disorder correlates for, suicidal behaviours in New Zealand, and to have adequate numbers of Māori and Pacific participants to generate estimates of such behaviours with acceptable precision.

7.1.4 Content of this chapter

This chapter includes information about:

- lifetime and 12-month prevalences of suicidal ideation, making a suicide plan and making a suicide attempt (see 7.2)
- onset distributions for suicidal ideation, suicide plan and suicide attempt (see 7.3)
- sociodemographic correlates of suicidal ideation, suicide plan and suicide attempt (see 7.4)
- ethnicity and prevalences of suicidal behaviours (see 7.5)
- DSM-IV mental disorders and suicidal behaviours (see 7.6; for a general explanation about the DSM, see 1.10.1)
- health services use among people with suicidal behaviour (see 7.7).

7.2 Lifetime and 12-month prevalences

Table 7.1 shows estimated recent (ie, past 12 months) and lifetime prevalences of suicidal ideation, suicide plans and suicide attempts, for males, females and the total population. A hierarchy of severity exists in these suicidal behaviours, with the more severe behaviours occurring less often. While lifetime suicidal ideation was relatively common, with 15.7% reporting a history of suicidal ideation, suicide plans and suicide attempts were less common, with 5.5% reporting a lifetime history of making plans for suicide and 4.5% making a suicide attempt. Similarly, while 3.2% reported suicidal ideation in the past 12 months, only 1.0% reported making suicide plans and 0.4% reported making a suicide attempt.

Lifetime rates of suicidal behaviour were consistently significantly higher in females than males (ideation: females, 17.4%; males, 14.0% ($p < .0001$); plan: females, 6.4%; males, 4.6% ($p < .005$); attempt: females, 5.6%; males, 3.4% ($p < .0001$)). However, in the past 12 months males and females were equally likely to have made suicide plans (males, 0.9%; females, 1.0%) and suicide attempts (males, 0.4%; females, 0.4%), despite females significantly more often reporting suicidal ideation (females, 3.7%; males, 2.6% ($p < .05$)). (See Table 7.1.)

Table 7.1: Twelve-month and lifetime prevalence of suicidal ideation, suicide plan and suicide attempt, by sex

	Twelve-month prevalence % (95% CI)			Lifetime prevalence % (95% CI)		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Suicidal ideation	2.6 (2.2, 3.2)	3.7 (3.2, 4.4)	3.2 (2.8, 3.6)	14.0 (12.8, 15.2)	17.4 (16.3, 18.5)	15.7 (14.9, 16.6)
Suicide plan	0.9 (0.7, 1.3)	1.0 (0.8, 1.4)	1.0 (0.8, 1.2)	4.6 (3.9, 5.3)	6.4 (5.7, 7.1)	5.5 (5.0, 6.0)
Suicide attempt	0.4 (0.2, 0.8)	0.4 (0.3, 0.6)	0.4 (0.3, 0.6)	3.4 (2.8, 4.1)	5.6 (4.9, 6.2)	4.5 (4.1, 5.0)

Suicide attempts range in severity from the mildly injurious to the determinedly lethal. All those who made suicide attempts were asked about the lethality and intent of their first and their most recent attempt (Table 7.2). Almost half (46.5%) of those who made one or more suicide attempts reported that their first attempt was a serious attempt to die and it was only by chance that they did not succeed; while 37.0% (more than one-third) reported they did not intend to die in their first attempt and it was a 'cry for help'. The remainder (16.5%) reported that their first attempt was serious but they were not certain that the method would kill them. Levels of intent and lethality reported for the first suicide attempt were strikingly similar to those reported for the most recent attempt (among those who reported more than one lifetime suicide attempt).

Table 7.2: Lethality and intent of first and most recent suicide attempts

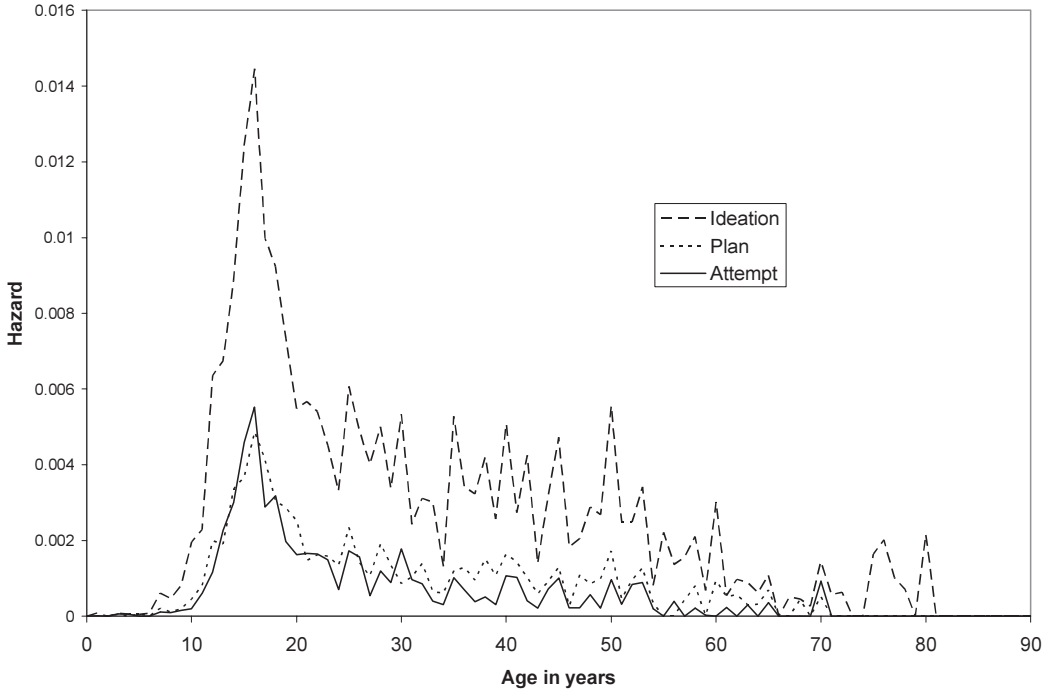
	First suicide attempt %	Most recent suicide attempt (among those making multiple attempts) %
Lethality and intent		
A serious attempt to die and only by chance did not succeed	46.5	47.9
A serious attempt to die but not certain the method would kill them	16.5	15.1
Did not intend to die – a 'cry for help'	37.0	36.9

7.3 Onset distributions

Hazard functions were estimated to show the first onset of suicidal ideation, suicide plan and suicide attempt (Figure 7.1). A hazard is the instantaneous risk of a behaviour happening in an individual who has not previously experienced that behaviour. It is estimated as the proportion of individuals who have experienced an event for the first time in an interval, out of those who have reached the beginning of the interval without ever experiencing the event (see 12.10.3). For example, Figure 7.1 shows that people who had reached the age of 16 without suicidal ideation had a risk of 1.4% of experiencing such ideation for the first time in the next year. This analysis yielded the following results.

- Median ages of onset for all three behaviours were in the twenties: 25 years for suicidal ideation; 25 years for making a suicide plan; and 21 years for a suicide attempt.
- Although the onset of suicidal ideation was most likely to occur in late adolescence, onset continued throughout adult life: 2.8% (2.4, 3.2) reported suicidal ideation by age 15; 7.8% (7.2, 8.5) by age 20; 10% (9.3, 10.8) by age 25; and 17.5% (16.5, 18.5) by age 50. By age 75, 20.2% (19.1, 21.3) reported suicidal ideation.
- A similar pattern emerged for suicide plans: 0.9% (0.7, 1.1) reported suicide plans by age 15; 2.7% (2.4, 3.1) by age 20; 3.6% (3.1, 4.0) by age 25; and 6.2% (5.6, 6.9) by age 50. By age 75, 7.2% (6.5, 7.9) reported making suicide plans.
- For suicide attempts, 0.8% (0.6, 1.0) reported suicide attempts by age 15; 2.6% (2.2, 2.9) by age 20; 3.2% (2.9, 3.7) by age 25; and 5.1% (4.6, 5.6) by age 50. By age 75, 5.5% (5.0, 6.2) reported having made at least one suicide attempt.

Figure 7.1: Hazard functions of first onset of suicidal ideation, suicide plan and suicide attempt



7.4 Sociodemographic correlates

Table 7.3 shows rates of suicidal ideation, suicide plan and suicide attempt in the past 12 months classified by a series of individual sociodemographic factors including age, sex, educational qualifications, household income and area descriptors, including deprivation level, urbanicity and region (see 12.12.1). (Correlates are not presented for lifetime suicide attempts because of the potential disjunction between currently measured sociodemographic variables and historically reported attempts.) These comparisons yielded the following conclusions.

The risk of suicidal ideation varied with individual sociodemographic factors (age, sex, educational qualifications, household income) and with the area-level descriptor of deprivation. Population risk of suicidal ideation was significantly higher in females ($p < .05$) and in younger people ($p < .0001$), with risk decreasing with increasing age. Ideation was higher in people with poor educational qualifications ($p < .05$); in people with low household income ($p < .0001$); in people from the most deprived areas (deciles 9 and 10), as measured by the New Zealand Index of Deprivation 2001 (NZDep2001; see 12.12.1) ($p < .05$); and in people from urban areas ($p < .05$). Regionality made no contribution to the risk of ideation.

The risk of making a plan for suicide was higher in younger people ($p < .0001$), with risk decreasing with increasing age; in people with low household income ($p < .005$); and in people from the most deprived areas (deciles 9 and 10 NZDep2001) ($p < .05$). However, other individual-level factors (sex, educational qualifications) and area-level descriptors (urbanicity and regionality) made no contribution to risk of making a suicide plan.

Similarly, the risk of suicide attempt was higher in younger people ($p < .005$), in those from low household incomes ($p < .01$), in those from the most deprived areas (deciles 9 and 10) ($p < .05$). Risk of suicide attempt was also higher in those from urban areas ($p < .01$). Sex, educational qualifications and regionality did not contribute to the 12-month risk of suicide attempt.

Table 7.3: Sociodemographic characteristics and prevalence of suicidal ideation, suicide plan and suicide attempt in the past 12 months

Correlate[1]	Suicidal ideation % (95% CI)	Suicide plan % (95% CI)	Suicide attempt % (95% CI)
Individual characteristics			
Sex			
Male	2.6 (2.2, 3.3)	0.9 (0.7, 1.3)	0.4 (0.2, 0.8)
Female	3.7 (3.2, 4.4)	1.0 (0.8, 1.4)	0.4 (0.3, 0.6)
Age group (years)			
16–24	6.6 (5.3, 8.3)	2.0 (1.2, 3.2)	1.3 (0.6, 2.3)
25–44	3.6 (3.0, 4.3)	1.2 (0.9, 1.6)	0.4 (0.2, 0.6)
45–64	2.1 (1.5, 2.7)	0.5 (0.3, 0.7)	0.1 (0.0, 0.3)
65 and over	0.8 (0.4, 1.4)	0.3 (0.1, 0.8)	0.1 (0.0, 0.7)
Educational qualifications[1]			
None	4.3 (3.4, 5.5)	1.1 (0.8, 1.7)	0.6 (0.3, 1.1)
School or post-school only	3.4 (2.7, 4.1)	1.2 (0.8, 1.6)	0.4 (0.2, 0.6)
Both school and post-school	2.6 (2.0, 3.3)	0.8 (0.5, 1.2)	0.4 (0.2, 0.8)
Equivalised household income[1]			
Under half of median	4.6 (3.7, 5.7)	1.2 (0.8, 1.9)	0.8 (0.4, 1.4)
Half median to median	4.3 (3.5, 5.3)	1.5 (1.0, 2.1)	0.6 (0.3, 1.2)
Median to one and a half times median	2.2 (1.6, 3.0)	0.8 (0.4, 1.3)	0.1 (0.0, 0.5)
One and a half times median and over	1.9 (1.2, 2.7)	0.4 (0.2, 0.7)	0.2 (0.0, 0.5)

Correlate[1]	Suicidal ideation % (95% CI)	Suicide plan % (95% CI)	Suicide attempt % (95% CI)
Area characteristics			
NZDep2001 deciles[1]			
9 and 10 (most deprived)	4.3 (3.4, 5.5)	1.5 (1.0, 2.1)	0.6 (0.4, 1.0)
7 and 8	4.1 (3.1, 5.3)	1.4 (0.8, 2.3)	0.8 (0.3, 1.7)
5 and 6	2.8 (2.1, 3.7)	0.9 (0.6, 1.4)	0.3 (0.1, 0.7)
3 and 4	2.5 (1.7, 3.6)	0.7 (0.4, 1.2)	0.2 (0.0, 0.7)
1 and 2 (least deprived)	2.5 (1.7, 3.7)	0.5 (0.2, 1.0)	0.2 (0.0, 0.7)
Urbanicity[1]			
Main	3.5 (3.0, 4.0)	1.1 (0.8, 1.4)	0.5 (0.3, 0.7)
Secondary	2.9 (1.7, 4.6)	1.1 (0.5, 2.1)	0.4 (0.1, 1.2)
Minor	2.3 (1.5, 3.4)	0.7 (0.3, 1.4)	0.4 (0.1, 1.0)
Other (rural)	2.3 (1.6, 3.4)	0.6 (0.3, 1.1)	0.1 (0.0, 0.4)
Region[1]			
North	3.0 (2.4, 3.7)	1.1 (0.7, 1.7)	0.5 (0.2, 0.9)
Midland	3.6 (2.8, 4.7)	1.4 (0.9, 2.1)	0.4 (0.2, 0.8)
Central	3.7 (2.8, 4.9)	0.7 (0.4, 1.1)	0.4 (0.2, 0.7)
South	2.8 (2.1,3.7)	0.7 (0.4, 1.1)	0.4 (0.2, 0.7)

1 Sociodemographic correlates are defined in 12.12.1.

7.5 Ethnicity and prevalence of suicidal behaviours

Table 7.4 shows rates of suicidal ideation, suicide plan and suicide attempt classified by ethnic group (Māori, Pacific and Other). The table shows:

- unadjusted 12-month prevalences
- 12-month prevalences adjusted for age and sex (to take account of the younger Māori and Pacific populations, compared with the Other (ie, non-Māori non-Pacific) population
- 12-month prevalences adjusted for age, sex, educational qualifications and household income.

Rates of suicidal ideation, suicide plan and suicide attempt varied with ethnicity, with Māori and Pacific people reporting significantly higher rates than Other people: ideation (Māori, 5.4%; Pacific, 4.5%; Other, 2.8% ($p < .0001$)); suicide plan (Māori, 1.8%; Pacific, 2.6%; Other, 0.8% ($p < .0001$)); attempt (Māori, 1.1%; Pacific, 1.2%; Other, 0.3% ($p < .0002$)). After adjustment for sociodemographic factors, there were no ethnic variations in suicidal ideation ($p=.34$). However, some ethnic differences remained for suicide plans ($p=.01$) and suicide attempts ($p=.04$) after adjustment for sociodemographic factors: Māori and Pacific participants had significantly higher rates of making suicide plans and suicide attempts after adjustment for sociodemographic factors.

Table 7.4: Ethnicity and 12-month prevalence of suicidal behaviours

	Unadjusted % (95% CI)	Adjusted for age and sex % (95% CI)	Adjusted for age, sex, educational qualification,[1] household income[1] % (95% CI)
Suicidal ideation			
Māori	5.4 (4.3, 6.5)	4.5 (3.6, 5.4)	3.8 (2.9, 4.6)
Pacific	4.5 (3.0, 6.0)	3.8 (2.5, 5.0)	3.1 (2.1, 4.2)
Other	2.8 (2.4, 3.3)	3.0 (2.5, 3.4)	3.1 (2.6, 3.6)
Suicide plan			
Māori	1.8 (1.2, 2.4)	1.5 (1.0, 2.1)	1.3 (0.9, 1.8)
Pacific	2.6 (1.3, 3.9)	2.2 (1.1, 3.3)	1.8 (1.0, 2.7)
Other	0.8 (0.5, 1.0)	0.8 (0.6, 1.1)	0.8 (0.6, 1.1)
Suicide attempt			
Māori	1.1 (0.6, 1.7)	0.9 (0.5, 1.3)	0.7 (0.4, 1.1)
Pacific	1.2 (0.5, 1.9)	1.0 (0.4, 1.5)	0.8 (0.3, 1.3)
Other	0.3 (0.1, 0.4)	0.3 (0.1, 0.5)	0.3 (0.1, 0.5)

1 Sociodemographic correlates are defined in 12.12.1.

7.6 Mental disorder correlates

Percentages of suicidal behaviour by mental disorder in the past 12 months were estimated for a series of DSM-IV mental disorders (Table 7.5). Compared with the overall 12-month prevalences of suicidal ideation (3.2%), suicide plan (1.0%) and suicide attempt (0.4%), individuals with any mental disorder had elevated risks of suicidal behaviour, with 11.8% of those with any disorder reporting suicidal ideation, 4.1% making a suicide plan and 1.6% making a suicide attempt.

More specifically, mood disorders, anxiety disorders, eating disorders and substance use disorders were all associated with suicidal ideation, with from 10.2% (specific phobia) to 40.9% (drug dependence) of those with these disorders reporting ideation. For example, 20.2% of those with a mood disorder, 22.9% of those with an eating disorder, 16.7% of those with an alcohol disorder and 28.5% of those with a drug disorder reported suicidal ideation.

These disorders were also associated with the risk of making plans for suicide, with from 4.3% (specific phobia) to 23.2% (drug dependence) of those with these disorders reporting they had made suicide plans. Among those with mood disorders 7.6% reported making plans for suicide. Among those with eating disorders 10.1% reported making suicide plans while 7.6% of those with an alcohol disorder and 16.0% of those with a drug disorder reported making such plans.

The risk of suicide attempt was less common than suicidal ideation or making suicide plans: 9% of those with an eating disorder and 3.4% of those with a mood disorder and 4% of those with a substance use disorder reported making suicide attempts, for example. To estimate the strength of association between individual disorders and suicidal behaviours, odds ratios (ORs) were computed. The odds ratio is a relative measure of risk, assessing how much more likely it is that someone exposed to a particular risk factor will develop an outcome (in this case, suicidal ideation, suicide plan or suicide attempt) compared with someone who is not exposed. Consistent with previous research (Beautrais et al 2005) ORs were largest, for each suicidal behaviour, for major depressive disorder: ideation, OR = 7.2 (4.9, 10.8); plan, OR = 7.2 (3.7, 14.0); attempt, OR = 14.3 (6.2, 32.7), taking account of all other disorders.

The risk of suicidal ideation, suicide plan and suicide attempt increased with increasing number of disorders. Among those with three or more disorders, 29.8% reported suicidal ideation (compared with 6.1% of those with only one disorder), 13.2% reported making a suicide plan (compared with 1.1% of those with one disorder) and 5.6% reported a suicide attempt (compared with 0.3% of those with one disorder).

Table 7.5: Mental disorder in past 12 months and risk of suicidal ideation, suicide plan and suicide attempt in past 12 months

Disorder groups[1]	Suicidal ideation % (95% CI)	Suicide plan % (95% CI)	Suicide attempt % (95% CI)
Anxiety disorders			
Panic disorder	25.4 (18.7, 33.5)	11.4 (7.6, 16.7)	3.6 (1.8, 7.1)
Agoraphobia without panic	24.6 (14.7, 38.1)	7.1 (3.4, 14.5)	3.0 (0.9, 9.1)
Specific phobia	10.2 (7.9, 13.0)	4.3 (2.7, 6.7)	2.1 (1.0, 4.4)
Social phobia	17.2 (13.6, 21.4)	7.2 (5.1, 10.0)	2.1 (1.2, 3.8)
Generalised anxiety disorder	21.5 (15.9, 28.3)	7.5 (4.3, 12.9)	1.0 (0.4, 2.7)
Post-traumatic stress disorder[2]	16.4 (12.0, 22.0)	5.0 (3.3, 7.7)	1.8 (1.0, 3.3)
Obsessive–compulsive disorder[2]	27.3 (15.4, 43.9)	14.2 (5.9, 30.4)	3.3 (1.2, 9.3)
Any anxiety disorder[2]	12.1 (10.3, 14.2)	4.7 (3.6, 6.2)	1.9 (1.2, 3.0)
Mood disorders			
Major depressive disorder	21.3 (17.7, 25.3)	8.2 (5.8, 11.4)	4.0 (2.3, 6.8)
Dysthymia	28.2 (18.9, 39.7)	16.6 (8.8, 28.9)	6.2 (1.7, 20.4)
Bipolar I–II disorders	17.6 (12.8, 23.6)	5.5 (3.5, 8.4)	1.9 (0.9, 3.7)
Any mood disorder	20.2 (17.2, 23.4)	7.6 (5.7, 9.9)	3.4 (2.1, 5.4)
Substance use disorders			
Alcohol abuse	16.5 (12.2, 21.9)	7.6 (4.8, 11.8)	2.3 (1.1, 4.5)
Alcohol dependence	23.5 (16.7, 32.1)	12.1 (7.3, 19.6)	3.8 (1.9, 7.4)
Drug abuse	25.7 (17.5, 35.9)	13.3 (7.8, 21.8)	4.3 (2.2, 8.2)
Drug dependence	40.9 (27.8, 55.4)	23.2 (12.3, 39.5)	11.3 (3.6, 30.2)
Marijuana abuse	24.2 (15.6, 35.5)	12.5 (6.8, 21.9)	4.9 (2.4, 9.8)
Marijuana dependence	38.6 (24.3, 55.2)	19.8 (10.1, 35.3)	6.6 (3.1, 13.6)
Any alcohol disorder	16.7 (12.7, 21.7)	7.6 (5.0, 11.5)	2.5 (1.4, 4.6)
Any drug disorder	28.5 (20.0, 38.8)	16.0 (9.3, 26.1)	7.4 (2.9, 17.5)
Any substance use disorder	18.5 (14.5, 23.3)	9.0 (6.0, 13.2)	4.0 (2.0, 7.8)
Eating disorders			
Anorexia[23]	–	–	–
Bulimia[2]	20.3 (10.5, 35.6)	10.5 (4.5, 22.3)	9.3 (3.1, 25.0)
Any eating disorder[2]	22.9 (12.3, 38.4)	10.1 (4.4, 21.7)	9.0 (3.0, 24.3)

Disorder groups[1]	Suicidal ideation % (95% CI)	Suicide plan % (95% CI)	Suicide attempt % (95% CI)
Any disorder[2]	11.8 (10.4, 13.5)	4.1 (3.2, 5.1)	1.6 (1.1, 2.4)
No disorder	0.9 (0.7, 1.3)	0.2 (0.1, 0.3)	0.1 (0.0, 0.2)
One disorder[2]	6.1 (4.7, 7.8)	1.1 (0.7, 1.7)	0.3 (0.1, 0.7)
Two disorders[2]	15.4 (12.2, 19.4)	5.9 (3.9, 8.7)	2.6 (1.3, 5.0)
Three or more disorders[2]	29.8 (24.4, 35.7)	13.2 (9.4, 18.4)	5.6 (3.1, 10.1)
Total	3.2	1.0	0.4

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 A dash (–) in a cell indicates fewer than 30 with the disorder.

7.7 Health services use

The extent to which those who reported 12-month suicidal ideation, suicide plan and suicide attempts made visits for mental illness in the past 12 months was explored. While available data do not give precise information about the timing of these visits in relation to suicidal behaviour, or whether the visit was specifically for suicidal behaviour, it is useful to know the fraction of those with suicidal behaviour within the past 12 months who also made visits for mental health, including substance use, problems within the past 12 months.

Almost half of those with a 12-month history of suicidal ideation (42.8%), suicide plan (45.0%) or suicide attempt (44.7%) did not make any mental health visits within the same 12-month period in which they were suicidal. More specifically, of those with suicidal ideation, 16.7% reported that they had made visits to a psychiatrist within the past 12 months, 34.5% had made visits to a psychiatrist and/or another mental health professional, and 53.6% had made visits to any health professional. Of those who made a plan for suicide, 25.8% had made visits to a psychiatrist within the previous 12 months, 41.7% had made visits to a psychiatrist and/or another mental health professional and 54.5% had made visits to any health professional. Of those who made a suicide attempt, 31.5% had made visits to a psychiatrist within the previous 12 months, 45.2% had made visits to a psychiatrist and/or another mental health professional and 53.7% had made visits to any health professional.

7.8 Conclusions

The analyses reported in this chapter have implications for the following major themes relating to the prevalence, correlates and the management of suicidal behaviours in New Zealand.

7.8.1 Prevalence of suicidal behaviours

Suicidal ideation was common, with 15.7% of participants acknowledging a lifetime history of suicidal ideation. In comparison, lifetime rates of suicide plans (5.5%) and attempts (4.5%) were lower. Reports of suicidal behaviours were more common among the young and decreased with increasing age. Lifetime rates of suicidal behaviours were consistently significantly higher in females than males. Suicidal behaviours are thus a problem for both sexes: while males are more likely to die by suicide, suicidal morbidity is dominated by females (Ministry of Health 2005a).

The findings in this survey are broadly consistent with estimates of suicidal ideation and suicide attempt obtained in previous New Zealand studies (Beautrais 2001; Fergusson et al 2000; Nada-Raja et al 2004; Weissman et al 1993; Weissman et al 1999), with the exception of the findings from the National Secondary School Youth Health Survey (Adolescent Health Research Group 2003), which reported rates of suicidal behaviour in the year before interview that were higher than the findings from other New Zealand studies. The findings from this survey are also consistent with findings from national surveys conducted in comparable OECD countries. These studies have reported lifetime rates of suicidal ideation ranging from 11.3% to 16.5% and of suicide attempt ranging from 3.1% to 4.9% (Kessler et al 1999a; Pirkis et al 2000; Weissman et al 1999), and 12-month rates of ideation ranging from 3.3% to 3.4% and of attempt ranging from 0.4% to 0.6% (Kessler et al 2005a; Pirkis et al 2000).

It should be noted that the observed prevalences for suicidal behaviours are likely to be underestimates, because of participant reluctance to admit to stigmatised suicidal behaviours or because of non-participation in the survey. It is also likely that the observations of decreasing suicidal behaviours with increasing age may reflect, in part, recall bias or forgetting, and that, with age, historical events become overlaid with more recent life experiences. However, these limitations are likely to apply to a similar degree to comparable surveys.

7.8.2 Sociodemographic correlates of suicidal behaviours

Suicidal ideation was associated with both individual-level sociodemographic factors (including female gender, youth, poor educational qualifications and low household income) and with the area-level descriptors of social deprivation and urbanicity. Suicide plans and attempts were linked with youth, low household income and the area-level descriptor of deprivation. In addition, suicide attempt was associated with urbanicity. These findings are consistent with a large body of New Zealand and international evidence that has shown consistent links between a range of social and demographic factors and suicidal behaviours (Beautrais et al 2005; Collings and Beautrais 2005; Goldsmith et al 2002; Hawton and van Heeringen 2000).

7.8.3 Ethnicity and suicidal behaviour

Rates of suicidal ideation, suicide plan and suicide attempt varied with ethnicity, with Māori and Pacific people reporting significantly higher rates of suicidal ideation, suicide plan and suicide attempt than Other people. Some of these ethnic differences in suicidal behaviours were explained by social and demographic factors.

These findings are consistent with those of previous New Zealand studies and with a large body of international evidence that has found elevated rates of suicidal behaviour among aboriginal and ethnic minority populations, with these higher rates accounted for, in part, by higher rates of social deprivation and disadvantage, and attributed, in part, to acculturative stress (Ajwani et al 2003; Beautrais et al 2005; Collings et al 2004; EchoHawk 1997; Hunter and Harvey 2002; Indian Health Service et al 1999; Leenaars in press).

7.8.4 Mental disorders and suicidal behaviours

Individuals with mental disorder had elevated rates of suicidal behaviour, with 11.8% of those with any disorder reporting suicidal ideation, 4.1% making a suicide plan and 1.7% making a suicide attempt. Mood disorders, anxiety disorders, eating disorders, and alcohol, drug and substance use disorders were all associated with increased rates of suicidal ideation, suicide plan and suicide attempt, with major depressive disorder having the strongest association with each type of suicidal behaviour (ideation: OR = 7.2 (4.9, 10.8); plan, OR = 7.2 (3.7, 14.0); attempt, OR = 14.3 (6.2, 32.7).

These findings confirm the association between mental disorders, and, particularly, mood disorders, and the risk of suicidal behaviours found in extensive New Zealand and international research. This body of evidence suggests mental disorders are consistent and strong risk factors for suicidal behaviour (Beautrais et al 2005; Collings and Beautrais 2005; Goldsmith et al 2002; Hawton and van Heeringen 2000).

7.8.5 Visits made to health professionals for suicidal behaviours

Almost half of those who reported suicidal behaviours within the 12 months before interview made no visits to specialist mental health professionals or other health professionals in that period. In particular, less than one-third (31.5%) of those who attempted suicide received treatment from a psychiatrist.

In this survey we collected very limited data on the temporal links between suicidal behaviours and visits to health professionals, limited data on type of treatment received during visits to health professionals, and no data on the quality of that treatment. Nevertheless, the findings from our survey are generally consistent with New Zealand and international research that suggests that a substantial fraction of people with suicidal behaviours and the mental disorders with which they are associated do not receive treatment. In addition, emerging evidence suggests that, of those who do have treatment contact, only a minority receive adequate treatment (Beautrais et al 2000; Demyttenaere et al 2004; Wang et al 2005b).