

# 10 Suicide and self-inflicted injury

The causes of suicide are multifactorial but suicide is strongly associated with psychological distress and disorders, particularly depression (DHAC & AIHW 1999, Skegg 1997). It has also been noted that suicide is one of the main causes of death attributed to mental illness (AIHW & DHFS 1997). Deliberate self-harm not ending in death is often termed 'attempted suicide'. However, these individuals may not have intended to end their life, but only to harm themselves. Therefore, a better term for self-inflicted injury that is survived is 'parasuicide', because it does not imply intention (Skegg 1997). Even though intention is not recorded in cases of parasuicide, it has been shown that individuals who have had a hospital admission due to parasuicide are at higher risk of committing suicide at a later date (Nordentoft et al. 1993).

This chapter presents results on both suicides and parasuicides. The section on parasuicides includes data on the proportion of the population who report that they have attempted suicide, and hospitalisations for self-inflicted injury.

### Suicide

Information below comes from the AIHW Mortality Database, which includes a cause of death code that can be used to determine the number of deaths due to suicide. Suicides recorded in the national data are likely to be underestimates of the true level of suicide in the community (Ruzicka & Choi 1999; Ministry of Health 1998), but the extent of this underestimation is believed to be small. This is due mainly to the possible difficulty in determining whether the death was intentional or unintentional. It has also been suggested that there may be pressures (social, financial or religious) in some cases not to record the death as a suicide.

In comparison to other Western countries, the reported Australian youth suicide rate for males is relatively high, ranking fifth behind Finland, New Zealand, Switzerland and Austria (Ruzicka & Choi 1999). The Australian female rate for youth suicide is well down the ranking compared with other Western countries, ranking eleventh. Methods of recording suicide deaths may account for some of these differences.

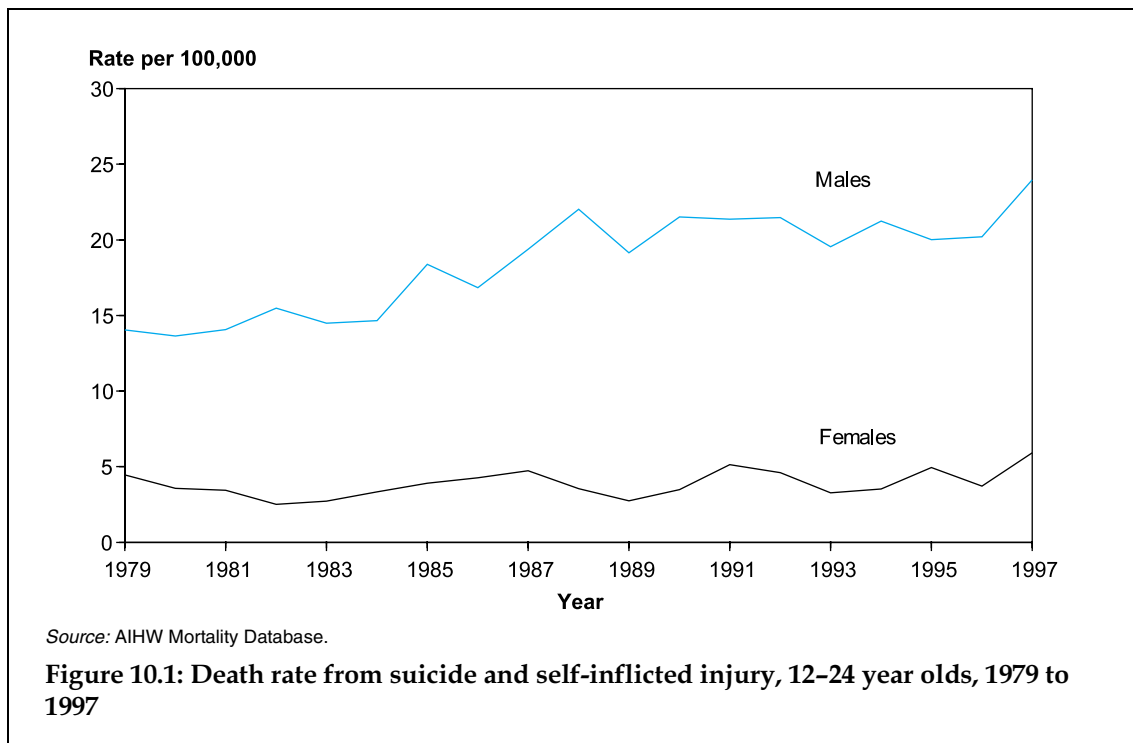
Youth suicide rates in Australia, particularly for males, have increased substantially over the last three decades (Cantor et al. 1999). Many other Western countries have also experienced rising youth suicide rates in recent years. There have been a number of suggested reasons for the increase, which also may apply in Australia. These include an increasing prevalence of depression in recent generations of young people, increased use of alcohol and other drugs, a possible increase in family conflict, a decrease in family and social support, and a changing society as a whole (Skegg 1997).

## Suicide and self-inflicted injury

### Over time

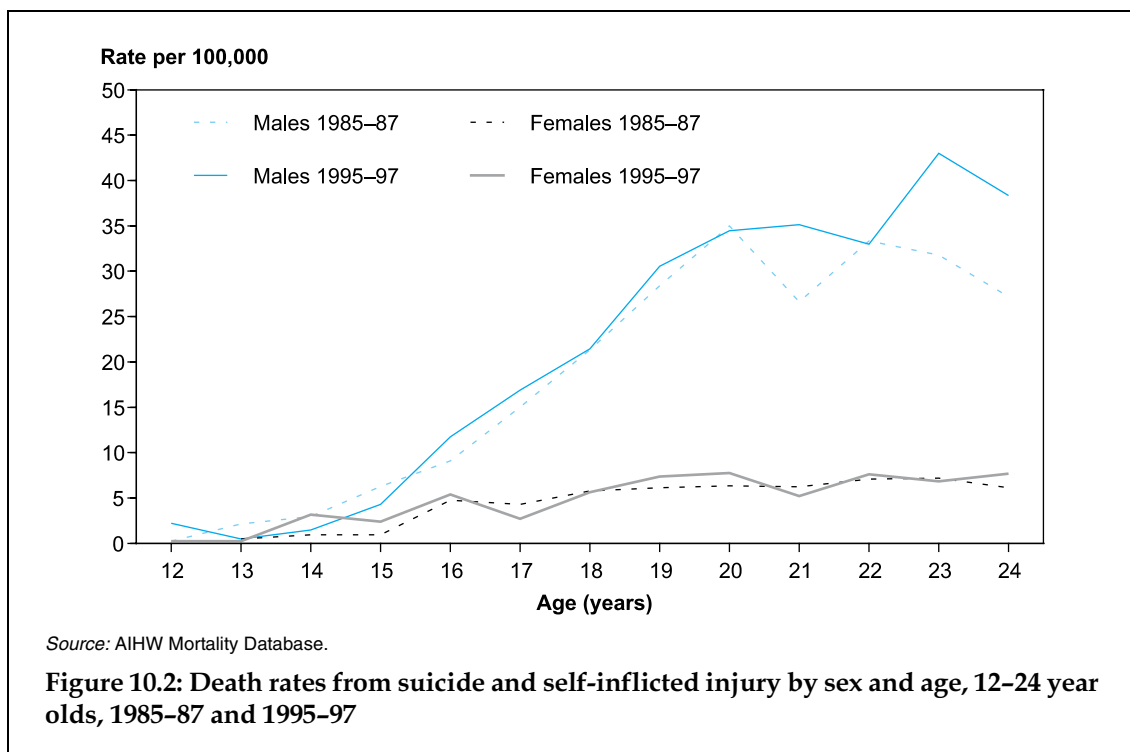
In 1997, 523 people aged between 12 and 24 years committed suicide (423 males and 100 females). Over the period 1979 to 1997, a total of 7,463 young people were recorded as committing suicide – an average of 393 per year.

Suicide rates for young people were lower than those for all ages for most of this century. However, since approximately the mid to late 1970s, the suicide rate for young males has climbed above the rate for all males (Harrison et al. 1997). The increase in the male rate has been steady from around 1950, with some plateauing-off in recent years.



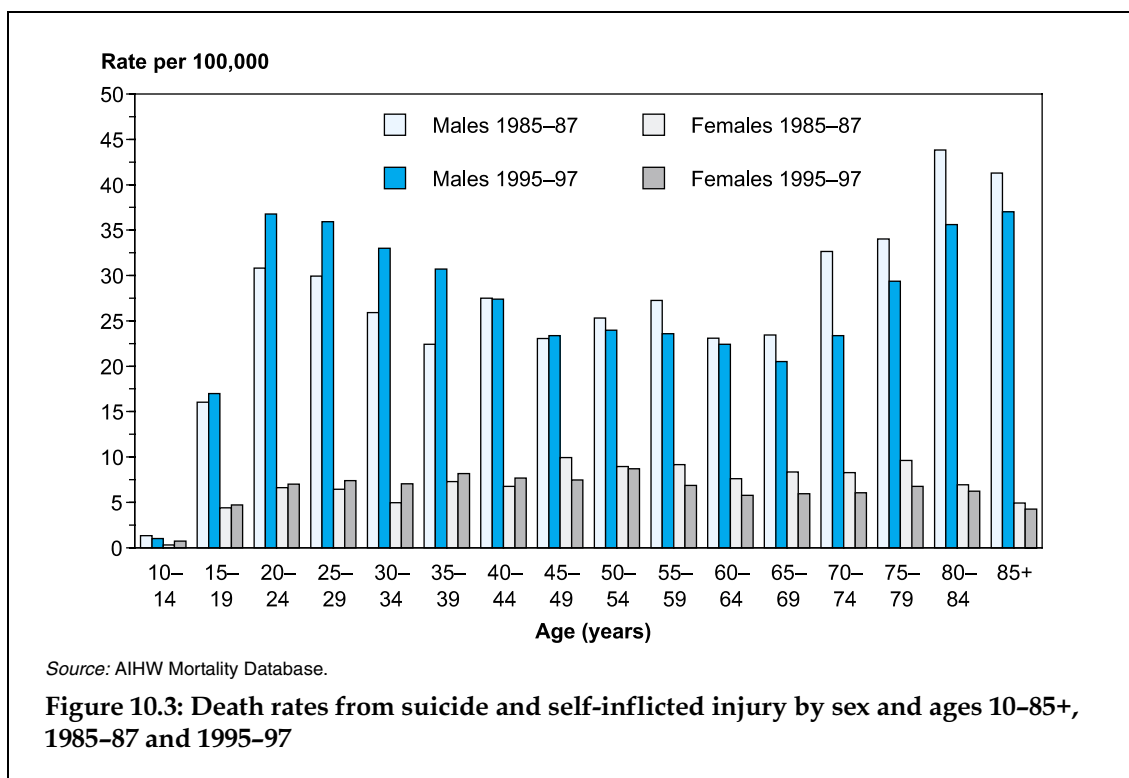
- The suicide rate for young people aged 12-24 years increased over the period 1979 to 1997. For males, the rate increased by 71%, from 14 per 100,000 to 24 per 100,000. The female rate has increased from 4.5 per 100,000 in 1979 to 5.9 per 100,000 in 1997. However, this increase in the female rate has been shown to be not statistically significant (Cantor et al. 1999).
- Over the period 1979 to 1997, the male suicide rate for this age group was substantially higher than the female rate. The male rate ranged between 3.2 and 7.0 times higher (in 1979 and 1989 respectively) than the female rate.

### Age specific rates



- In recent years (1995-97) the differences between the male and female suicide rates around ages 12-15 was not large. However, from about 15 years of age the difference between the male and female rate increased substantially across age groups. For the older ages (23-24 years), the male rate was between 5 and 6 times the female rate.
- Between 1985-87 and 1995-97, the overall suicide rate for 12-24 year old males increased by 18%. Figure 10.2 shows that the majority of this increase occurred in the age group 20-24 years, from around 31 per 100,000 to nearly 37 per 100,000.
- Over the same 10-year period, the female rate increased by 14%, with this increase distributed unevenly across the whole age range 12-24 years.

## Suicide and self-inflicted injury



- Figure 10.3 extends the information presented in Figure 10.2 to cover all ages.
- For males, the suicide rate for the period 1985-87 was highest in the older ages (over 70 years of age). Also, the suicide rates for young men aged in their late teens and early twenties were only slightly higher than those for some other ages (early to mid forties and late fifties).
- In contrast, for the period 1995-97, the highest male suicide rates occurred at two ages: 20-24 years and 85+ years. This change in the peak rates occurred due to increases in suicide rates in the younger ages, and decreases in the rate at older ages over the 10-year period.
- As well as having a higher suicide rate compared with older males, the number of cases of suicide occurring among younger males is very much larger than for other age groups. In 1995-97, 19% of all male suicides registered were for males aged 12-24 years. Another 25% of male suicide cases occurred in the age range 25-34 years. Only 3% occurred in men aged 80 years or over.
- The increase in the suicide rate between 1985-87 and 1995-97 at younger ages extends from the late teens to the late thirties.
- The changes in the female rate between 1985-87 and 1995-97 were less dramatic than those observed for the male rate. However, there was still a decrease in the suicide rate in the older age groups, and some increase at younger ages (particularly for women aged in their late twenties and thirties).

### Methods of suicide

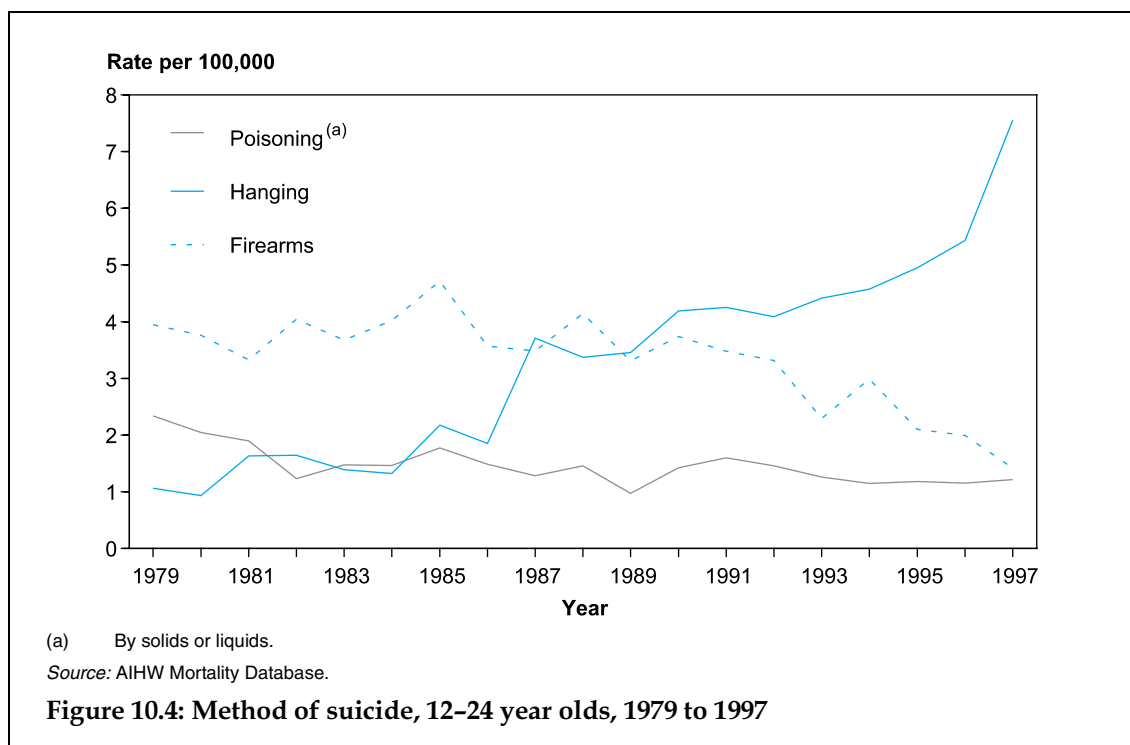
This section outlines the trends in the method used for suicide amongst young people, including trends over time. Gaps remain in the understanding of environmental risk factors for suicide, outlined in a recent report by the National Injury Prevention Advisory Council (NIPAC 1999).

**Table 10.1: Methods of suicide, 12–24 year olds, 1997 (per cent)**

	Males	Females
Poisoning by solids/liquids	5	20
Gases and vapours	16	14
Hanging	51	47
Drowning	1	2
Firearms	11	3
Cutting/piercing	1	3
Jumping from height	6	6
Other/unspecified	9	5
<b>Total</b>	<b>100</b>	<b>100</b>

Source: AIHW Mortality Database.

- In 1997, around half of all suicides in the age range 12–24 years were from hanging (51% of male suicides, and 47% of female suicides).
- For males, the next most common method of suicide was from gases/vapours (16%) followed by firearm-caused deaths (11%).
- For females, poisoning was the second most common method of suicide (20%), followed by deaths from gases/vapours (14%).



## Suicide and self-inflicted injury

- The method of suicide for 12–24 year olds has changed dramatically over the period 1979 to 1997.
- Over this period, the suicide rate from firearms has decreased by 64%, from 3.9 per 100,000 to 1.4 per 100,000.
- However, over the same period, the suicide rate from hanging has increased substantially (by more than 6 times), from 1.1 per 100,000 to 7.6 per 100,000.
- The death rate from poisoning has remained relatively constant over this period.

## Parasuicide

This section includes information on episodes of deliberate self-harm that are survived at least until hospital admission. As outlined in the introduction to this chapter, the individuals involved in these instances of self-harm may or may not have intended to end their life when deliberately injuring themselves.

Some estimates are available on the reported incidence of parasuicide, presented in the next section. More detail is available on hospitalisations for self-inflicted injury, results of which are also given below.

### Reported incidence

Estimates are available from different sources on the incidence of parasuicide in young people. Two sets of results are given below (12–16 year olds, followed by 18–24 year olds). However, the results of these two sources are not directly comparable, due to differences in methodology as outlined under Figure 9.1 in Chapter 9.

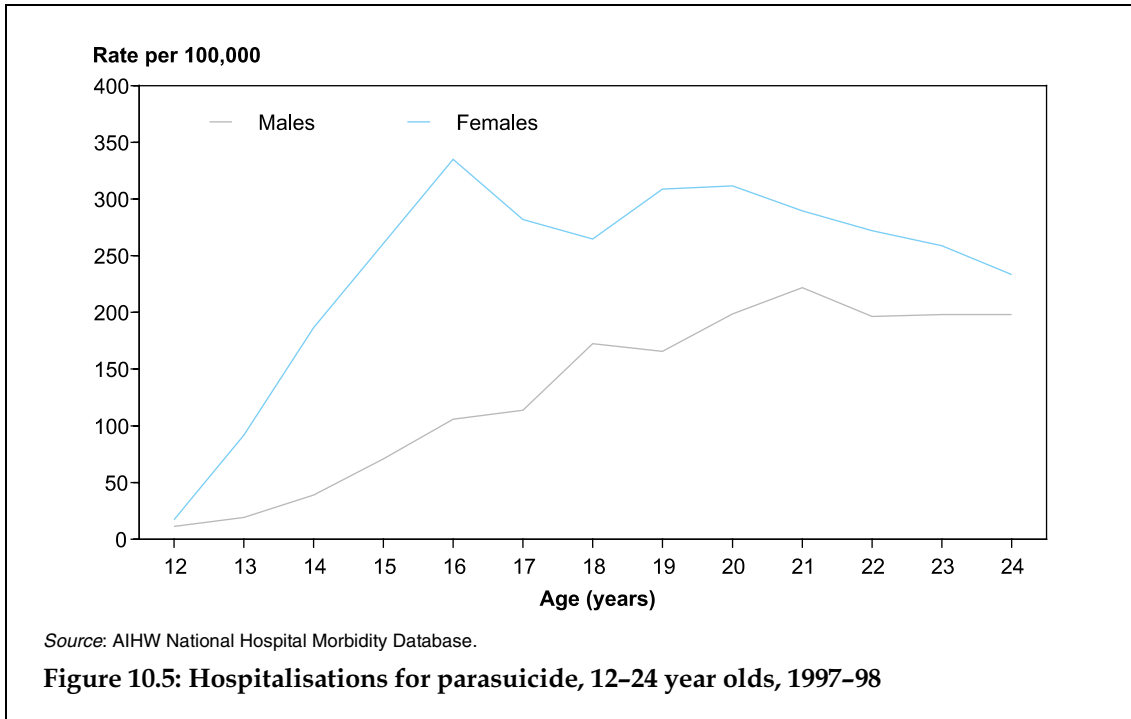
In Western Australia, 8% of 12–16 year olds reported deliberate self-harm in the 6 months prior to the Western Australian Child Health Survey conducted in 1993 (Zubrick et al. 1995). The rates were very similar for boys and girls (7% of males and 8% of females).

For the older age group (18–24 years), just under 3% of both males and females in 1997 reported that they had attempted suicide in the past (AIHW, from ABS Survey of Mental Health and Wellbeing, 1997).

### Hospitalisations

Hospital morbidity data (AIHW National Hospital Morbidity Database) can be used as a source of the number of hospitalisations resulting from self-inflicted injury (using ICD-9-CM 'external cause' codes). There were nearly 6,400 hospitalisations of 12–24 year olds for self-inflicted injury in 1997–98.

As with all hospitalisation data included in this report, the results indicate the number of episodes of hospital care, not the number of individuals hospitalised. Therefore, if an individual is hospitalised more than once for an injury, they will be counted on each occasion.



- Over the age range 12-24 years, females had higher hospitalisation rates for self-inflicted injuries than males in 1997-98. Similar patterns have been observed over a number of years (AIHW National Hospital Morbidity Database).
- For females, the highest hospitalisation rate in 1997-98 was for 16 year olds (335 per 100,000). Hospitalisation rates for older females were relatively constant.
- For males, the rate peaked at 21 years (222 per 100,000), following a steady increase over the younger ages.
- The hospitalisation rates for males and females were almost identical at age 12. The rate then diverged until the mid to late teens, before converging again. At age 16, the female rate was three times higher than the male rate. The rates began to converge from age 20.

As shown in Figure 10.2, the male suicide rate is considerably higher than the female rate. However, as shown in Figure 10.5, the hospitalisation rate for self-inflicted injury is higher for females than for males. Harrison et al. (1997) suggest that reflects the greater use among males (shown in Table 10.1 and Table 10.2) of more lethal methods of suicide. The method of parasuicide most used by young women is poisoning, in many cases of which death can be avoided if medical treatment is received quickly. In contrast, young males tend to choose methods that are more likely to be immediately lethal (such as use of firearms or hanging).

## Suicide and self-inflicted injury

**Table 10.2: Cause of self-inflicted hospitalised injuries, 12–24 year olds, 1997–98 (per cent)**

External cause	Males	Females
Poisoning with solids/liquids	69	87
Gases and vapours	2	1
Hanging	5	1
Drowning	0	0
Firearms	1	0
Cutting/piercing	15	10
Jumping from height	2	0
Other/unspecified	5	1
<b>Total</b>	<b>100</b>	<b>100</b>

Source: AIHW National Hospital Morbidity Database.

- The majority of hospitalisations for self-inflicted injuries for 12–24 year olds in 1997–98 was for overdoses with solid/liquid poisons (69% of male hospitalisations and 87% of female hospitalisations).
- Cutting/piercing injuries were the next most common (15% of male hospitalisations, 10% of female hospitalisations).

## References

Australian Institute of Health and Welfare (AIHW) & Commonwealth Department of Health and Family Services (DHFS) 1997. First report on the National Health Priority Areas 1996. AIHW Cat. No. PHE 1. Canberra: AIHW and DHFS.

Cantor C, Neulinger K & De Leo D 1999. Australian suicide trends 1964–1997 – youth and beyond? Medical Journal of Australia [online, cited 6 July 1999]. Available from Internet: <<http://www.mja.com.au/public/issues/prs2/cantor>>.

Commonwealth Department of Health and Aged Care (DHAC) & Australian Institute of Health and Welfare (AIHW) 1999. National Health Priority Areas report: mental health 1998. AIHW Cat. No. PHE 13. Canberra: DHAC and AIHW.

Harrison J, Moller J & Bordeaux S 1997. Youth suicide and self-injury, Australia. Australian Injury Prevention Bulletin, Issue 15 (supplement), March. AIHW Cat. No. INJ 6. Adelaide: AIHW National Injury Surveillance Unit.

Ministry of Health 1998. Progress on health outcome targets: the state of the public health in New Zealand 1998. Wellington: Ministry of Health.

National Injury Prevention Advisory Council (NIPAC) 1999. Directions in injury prevention report 1: research needs. Canberra: DHFS.

Nordontoft M, Breum L, Munck L et al. 1993. High mortality by natural and unnatural causes: a 10 year follow up study of patients admitted to a poisoning treatment centre after suicide attempts. British Medical Journal 306:1637–41.

Ruzicka L & Choi C 1999. Youth suicide in Australia. Research School of Social Sciences Working Papers in Demography No. 78. Canberra: Australian National University.

Skegg K 1997. Suicide and parasuicide. In: Ellis P & Collings S (eds.) Mental health in New Zealand from a public health perspective. Wellington: Ministry of Health.

Zubrick SR, Silburn SR, Garton A, Burton P, Dalby R, Carlton J, Shepherd C & Lawrence D 1995. Western Australia Child Health Survey: Developing health and wellbeing in the nineties. ABS Cat. No. 4303.5. Perth: Australian Bureau of Statistics and the Institute for Child Health Research.