Suicide in South Australia

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This study of suicide in South Australia is part of a wider investigation of suicide in Australia generally - and of the international problem of self-destruction. It was conducted with the cooperation of the Australian Bureau of Statistics and the authors wish to acknowledge the generous assistance provided by officers of the Department of the Attorney-General of South Australia in supporting this inquiry. They are indebted to the Crown Law Section which gave direct help in the assembling of the case material which is used in this study.

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CHAPTER 1

ORIENTATION

Those who already know Australia and more particularly South Australia need not be detained by this chapter. But since suicide is acknowledged to be culturally conditioned, it is necessary to introduce South Australia as a setting for the figures and for the cases of self destruction which are covered by this study.

It will come as a surprise to many that they have already read about South Australia in Jonathan Swift's account of Gullivers Travels. For the fifth journey of Lemuel Gulliver, Swift gives a latitude and longitude which was that of Nuytsland. This remote location he probably got from publicity given to a proposal made in 1717 by a Swiss, Jean Pierre Purry, to the Dutch East India Company that soldiers and colonists be sent to Nuytsland. The Nuyts Archipelago (off Denial Bay towards the west as one proceeds along the coast of South Australia) had been named by Francois Thijssen the commander of a Dutch ship, the Guilden Zeepaard, which sailed these waters in 1627.

The French might well have been the first colonisers, for Bruni d'Entrecasteaux sailed to the head of what is now known as the Great Australian Bight in 1792 looking for Nuytsland, but he ran out of water and put in at Van Diemans Land (now Tasmania). Eight years later Lieutenant James Grant left England commanding the Lady Nelson and landed at a point very near what is now South Australia's eastern border with Victoria. He named

one cape "Northumberland" and the other "Banks". The following year Matthew Flinders, the leading surveyor and cartographer of his time, was given command of the Investigator. He set out to forestall two French ships which had applied for and obtained British permission to do scientific research in New Holland (now Australia). Flinders began to chart the south coast of New Holland from December 6th, 1801. On January 26th, 1802, he crossed what is now the border between Western and South Australia. He found and named Kangaroo Island discovering there large numbers of these animals so unaccustomed to human beings that they made no attempt to escape as the sailors came to butcher them for meat. In what he later called Encounter Bay near the modern capital city of Adelaide, he met the commander of the two French ships. He discovered and named Mount Lofty at the foot of which Adelaide now stands.

For the next thirty years little was done and indeed little was known of the interior of South Australia until Charles Stuart made his way down the Murray River in 1830. There had been some activity along the coast however. Convicts escaping from Van Diemans Land settled in small groups hunting seals and kangaroos. A few American sealers built a schooner on Kangaroo Island. This was an island which had been surveyed by a British government party in 1804 and considered to be unsuitable for colonisation.

In England, Edward Gibbon Wakefield was advocating a policy of selling Crown Land in the colonies and using the proceeds to finance the emigration of free labourers. In 1829 he made the first suggestion for applying this scheme to South Australia. His ideas were adopted by the short lived National Colonisation Society. There was another abortive attempt in 1831, when the South Australian Land Company developed a scheme for a chartered colony in South

Australia, but it could not get approval. In 1834 the South Australian Association was more successful and the British Government enacted a statute, the South Australia Act, which provided for the official settlement of South Australia in 1835, with authority for the project being divided between the Colonial Office and a Colonisation Commission. South Australia like Western Australia was to be settled without convicts. Of course some convicts came across the borders from neighbouring colonies and there were the few from Van Diemans Land. But unlike Western Australia which officially admitted transported convicts in 1850, South Australia managed to continue as a free settlement unaided by transportation.

The first Governor to be appointed, Captain John Hindmarsh, reached Holdfast Bay in H.M.S. Buffalo on 28th December, 1836, and proclaimed the settlement of South Australia. Before he ever got to the colony, however, eight ships from England and three from Australian ports had made land in the new country. The new immigrants did not always settle on their land and produce as had been expected however, and a market rapidly developed in land and imports leading to speculation. By 1840 the population was 14,000 people but the original plan for a self-sufficient colony had not been realised.

Most of the £300,000 which the Colonisation Commission had received from the sale of land had been absorbed by the administration. Only £125,000 had been used as originally intended to finance 7,500 migrants. Parliament held an inquiry and bailed out the Commission with a grant of £220,000 but then in 1842 South Australia was made an ordinary Crown Colony, its land revenues being

paid into and controlled by the Colonial Land and Emigration Commission in London. The new Governor, Captain George Grey, stopped immigration for the time being and moved people to work on their land. By 1844 the picture had changed : the colony was self-supporting and agricultural production was surplus to local requirements. There were by that time 17,000 people in South Australia.

South Australia did not have the gold rushes of the other colonies but the discovery of other minerals acted like a blood transfusion. By 1840 Adelaide had become the first municipal council in the colonies. The following year silver and lead were discovered nearby. In the next few years copper was found in several places, notably at Kapunda in 1845. Consequently the migrants flowed in - no less than 43,000 in a period of five years. By 1850 the population had grown to 64,000 and a relatively independent South Australia became the first British colony to disestablish the Church. In the same spirit it refused to cooperate with Victoria in 1856 in keeping out Chinese. So the Chinese continued to enter Australia via Adelaide or Guichen Bay, and went overland to Victoria. Only in 1857 did South Australia impose its own restrictions on the flow of Chinese. In the same period South Australia was opposing the idea of federation for the Australian colonies. The Sydney Morning Herald for the 19th February 1857, quoted a candidate for the South Australian Legislative Assembly as declaring "Federation at this moment is suicide".

Further mineral discoveries sustained the colony during the early depressed years of the 1860's so that it was still an attractive land for investment. Loans were raised in London and railways built. In the ten years 1857 to 1868 the population grew from 110,000 to 176,000.

The fifteen years 1869 to 1884 were prosperous years for South Australia and by 1883 the people in the colony numbered 300,000. More than a third of this population lived in Adelaide.

In 1900 the Commonwealth of Australia Constitution Act received Royal Assent and a Proclamation was issued uniting South Australia and the other States as the Commonwealth of Australia as from 1 January, 1901. By the mid 1920's South Australia's population had passed the half million mark and by 1963 the population reached one million.

Today South Australia has a population in excess of one and a quarter million, almost three quarters of which live in Adelaide. Thus the State has a largely urbanised population and over the last thirty years its economy has changed from being largely based on agriculture to being typified by its industrial diversification.

CHAPTER 2

SUICIDE IN SOUTH AUSTRALIA - AN HISTORICAL PERSPECTIVE

Suicides During the Early Years of Settlement

As early as 1839, i.e. three years after the settlement of South Australia began, the local newspapers were calling for a systematic registration of births, marriages and deaths. Actually the registration began in 1842 and it led to an attempt to provide public information on the deaths which had occurred in South Australia from 1802 i.e. from the time of Flinder's early survey.(1) Burial registers and newspapers were scrutinised at that time for the compilation of this list of deaths which included eight cases of suicide. None of these suicide cases occurred before 1839 so that there is either a gap for suicide cases for the thirty seven years before or else some of the deaths were suicides without being recorded as such.

One Geoffrey Guy Nash may have drunk himself to death in 1838. He was said to have died through "drinking at Onkaparinga".(2) Otherwise the first recorded suicides in South Australia were the following:

(1) Kenneth McIvor, buried 31/3/1839 following "suicide by poison".[3]

(2) George Whitfield, buried 9/6/1839 following death by a "cut throat".[4]

(3) Elizabeth Burkin of Port Adelaide, aged 34 years and buried 3/12/1839 after she had "killed herself in a state of temporary derangement".[5]

(4) Henry Galloway of Parra River, aged about 32 years and buried 24/3/1840 after he had committed "suicide while temporarily insane".[6]

(5) William Overs of Currie Street, Adelaide, buried 27/10/1840 following death by "suicide".[7]

(6) George Martin of Currie Street, Adelaide, aged 58 years and buried on 25/2/1842 after "suicide during temporary insanity".[8]

(7) Colin Campbell of Walkerville, aged 55 years and buried on 3/8/1841 following death by "suicide".[9]

(8) Isaac Smith of North Adelaide, aged 22 years and buried on 14/11/1842 after committing "suicide while temporarily insane".[10]

From the Archives of South Australia it was possible to glean further information about these first recorded cases from dispositions from inquests held at the time.[11]

These dispositions include both statements made by friends and/or relatives of the deceased and findings of the coroner and jury. Dispositions are available for the cases of George Whitfield, Elizabeth Burkin, Henry Galloway, George Martin, Colin Campbell and Isaac Smith but not for Kenneth McIvor or William Overs. The dispositions relevant to the death of George Whitfield are the first in the archival series although the inquisition into the death of Elizabeth Burkin occurred in December 1839, three months before the inquisition

into the death of Whitfield.

George Whitfield was aged 35 years at the time of his death and was employed as a carpenter on board the Lady Mary Pelham . He was apparently married and had two children although his family did not reside in the colony. He died on the 9th June 1839, and the inquest into his death was conducted on March, 1840. According to the dispositions taken during the inquest it was ascertained that:

> "....not being of sound mind, memory and understanding but lunatic and distracted... with a certain razor of the value of five shillings which the said George Whitfield in his right hand then and there held the throat of him the said George Whitfield then and there did strike, stab and penetrate..."(12)

Elizabeth Burkin died on the 1st December, 1839 in similar fashion, her husband stating that she had always been of a "melancholy temperament" since arriving in the colony. She had apparently attempted suicide on at least two previous occasions but details of these earlier attempts have not been documented.

Henry Galloway of Hindmarsh Town died on the 22nd March, 1840 and an inquest was conducted two days later. Galloway:

> "....destroyed himself by cutting his throat with a knife while under the influence of temporary insanity produced by habits of intoxication."(13)

Galloway was unemployed at the time of his death and according to a friend's statement had experienced a great alteration in his manner a few days prior to death, apparently becoming quite depressed. Galloway had told his friend that he had been "a man of a thousand pounds in Van Diemans Land". Did he kill himself because he had lost money and prospects? Is it relevant that it was known that he "drank hard"?

An inquiry into the death of Isaac Smith was held on 16th November 1840, five days after he had:

> "...with a certain quantity of a poisonous mineral called arsenic himself did kill and murder, to wit, the quantity of two drachms of the said white arsenic did but mix and mingle into with a certain quantity of port wine."(14)

It appears that Smith committed suicide following an argument with a friend who subsequently wrote Smith a letter rejecting him.

Colin Campbell died on 4th August, 1841 from a shotgun wound to the head. He too was considered by coroner and jury to be:

> "under the influence of temporary insanity (which) produced extreme mental excitement."(15)

Campbell was a ship's purser who told his captain that he had lost "any piece of mind" following the employment of mutineers on the ship and the deception of the captain by a certain Mr Hookes.

Finally, the inquest on George Martin who died on 20 February, 1842 states that he had been:

> "...labouring under a grievous disease of the body, to wit, a nervous disease being delirious and out of his mind with a certain pistol did shoot and discharge....under the chin."(16)

It is not clear why he committed suicide but the evidence suggests he was insane at the time of his death, witnesses describing his behaviour as "perfectly childish" and his general circumstances to be "very bad".

The first recognised census of South Australia was taken in 1844 but there was an estimate of the population in 1841 at 15,485 persons. Employing this figure for the calculation of suicide rates for the period 1839-1842 gives us an approximate average annual rate of 12.9 per 100,000 persons, a rate remarkably similar to South Australian rates during recent years.

Previous Studies

There have apparently been no previous studies of suicide in South Australia, but there have been several Australia-wide investigations into suicide which make reference to the South Australian figures.

Knibbs(17) was the first researcher to undertake a systematic study of suicide covering the whole of Australia. This study, published in 1912, examined national and international patterns of suicide during the period 1858-1910. Unfortunately, Knibbs, whilst using data from South Australia, did not tabulate his material

for each separate State. Recognizing this deficiency, Minogue[18] produced a study in 1935 which, while largely concerned with patterns of suicide in New South Wales over the period 1913-1920, did include description of the suicide trends in each State of Australia, usually for the years 1875-1932.

Minogue noted, as did Knibbs, that the Australian suicide rate remained fairly constant although the peaks corresponded to times of "excessive speculation" in land, silver and gold, and, in the case of the record year, 1930, to the beginning of the then financial depression. Other interesting observations made by Minogue were:

(1) that each State showed a periodic rise and fall in its suicide rate, there being a cycle in all States of about seventeen years duration;

(2) that the general tendency within the States was for the peaks in the suicide rate to become increasingly higher, although the reverse was the case in Victoria;

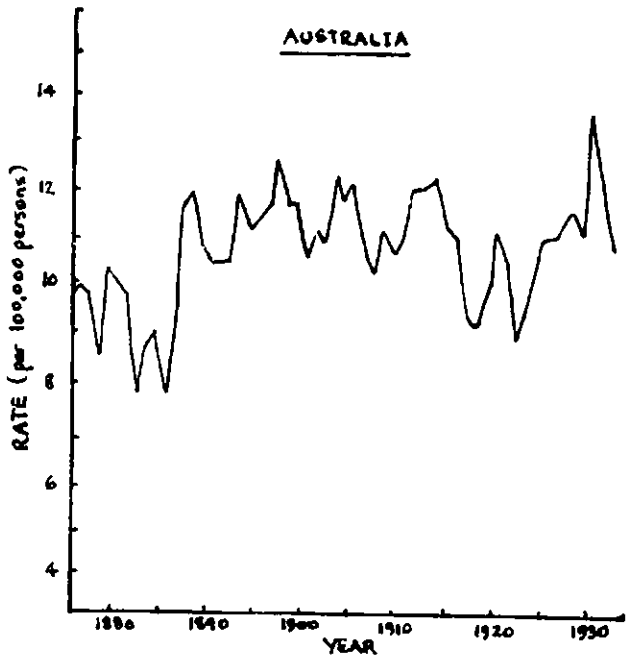
(3) that suicide rates were found to vary considerably with Tasmania having the lowest and Western Australia and Queensland the highest rates. South Australia was considered to experience a rate similar to Victoria's, both being lower than New South Wales;

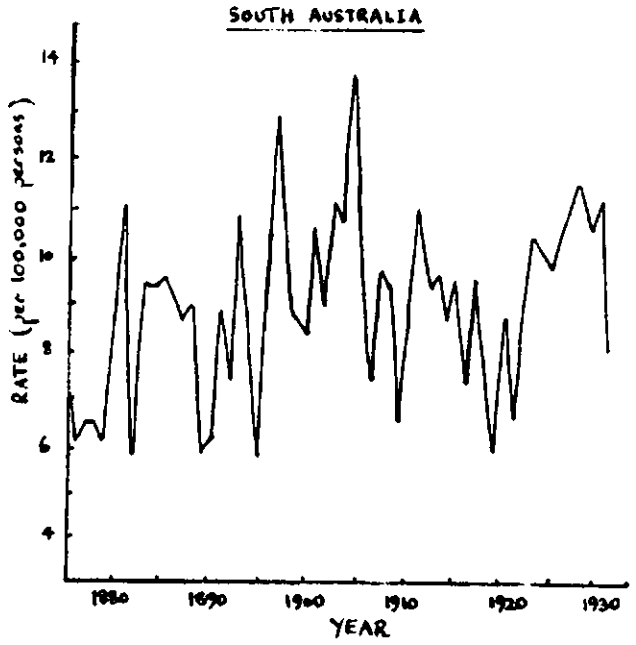
(4) that the suicide rates in the various States increased progressively as one went northwards from Tasmania.

Figure 1 presents suicide rates for both Australia and South Australia during the period 1875-1932 as given in this study.

FIGURE 1

SUICIDE RATES FOR AUSTRALIA AND SOUTH AUSTRALIA 1875 - 1932





AFTER MINOGUE (1935)

The subsequent thirty years produced no Australia-wide studies of suicide, much less any investigation into suicide in South Australia. But in 1965 Saint[19] remedied this somewhat remarkable situation, producing a detailed analysis of suicide in Australia and internationally, supported by a brief review of suicides in Western Australia. Saint's study is undoubtedly a pioneering one which has been cited by many contemporary researchers.

With respect to suicide in Australia and the Australian States, Saint found that, since the 1870's, male suicides clearly reflected political and economic pressures. It was found that the male suicide rates showed a decline during World War 1 and an even sharper decline during World War 11. Conversely, the male suicide rates in each State and for Australia rose sharply in 1930 before gradually returning, by 1938, to the level experienced in the 1920's. Saint found that the South Australian male suicide rates were consistently below the national mean prior to World War 11 but had drawn a little ahead after 1954-1955. An important comment by Saint was that he doubted the existence of significant differences in female suicides as between the States. However, he advanced no statistical proof and seems to have made this decision on the basis of general patterns with which we are not provided.

To highlight differences in suicide rates within Australia, Saint computed comparative mortality rates for each State for selected three-yearly periods. On the basis of this analysis he argued:

> "Until World War 11, South Australia was a peaceful, fairly closely settled State, which prided itself on its good social manners; predictably, the suicide rate approximated that of Victoria. However, since the war, industrialisation in South Australia has proceeded at a pace exceeding that in other States; rapid immigration of capital and labour, we may suspect, creates a temporary sociological instability reflected in a higher suicide rate (it is notable that South Australia showed the greatest rise in suicide rate for males in the 1958-1959 recession)."[20]

These observations and comments constitute the most interesting and detailed appraisal of suicide in South Australia prior to the present study. Since 1965 several more Australia-wide studies of suicide have been conducted, including those by Hetzel (1971)[21] Whitlock (1969, 1975),[22] Dax (1968),[23] Krupinski (1976),[24] Oliver and Hetzel (1972 and 1973),[25] Stoller and Krupinski (1972),[26] and Lindsay (1978)[27] but these do not incorporate material dealing with suicide patterns in the respective States. The last of these is a survey of some thirty eight studies of Australasian "medical and hospital experiences" with attempted and completed suicide during the past ten years. It highlights the relative absence of suicide research in South Australia.

Historical Trends of Suicide in South Australia

It was noted earlier that civil registration of vital statistics in South Australia began in 1842. However, the annual Statistical Report of South Australia which was published from 1843 to 1854 did not incorporate suicide as a separate cause of death. This publication was succeeded by the Statistical Register of South Australia which was firstly produced for the year 1855.

Unlike its predecessor this Statistical Register employed suicide as a category of cause of death, but only a single case of suicide (in 1859) had been documented for the entire period 1855-1861. It seems not unreasonable to assume that the absence of suicides in 1855-1858 and 1860-1861 indicates that no suicides were recorded during those years rather than that no suicides actually occurred.

In the study by Knibbs mentioned previously, suicides in South Australia were included in the Australian total from 1867 onwards. This would suggest that before 1867 no suicide data was available for South Australia. However, the Statistical Register does provide annual numbers of suicides, for both males and females, for all years after 1861. Table 1 gives sex-specific and total numbers and rates of suicide for the decade 1862-1871, this being the first ten-year period for which suicide data was available annually.

The average annual suicide rates during this period were 10.1 per 100,000 males and 2.1 per 100,000 females. The rate for the total population, male and female, was 6.1. But of rather special interest is the fact that in 1862, 1863 and 1865 the female rate actually exceeded the male rate. Nearly always and nearly everywhere the male suicide rate far exceeds the female so that this situation in South Australia is unusual. However, for the rest of this period male rates fell into pattern and were much higher than the female rates.

One of the earliest, if not the earliest, published tabulations of suicide statistics in various States of Australia was compiled by Heaton in 1879[28] and referred to suicides during 1877. This is reproduced in Table 2.

TABLE 1

ANNUAL SEX-SPECIFIC AND TOTAL NUMBERS AND RATES* OF SUICIDE FOR SOUTH AUSTRALIA.

1862-1871

Year	Number of Suicides			Suicide Rate		
	Males	Females	Total	Males	Females	Total
1862	3	3	6	4.2	4.5	4.3
1863	3	3	6	4.0	4.3	4.1
1864	4	-	4	5.4	-	2.6
1865	4	4	8	4.8	5.2	5.0
1866	12	1	13	13.6	1.2	7.7
1867	9	-	9	10.0	-	5.2
1868	17	2	19	18.6	2.3	10.7
1869	15	1	16	16.1	1.1	8.8
1870	12	1	13	12.6	1.1	7.0
1871	11	1	12	11.3	1.1	5.8

Note: *Rates per 100,000 persons

Source: Statistical Register of South Australia 1862-1871, Government Printer, Adelaide, 1863-1872.

TABLE 2

SUICIDES IN AUSTRALIA FOR THE YEAR ENDING DECEMBER 31st, 1877

	Population	Suicides
New South Wales	662,212	66
New Zealand	417,622	38*
Queensland	203,084	Not given in Colony Statistics
South Australia	236,864	17
Tasmania	107,107	9
Victoria	860,787	92
Western Australia	27,838	Not given in Colony Statistics

Notes: * There were in addition to this number inquests held on 22 persons found dead, 42 drowned and 4 hanged.

Source: Heaton, 1879. p.263

Heaton's population statistics for New South Wales and Victoria differ somewhat from 1877 population estimates published by the Australian Bureau of Statistics, but this table is of some significance for while it does not include suicide rates, it endeavours to show variations in the incidence of suicide between the states. Using these official population estimates, Heaton's data on the number of suicides gives rates per 100,000 persons of 10,0 for New South Wales, 9.1 for New Zealand, 7.2 for South Australia, 8.4 for Tasmania and 10.7 for Victoria.[29]

In 1890 Coghlan[30] produced the first issue of A Statistical Account of Australia and New Zealand, an annual report that was published until the early 1900's. This publication included suicide statistics for each state, and New Zealand and Australasia, for the last thirty years of the nineteenth century. The report for 1902-1903[31] gives data for five-yearly periods for each State and these are presented in Table 3.

It can be seen that the rates for South Australia tended to increase slightly during 1871-1900, but while South Australia had the third highest rate among the States for 1871-1875 it experienced the second lowest rate during both 1886-1890 and 1891-1895. Throughout the thirty year period under consideration South Australia's suicide rate tended to be lower than rates for Victoria, Queensland and Western Australia, but higher than that for Tasmania. The rate for New South Wales tended to approximate that for South Australia more than did any other State, although the suicide rate for Victoria did not differ markedly from South Australia's.

With respect to methods employed in suicide during this period Coghlan states:

> "The means of committing suicide most favoured in all the States are poisoning, drowning, shooting, which is more common now than formerly, and hanging amongst males, and poisoning and drowning amongst the females."[32]

Coghlan also provides statistics of the significance of suicide as a cause of death in the various States in certain editions of A Statistical Account of Australia and New Zealand.[33] Table 4 presents the suicide rates per 100,000 deaths for Australian States, New Zealand and Australia for the three periods 1873-1892, 1885-1894 and 1887-1896.

TABLE 3

AVERAGE ANNUAL SUICIDE RATES* FOR AUSTRALIAN STATES, NEW ZEALAND AND AUSTRALASIA. 1871/75 - 1896/1900

	Average Annual Suicide Rate					
	1871/75	1876/80	1881/85	1886/90	1891/95	1896/1900
South Australia	8.1	7.7	9.9	8.7	9.2	10.7
New South Wales	7.8	9.0	8.7	11.2	11.9	13.3
Victoria	11.7	12.3	10.2	12.1	10.8	9.5
Queensland	10.0	13.8	13.3	16.2	16.9	17.1
Western Australia	2.9**	5.0	14.6	10.5	22.5	19.9
Tasmania	5.4	6.8	4.4	6.3	8.5	7.9
New Zealand	7.2**	9.1	9.9	8.9	10.3	9.2
Australasia	-	10.2	9.8	11.2	11.6	11.8

Notes: * Rates per 100,000 persons
** 1872-1875

Source: Modified after Coghlan, 1904 : p.470

TABLE 4

AVERAGE ANNUAL SUICIDE RATES PER 100,000 DEATHS FOR AUSTRALIAN STATES, NEW ZEALAND AND AUSTRALASIA

1873/92 - 1887/96.

	Average Annual Suicides per 100,000 deaths		
	1873-1892	1885-1894	1887-1896
South Australia	648	749	730
New South Wales	666	773	922
Victoria	745	744	766
Queensland	899	1,108	1,207
Western Australia	579	1,044	1,183
Tasmania	369	473	567
New Zealand	817	928	960
Australasia	720	810	881

Source: Modified after Coghlan, 1894 : p.177; 1896, p.97 and 1898, p.117.

Suicide was on average a more predominant cause of death in South Australia than in either Western Australia or Tasmania during the years 1873-1892, but between 1885 and 1896 the suicide rate per 100,000 deaths in Western Australia was much higher than in South Australia. Queensland's rate was consistently higher than that for South Australia while in New South Wales and Victoria the rates, on occasions, approximated those for South Australia.

The above figures taken from A Statistical Account of Australia and New Zealand must, however, be interpreted with caution for as Coghlan states:

> "It is believed that the actual number of suicides is even larger than is shown in the tables, especially during recent years; for there is a growing disposition on the part of Coroners' juries to attribute to accident what is really the result of an impulse of self destruction."(34)

This is the first reference we have in Australia to the unreliability of suicide statistics. Coghlan must have felt deeply about it for he reproduced the identical paragraph year after year.

It has been noted previously that only scant attention has been paid to trends in suicide in South Australia during this century. Accordingly, annual sex-specific and total suicide rates for South Australia have been computed for each year during the period 1900-1977. Figure 2 portrays these annual rates and Table 5 gives annual average suicide rates for both sexes and the total population during each decade since 1900.

South Australia's long term suicide rate has fluctuated dramatically this century, the lowest rate being 5.4 (for 1942) and the highest being 15.1 (for 1905). High rates were experienced in the early 1900's, the 1930's and the early 1960's, while low rates were the norm during the early 1920's and most of the years in the decade 1940-1950. It is interesting that these low years for suicide were war or immediate post-war years. It is less easy to categorise the periods of high suicide rates. The early 1930's were depression years whereas the early 1960's were affluent. Of significance too is the fact that current suicide rates in South Australia are of a similar magnitude to rates experienced during the early years of this century.

FIGURE 2

SEX SPECIFIC AND TOTAL SUICIDE RATES FOR SOUTH AUSTRALIA

1900 - 1977

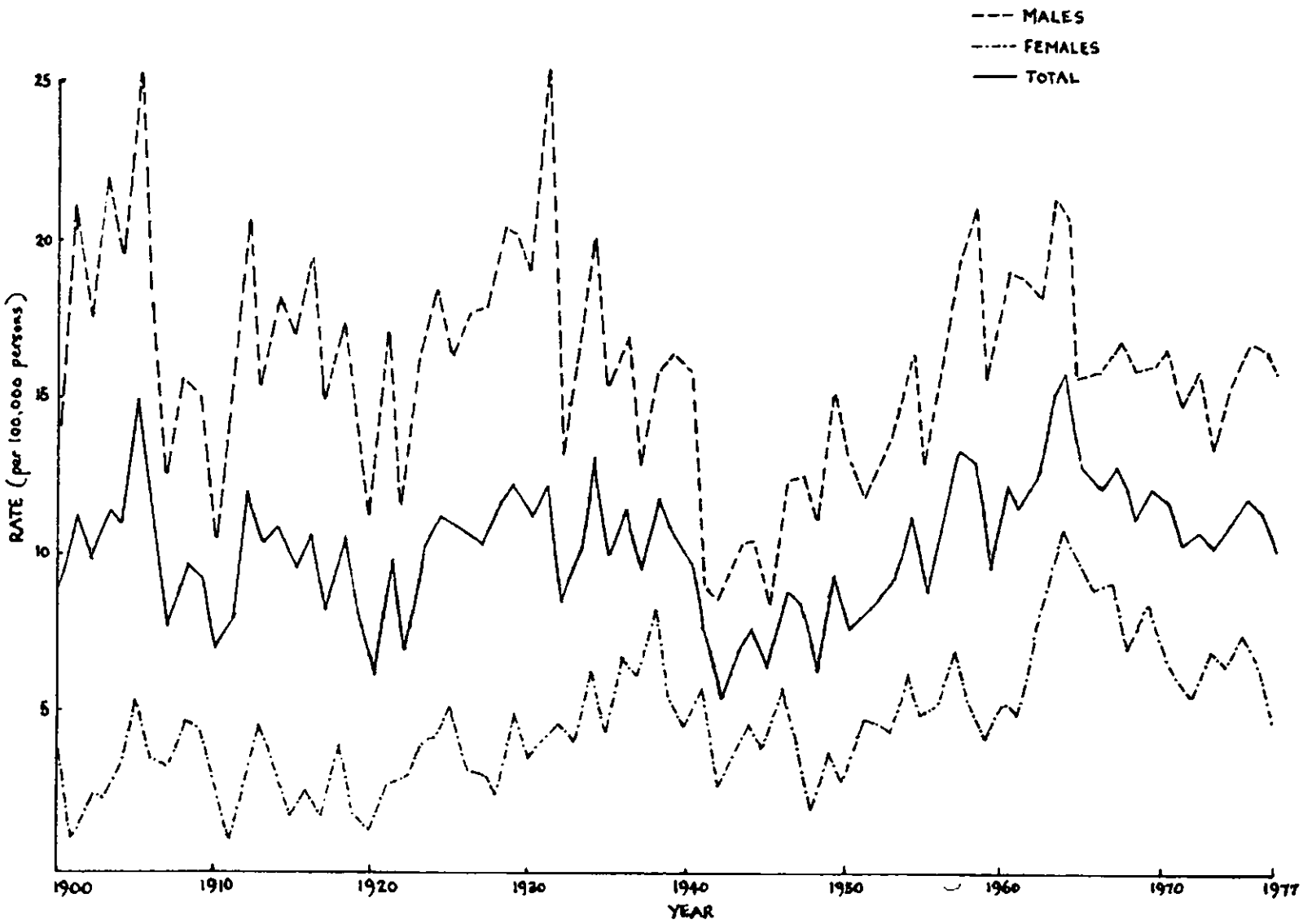


TABLE 5

AVERAGE ANNUAL SEX SPECIFIC AND TOTAL SUICIDE RATES* FOR SOUTH AUSTRALIA.

1900/09 - 1970/77

	Average Annual Suicide Rate		
Year	Male	Female	Total
1900-1909	18.2	3.3	10.6
1910-1919	16.5	2.7	9.6
1920-1929	16.9	3.5	10.2
1930-1939	17.2	5.4	11.0
1940-1949	11.5	4.2	7.8
1950-1959	15.4	5.0	10.2
1960-1969	17.9	8.0	13.0
1970-1977	15.7	6.3	11.0

Notes: * Rates per 100,000 persons

Source: Australia. Bureau of Statistics South Australian Office. Statistical Register of South Australia 1900-1976 (Part 2 : Demography), A.B.S., Adelaide 1901-1977 and Australia. Bureau of Statistics. Causes of Death 1977, A.B.S. Canberra, 1978.

The male suicide rate has fluctuated markedly with peaks during 1905 (25.3), 1931 (25.4) and 1963 (21.4) and troughs during 1910 (10.7), 1920 (11.1) and 1945 (8.4). Male suicide rates during the Second World War were less than half the magnitude of those during the years of the Great Depression with a general increase being experienced from the end of the war till the early 1960's, by which time rates were similar to those during the First World War.

Compared to the male suicide rate, South Australia's female suicide rate has been less erratic with peaks experienced in 1938 (8.4) and 1964 (10.9) and troughs in 1911 (1.0) 1920 (1.6) and 1948 (1.8). Unlike the male rate, the female rate did not increase dramatically during the Great Depression, although rates during the Second World War were comparatively low. Since the high rates experienced during the early 1960's the female rate has tended to decline, the rate for 1977 being the lowest for almost twenty years.

Summary of Findings

(a) In South Australia cases of suicide have been recorded since the earliest years of settlement, at least eight suicides occurring during the period 1839-1842.

(b) For the years 1862, 1863 and 1865 the female suicide rate actually exceeded the male suicide rate, a most unusual occurrence as in most societies and most points in time the male suicide rate is greater, if not much greater, than the female rate.

(c) During the last thirty years of the nineteenth century, the five-yearly suicide rates in South Australia varied from 7.7 to 10.7 per 100,000 persons, most other States except Tasmania tending to experience higher rates of suicide. The rates for Victoria and New South Wales approximated the South Australian rate more so than the rates for Queensland and Western Australia.

(d) Over the period 1870-1900 poisoning, drowning, shooting and hanging were the most favoured means of suicide amongst males and poisoning and drowning most favoured among females in both South Australia and the other States.

(e) Since 1900 South Australia's suicide rate has oscillated in a striking fashion with high rates in the early 1900's, the 1930's and the early 1960's and low rates during the early 1920's and the 1940's. Today's rates are quite similar to those typical of the early years of this century.

(f) South Australia's male suicide rate has fluctuated considerably during this century with peaks in 1905, 1931 and 1963 and troughs in 1910, 1920 and 1945. The male rate during the Depression years was more than double that for the period of the Second World War. Compared to the male rate, the female suicide rate in South Australia has been more static with no dramatic increase during the Depression years but a noticeable increase from the early 1940's to the early 1960's.

NOTES ON CHAPTER 2

(1) Registrar of Births, Deaths and Marriages. Deaths 1802-1842, Adelaide (1842?) typescript.

(2) Ibid. p.58.

(3) Ibid. p.88

(4) Ibid. p.20

(5) Ibid. Holy Trinity Church Burial Registrar No. 314.

(6) Ibid. No. 420

(7) Ibid. No. 594

(8) Ibid. No. 773

(9) Ibid. Burial Register of West Terrace Cemetery No. 309

(10) Ibid. Holy Trinity Church Burial Register No. 607.

(11) Archives of South Australia. "Dispositions taken during inquests 10/6/1839-11/3/1851" Reference GRG24/11.

(12) Ibid.

(13) Ibid.

(14) Ibid.

(15) Ibid.

(16) Ibid.

(17) Knibbs, G.H. "Suicide in Australia - A Statistical Analysis of the Facts", Journal of the Royal Society of New South Wales, 45, 1912 : pp. 225-246.

(18) Minogue, S.J. "Suicide in Australia", Medical Journal of Australia, June 8,1935 : pp. 707-714

(19) Saint, E. "Suicide in Australia", Medical Journal of Australia, June 19, 1965 : pp 911-920

(20) Ibid. p.915

(21) Hetzel, B.S. "The Epidemiology of Suicidal Behaviour in Australia", Australian and New Zealand Journal of Psychiatry 5, 1971 : pp. 156-166.

(22) Whitlock, F.A. "Suicide in Today's Society", Medical Journal of Australia, 1, 7, 15 February 1969 : pp 361-362; and "Suicide, Culture and Society" in I. Pilowsky (ed.), Cultures in Collision, Australian National Association for Mental Health, Adelaide, 1975 : pp 384-387.

(23) Dax, E.C. "Suicide in Today's Society", Medical Journal of Australia, 2, 28 December, 1968 : pp. 1197-1200.

(24) Krupinski, J. "Confronting Theory with Data : The Case of Suicide, Drug abuse and Mental Illness in Australia", Australian and New Zealand Journal of Sociology, 12, 2, June 1976 : pp 91-100

(25) Oliver, R.G. and Hetzel, B.S. "Rise and Fall of Suicide Rates in Australia : Relation to Sedative Availability", Medical Journal of Australia 2, 17, 21 October 1972 : pp 919-923; and "An Analysis of Recent Trends in Suicide Rates in Australia", International Journal of Epidemiology 2, 1, Spring 1973 : pp 91-101.

(26) Stoller, A. and Krupinski, J. "Suicides in Australia" Revista de Neurologia, Neuroaugia y Psiquiatria, 4, November 1972 : pp. 15-33.

(27) Lindsay, J.S. "Australasian Suicidology" Australian and New Zealand Journal of Psychiatry, 12, 1978 : pp 175-180.

(28) Heaton, J.H. Australian Dictionary of Dates and Men of the Time, George Robertson, Sydney 1879: p.263.

(29) Heaton also cites individual cases of suicide during the early years of colonisation in Australia. He states that Australia's first suicide occurred in 1803 when a man hanged himself in New South Wales goal. However, the authors have established that Australia's first suicide was a certain James Haydon who, having been transported for highway robbery, drowned himself in Long Cove during June 1790. Another convict committed suicide in 1791 but Judge Advocate David Collins who reported this event provides no further details.

(30) Coghlan, T.A. A Statistical Account of Australia and New Zealand 1890, Government Printer, Sydney, 1890.

(31) Coghlan, T.A. A Statistical Account of Australia and New Zealand 1902-1903, Government Printer Sydney, 1904 : p.470.

(32) Ibid. p.471

(33) Average annual suicide rates per 100,000 deaths are given in the 1894 edition (Sydney, 1894) for the years 1873-1892, the 1896 edition (Sydney, 1896) for the years 1885-1894 and the 1897-1898 edition (Sydney, 1898) for the years 1887-1896.

(34) Coghlan, op. cit. p.470

CHAPTER 3

SUICIDE AND THE LAW IN SOUTH AUSTRALIA

The State of South Australia is one of the three Common Law States of Australia, i.e. the penal law is not codified. Thus in South Australia suicide is a felony equivalent to murder and attempted suicide is a misdemeanour.

A person convicted of attempted suicide is liable to a penalty of two years imprisonment.(1) When two persons enter into an agreement to commit suicide (a "suicide pact") and one person accordingly kills himself, the survivor is an accessory before the fact and is guilty of murder.(2)

In South Australia, the verdict of felo de se was abolished under section 32(1) of the Coroner's Act 1935-1969. Section 23(2) of this Act states:

> (2) It shall not be lawful for a coroner to forbid the rites of Christian burial at the internment of any person who has committed suicide or died by his own act, nor shall any forfeiture or escheat to the Crown of any real or personal property belonging to such person take place by reason of such verdict, any law, statute, or custom to the contrary notwithstanding.

It is interesting to note that the finding of felo de se has also been abolished in New South Wales, (Coroners Act. 1912, s.19; Coroners Act, 1960 2.3(1)), Queensland (The Coroners Act of 1958, s.46(1)), Western

Australia (Coroners Act 1920-1960, s.21(1)) and Tasmania (Coroners Act 1857 s.8(5) and see Coroners Act 1913-1941 s.25) but not in Victoria though the effects of the findings have been limited (Coroners Act 1958 s.17), affected by the amendments to the Crimes Act (see below). Furthermore, as Brett and Waller[3] have pointed out, in the Criminal Codes of Queensland (ss 311-12), Tasmania (ss 163-4) and Western Australia (ss 288-9) suicide was not treated as a form of murder, but there were specific crimes created of aiding or instigating another's suicide. Howard explains that suicide is not an offence in these States following from "the definition of unlawful homicide in the three codes in terms of the killing of another and the absence of a specific offence of suicide."[4]

New South Wales, like South Australia, retains the Common Law. Victoria, however, has enacted provisions similar to those of the English Suicide Act of 1961. The offence of suicide itself has been abolished[6] and replaced by a statutory offence of manslaughter which is committed by any survivor of a suicide pact who would apart from the statute itself be guilty of murder.[7]

The Criminal Law and Penal Methods Reform Committee of South Australia has examined the issue of suicide in South Australia.[8] Reviewing amendments to the law relating to suicide in the United Kingdom and Victoria the members of the committee concluded:

"We are of the opinion that the Victorian legislation contains an appropriate and realistic attitude towards the offence committed by a person who is the survivor of a suicide pact and also the offence committed by one who incites another to commit suicide and, subject to any decision by the legislature in relation to the topic of euthanasia which may take certain acts of incitement or counselling to commit suicide out of the province of the Criminal Law, we are of the opinion that legislation similar to that in s.6B of the Crimes Act 1958 (Vic) is desirable in South Australia."(9)

NOTES ON CHAPTER 3

(1) Criminal Law Consolidation Act, 1936-1978, s. 270(1) (a).

(2) R. V Croft 1944 1 K.B.295 but see Williams, G. The Sanctity of Life and the Criminal Law, Faber, London, 1958 : p.265, n.2

(3) Brett, P and Weller, L. Criminal Law - Test and Cases (4th ed.). Butterworths, Melbourne, 1978 : pp 157-158.

(4) Howard, C. Australian Criminal Law (2nd ed.) Law Book Co., Melbourne, 1970 : p 124.

(5) Ibid.

(6) Crimes Act, 1958 s.6.A inserted by Crimes Act, 1967, s.2

(7) Crimes Act, 1958 s.6B(1) inserted by Crimes Act, 1967 s.2

(8) Criminal Law and Penal Methods Reform Committee of South Australia. Fourth Report : The Substantive Criminal Law, Government Publisher, Adelaide 1977 : pp 54-56.

(9) Ibid. p.56

CHAPTER 4

SOUTH AUSTRALIAN SUICIDES IN INTERNATIONAL AND NATIONAL PERSPECTIVE.

Suicide in South Australia and Overseas.

How does South Australia's suicide rate compare with rates experienced overseas? In order to answer this question international data was collected and analysed for a large number of countries during the post-war period. Before looking at the present position of South Australia internationally it is worthwhile to look back at what that position has been in the past.

Other researchers have computed suicide rates for various countries during the earlier periods of this century and it is possible to employ their data for comparative purposes. Knibbs[1] has undertaken a detailed statistical analysis of suicide in Australia and internationally and has computed average annual suicide rates for selected countries during the period 1901-1905. Table 6 presents these international suicide rates.

TABLE 6

AVERAGE ANNUAL SUICIDE RATES* FOR SELECTED COUNTRIES 1901-1905

Bosnia & Herzogivina	4.0	Romania	6.4	Germany	21.2
Ireland	3.3	England & Wales	10.3	Denmark	22.7
Italy	6.3	Australia	12.4	France	22.8
Scotland	6.0	Belgium	12.4	Switzerland	23.2
Finland	5.5	Sweden	12.4		
Serbia	5.1	Austria	17.3		
Netherlands	6.4	Hungary	19.1		
Norway	6.4	Japan	20.1		

Notes: * Rates per 100,000 persons

Source: Knibbs, 1912 p.230

The average annual suicide rate for South Australia during the years 1901-1905 was 11.9 per 100,000 persons which was similar to the rates for Belgium (12.4), Sweden (12.4) and Australia as a whole (12.4). South Australia's rate was approximately twice the magnitude of rates for countries like Italy, Scotland, Finland, Netherlands, Norway and Romania but was only half the magnitude of the high rates for such countries as Denmark, France and Switzerland.

Dublin[2] has also calculated international suicide rates for the two periods 1910-1914 and 1926-1930. Average annual rates for these countries are given in Table 7.

TABLE 7

AVERAGE ANNUAL SUICIDE RATES* FOR SELECTED COUNTRIES 1910-1914 AND 1926-1930

	1910-1914	1926-1930
Australia	12.8	12.2
U.S.A.	15.4	15.0
Japan	19.0	20.6
New Zealand	12.1	13.9
Denmark	18.6	16.8
Finland	9.6	16.8
Sweden	17.6	14.5
Norway	6.0	6.5
West Germany	21.9	25.9
Austria	25.7	35.3
Netherlands	6.2	7.1
Spain	5.1	4.7
France	22.2	19.1
Italy	8.5	9.6
England and Wales	9.9	12.3
Scotland	5.7	9.8

Notes: * Rates per 100,000 persons
Source: Dublin, (1963).

During the period 1910-1914 South Australia's average annual suicide rate of 9.7 was similar to that of such countries as Finland (9.6), Italy (8.5) and England/Wales (9.9). The suicide rate in South Australia was lower than most countries listed and was well below the high rates experienced in Austria, France, West Germany and Japan, but noticeably higher than the rates for such countries as Norway, Netherlands, Spain and Scotland. For the years 1926-1930 the average annual suicide rate in South Australia had increased to 11.3 and was similar in magnitude to Scotland (9.8), Italy (9.6) and New Zealand (13.9). Again the South Australian rate was lower than that for most countries for which data was available and considerably less than the high rates for Austria, West Germany and Japan. Over these years Norway, Netherlands and Spain all experienced suicide rates markedly lower than that for South Australia.

For the years 1949/1950 to 1975 suicide rates have been assembled for over fifty countries for all years where data has been available. The main sources of international statistics employed were the United Nations Demographic Yearbook[3] and the World Health Organisation Annual Epidemological and Vital Statistics Report[4] and its successor the World Health Statistics Annual.[5] As a detailed comparison between suicide rates for South Australia and suicide rates for all these countries over the twenty-five year period under consideration is beyond the scope of the present study, it was decided to concentrate on comparisons for the most recent period for which data is currently available, viz. 1970-1975. Table 8 gives average annual suicide rates for the fifty three countries which have produced suicide statistics for at least three years during this period.

TABLE 8

AVERAGE ANNUAL SUICIDE RATES* FOR SELECTED COUNTRIES, 1970-1975

Country	Suicide Rate	Rank	Country	Suicide Rate	Rank
Hungary	37.3	1	Netherlands	8.6	27
Czechoslovakia	24.1+	2	Portugal	8.4	28
Denmark	24.0	3	Trinidad/Tobago	8.1#	29
Austria	23.3	4	Scotland	8.0	30
Finland	23.1	5	England/Wales	7.9#	31
Federal Republic of Germany	20.8#	6	·Venezuela	5.9#	32
Sweden	20.5	7	Israel	5.7#	33.5
Sri Lanka	20.2	8	Italy	5.7#	33.5
Switzerland	19.7	9	Chile	5.3#	35
Japan	16.2	10	Mauritius	4.4	36
France	15.6#	11.5	·Thailand	4.3	37
Belgium	15.6	11.5	Spain	4.2#	38
Cuba	14.4+	13	Northern Ireland	3.7	39
Luxembourg	13.4	14	Guatemala	3.4**	40
Australia	12.2	15	West Malaysia	3.3+	41.5
Canada	12.1#	16.5	Costa Rica	3.3	41.5
Bulgaria	12.1	16.5	Greece	3.1	43
United State of America	11.9	18	Ireland	3.0#	44
Poland	11.6	19	·Ecuador	2.7#	45.5
Hong Kong	11.4	20	·Panama	2.7#	45.5
Uruguay	10.7#	21	Dominican Republic	2.6#	47
Singapore	10.5	22	·Paraguay	2.2**	48
Iceland	10.1	23	·Peru	2.1**	49
Norway	9.1	24.5	Mexico	1.1#	50
Puerto Rico	9.1	24.5	·Philippines	0.9#	51
New Zealand	8.9#	26	Malta	0.6+	52
			Jordan	0.1#	53

Notes:

* Rate per 100,000 population

. Countries with data of "unknown reliability"

** Data available for three years only.

\+ Data available for four years only.

\# Data available for five years only.

Source:

United Nations Demographic Yearbook U.N. New York 1970-1975.

W.H.O. World Health Statistics Annual, W.H.O. Geneva 1970-1976.

South Australia's average annual suicide rate for 1970-1975 was 11.0 which was of a similar magnitude to rates in the U.S.A. (11.9), Poland (11.6), Hong Kong (11.4) and Uruguay (10.7), but well below the high rates experienced in Hungary, Czechoslovakia, Denmark, Austria and Finland and much higher than the extremely low rates for Mexico, Philippines, Malta and Jordan. Thus, South Australia's suicide rate during this period was lower than about two-fifths of the countries for which data was available and higher than the remaining three-fifths. Hence its suicide rate can be classified as medium-high within an international perspective although those countries with very high rates have a suicide rate more than double that for South Australia.

Suicide in South Australia and Australia.

This section briefly compares patterns and trends of suicide in South Australia and Australia as a whole in order to place the former in a national perspective. In most instances data has been collected and analysed for the fifteen year period 1963-1977. This time scale was chosen for two main reasons. Firstly, it provides an adequate period within which to assess essentially current changes, and secondly it corresponds to the period for which standardised suicide data is available from the publication Causes of Death,[6] first published by the Australian Bureau of Statistics for 1963.

Since that year South Australia's annual suicide rate has generally been lower than that for Australia as a whole, but on occasions male and female suicide rates have been higher than corresponding national rates. Sex specific and total suicide rates for both Australia and South Australia are presented in Table 9 and Figure 3.

TABLE 9

SEX SPECIFIC AND TOTAL SUICIDE RATES*

AUSTRALIA AND SOUTH AUSTRALIA

1963 - 1977

	Australia			South Australia		
Year	Males	Females	Total	Males	Females	Total
1963	20.5	10.5	15.7	21.4	8.3	15.0
1964	19.1	9.9	14.5	20.6	10.9	16.0
1965	18.8	10.8	14.8	15.6	9.5	12.7
1966	17.5	10.6	14.0	15.9	8.7	12.4
1967	18.9	11.1	15.0	16.9	9.0	13.0
1968	16.9	8.5	12.7	15.9	7.0	11.4
1969	16.5	7.8	12.2	16.0	8.4	12.2
1970	17.0	7.6	12.3	16.6	7.1	11.8
1971	17.0	9.3	13.6	14.8	6.0	10.4
1972	16.7	8.4	12.5	15.9	5.5	10.7
1973	15.7	7.5	11.6	13.2	7.0	10.1
1974	16.0	7.4	11.7	15.6	6.4	11.0
1975	15.5	7.1	11.3	16.7	7.4	12.0
1976	15.7	5.9	10.8	16.7	6.5	11.6
1977	16.0	6.2	11.1	15.8	4.4	10.1

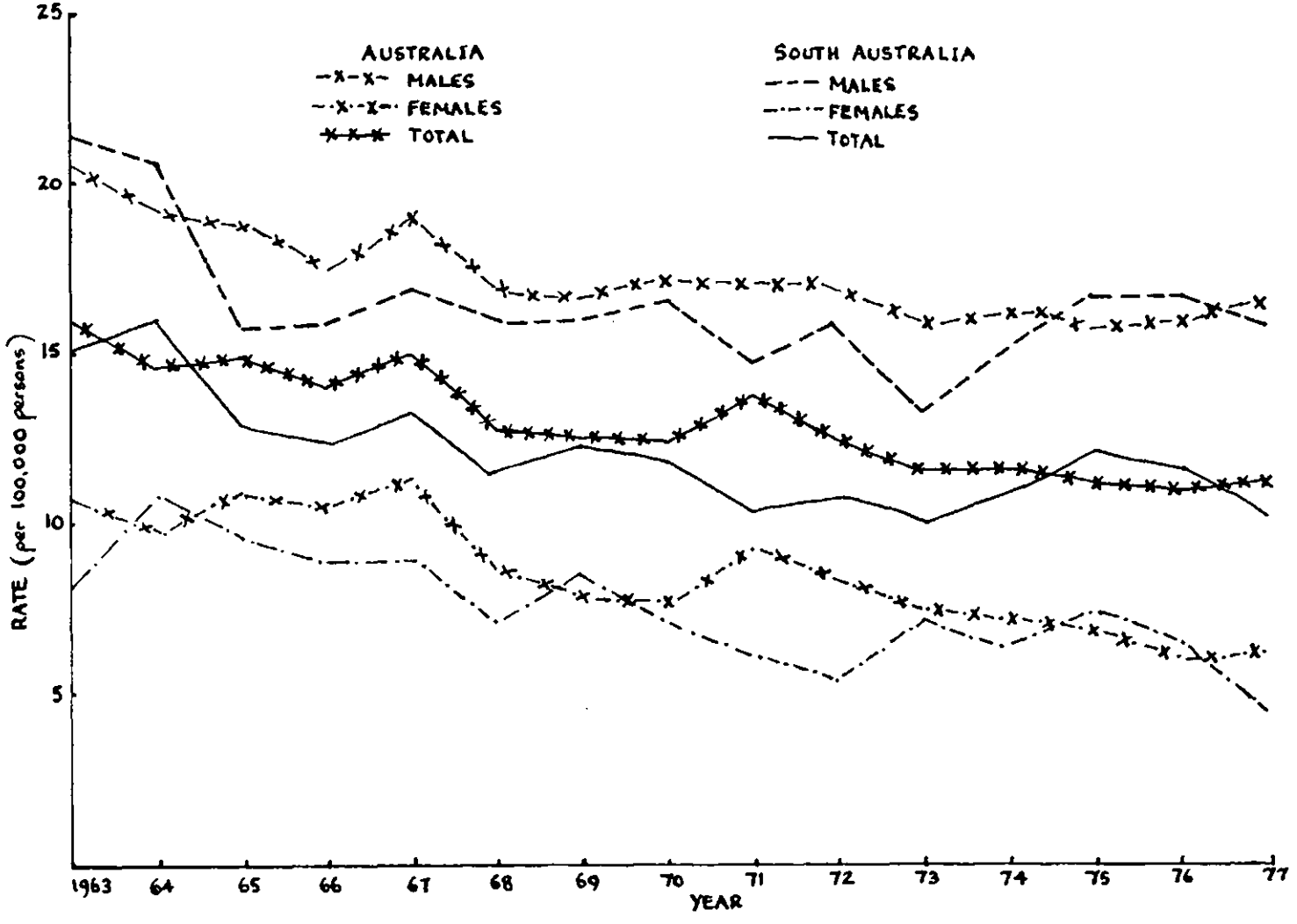
Notes: * Rates per 100,000 persons. Total rates based on mean population for year ended 31 December. Male and female rates based on estimated population as at 30 June.

Source: Australia. Bureau of Statistics. Causes of Death. 1963-1977. Canberra, A.B.S., 1964-1978

In 1964, 1975 and 1976 the male, female and total suicide rates in South Australia were above those for the whole country and in 1969 the female rate was also higher than the Australian female rate. Otherwise the South Australian rates have been lower than those for the country as a whole, with both male and female rates tending to decline. This decline in both the

FIGURE 3

SEX SPECIFIC AND TOTAL SUICIDE RATES FOR AUSTRALIA AND SOUTH AUSTRALIA 1963 - 1977



South Australian and Australian rates has not been steady, however, rather has there been a series of minor peaks and troughs. South Australia's average annual suicide rate was 12.0 for the period 1963-1977 compared to 12.9 for Australia as a whole.

Average annual age and sex specific suicide rates for Australian and South Australia have been computed for 1975-1977, the most recent triennium for which data is currently available. These rates are given in Table 10 and graphically portrayed in Figure 4.

TABLE 10

AVERAGE ANNUAL AGE AND SEX SPECIFIC SUICIDE RATES - AUSTRALIA AND SOUTH AUSTRALIA.

1975-1977

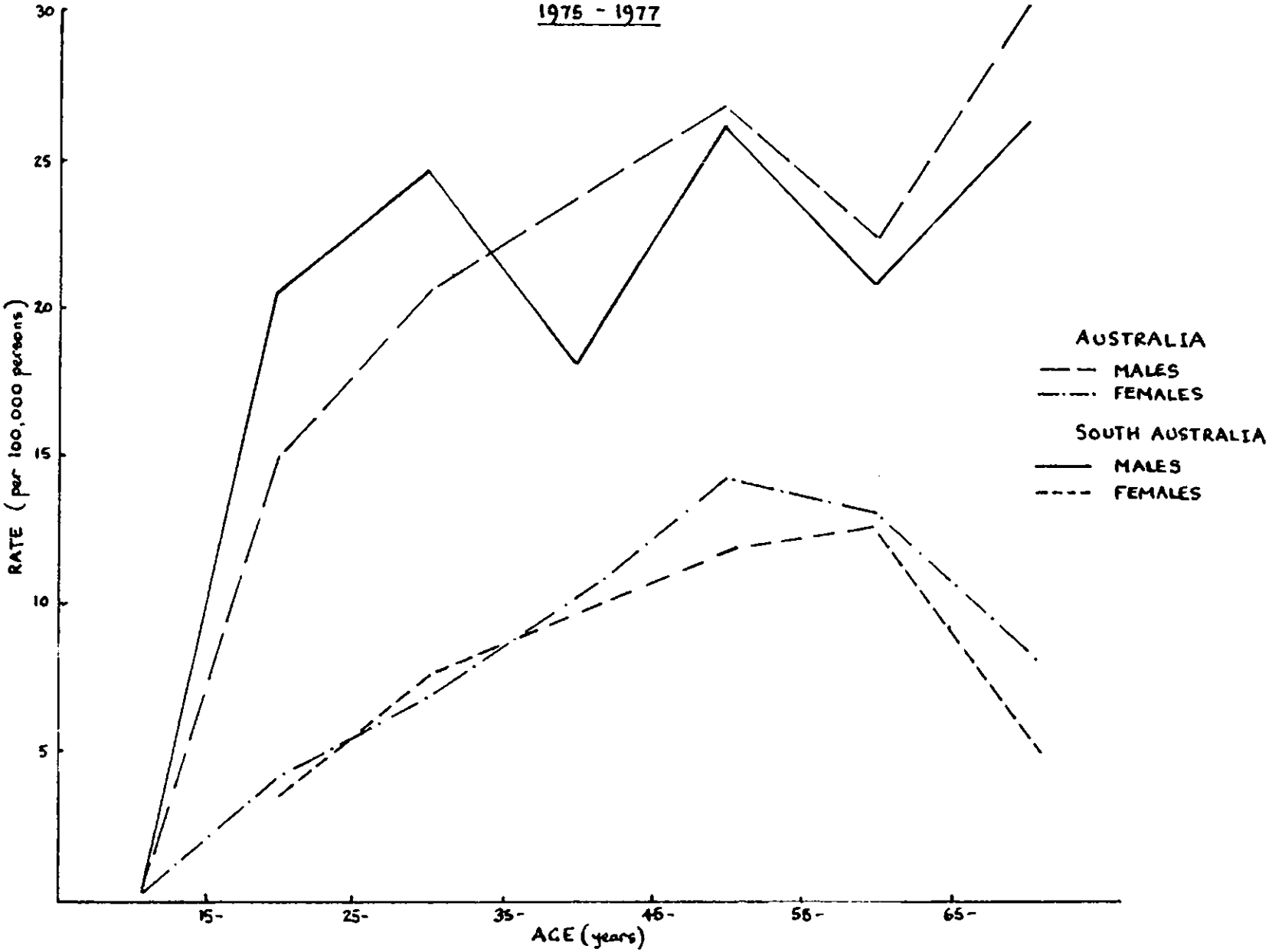
	Age (years)			
	<15	15-24	25-34	35-44
Males				
Australia	0.3	15.0	20.6	23.4
South Australia	0.2	20.6	24.9	18.2
Females				
Australia	0.1	4.2	6.9	10.2
South Australia	-	3.6	7.6	9.7
	45-54	55-64	65 +	
Males				
Australia	26.9	22.4	30.2	
South Australia	26.3	20.7	26.4	
Females				
Australia	14.0	13.1	8.2	
South Australia	11.9	12.8	5.2	

Notes: * Rates per 100,000 persons

Source: Australia. Bureau of Statistics. Causes of Death 1975-1977. Canberra. A.B.S. 1976-1978.

FIGURE 4

AVERAGE ANNUAL AGE AND SEX SPECIFIC SUICIDE RATES FOR AUSTRALIA AND SOUTH AUSTRALIA 1975 - 1977



Between 1975 and 1977 the suicide rate in South Australia for males aged 15-24 and 25-34 years was markedly higher than for Australia as a whole while the female rate for the 25-34 years age group was slightly higher than the corresponding Australian rate. Conversely, the South Australian rates for both sexes in the 35-45, 45-55 and 65 years and over age groups were lower than the corresponding Australian rates. In other words it appears that males aged 15-34 years and females aged 25-34 years in South Australia are more vulnerable to suicide than the total Australian population falling into these age groups.

The methods employed to commit suicide in Australia and South Australia are instructive. This is given in Table 11, these particular years having been selected to highlight the respective changes in methods used to commit suicide during the fifteen year period under consideration. In Australia and South Australia the percentage of suicides by solid and liquid poisoning has declined significantly, the proportions of suicides using this method being lower in South Australia. A similar trend is evident in the case of poisoning by domestic gas, but with poisoning by other gases (usually carbon monoxide) the trend is reversed, the proportion of suicides involving this method having more than doubled in Australia and almost tripling in South Australia.(7)

In the case of suicide by hanging, strangulation and suffocation the Australia-wide proportion of suicides involving this method has increased; but in South Australia

TABLE 11

PERCENTAGE DISTRIBUTION OF SUICIDES BY METHOD EMPLOYED.

AUSTRALIA AND SOUTH AUSTRALIA

1963, 1970 and 1977

Method	1963		1970		1977	
	Australia	South Australia	Australia	South Australia	Australia	South Australia
Poisoning (solids or liquid)	42.2	36.8	37.3	35.5	27.2	24.8
Poisoning (domestic gas)	12.3	11.8	6.4	2.9	1.7	-
Poisoning (other gases)	6.5	3.9	7.6	2.9	14.3	11.6
Hanging, Strangulation and Suffocation	9.1	14.5	11.2	12.3	14.6	12.4
Submersion (drowning)	4.7	5.9	4.3	7.2	2.8	0.8
Firearms and Explosives	19.6	24.3	25.8	29.7	26.8	41.1
Cutting and Piercing Instruments	2.2	2.0	1.7	3.6	2.9	0.8
Jumping from High Places	1.3	-	2.4	1.4	4.9	3.9
Other	2.0	0.7	3.2	4.3	4.8	4.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: Australia. Bureau of Statistics. Causes of Death. 1963, 1970 and 1977. A.B.S. Canberra, 1964, 1971 and 1978.

has decreased. Suicide by firearms and explosives has increased slightly as a favoured method throughout Australia but in South Australia the proportion of suicides involving this method has almost doubled.

So South Australia has shown over the years a very marked tendency to increase suicides by carbon monoxide and to use firearms or explosvies. Hanging, strangulation and suffocation as methods have declined in favour.

There are however, significant sex variations in the distribution of suicide by methods employed. Table 12 gives the relevant information for 1977, the most recent year for which data was available at the time of this study. From the study itself a full account of the methods distributed between the sexes is provided in a later chapter.

In both Australia and South Australia the proportions of males and females who committed suicide in 1977 by solid or liquid poisoning were very similar, this method accounting for slightly more than one half of all female suicides but only about one sixth of all male suicides. With the decline in the availaibility and usage of domestic gas, suicide involving poisoning with

TABLE 12

SEX-SPECIFIC PERCENTAGE DISTRIBUTION OF SUICIDES BY METHOD EMPLOYED - AUSTRALIA AND SOUTH AUSTRALIA - 1977

Method	Australia		South Australia	
	Males	Females	Males	Females
Poisoning (solid or liquids)	16.2	55.5	16.8	53.6
Poisoning (domestic gas)	1.6	2.0	-	-
Poisoning (other gases)	17.9	5.0	14.9	-
Hanging, Strangulation and Suffocation	16.5	9.6	13.9	7.1
Submersion (drowning)	2.2	4.3	-	-
Firearms and Explosives	34.0	8.2	46.5	21.4
Cutting and Piercing Instruments	2.7	3.4	1.0	-
Jumping from High Places	4.2	6.6	5.0	-
Other	4.6	5.2	2.0	14.3
TOTAL	100.0	100.0	100.0	100.0

Source: Australia. Bureau of Statistics. Causes of Death 1977. A.B.S. Canberra, 1978.

this agent is now of little significance both nationally and within South Australia.

Though carbon monoxide poisoning seems increasingly popular this does not seem to apply to women and girls. In 1977 there were no female deaths by poisoning using non-domestic gas while this method was used in only 5.0 per cent of all female suicides throughout Australia. Slightly higher proportions of Australian males, as compared to South Australian males, committed suicide by this method and by hanging, strangulation or suffocation. The most important difference between methods employed by the sexes in South Australia as compared to Australia relates to suicide using firearms and explosives. In 1977 34.0 per cent of Australian males used this method compared to 46.5 per cent of South Australian males and over one-fifth of South Australian females killed themselves by shooting compared to only 8.2 per cent of Australian females. A further 14.3 per cent of South Australian females used other or unspecified methods (e.g. self-immolation, jumping in front of trains) compared to only 5.2 per cent of females throughout Australia. In brief there were higher proportions of both males and females in South Australia killing themselves with firearms and explosives than there were in Australia as a whole - and the difference was particularly marked amongst females.

Finally, it is important to examine the relative importance of suicide as a cause of death in both Australia and South Australia. Table 13 and Figure 5 present sex specific and total suicide rates per 1,000 deaths for Australia and South Australia during the period 1963-1977.

TABLE 13

SEX SPECIFIC AND TOTAL SUICIDE RATES PER 1,000 DEATHS FOR AUSTRALIA AND SOUTH AUSTRALIA

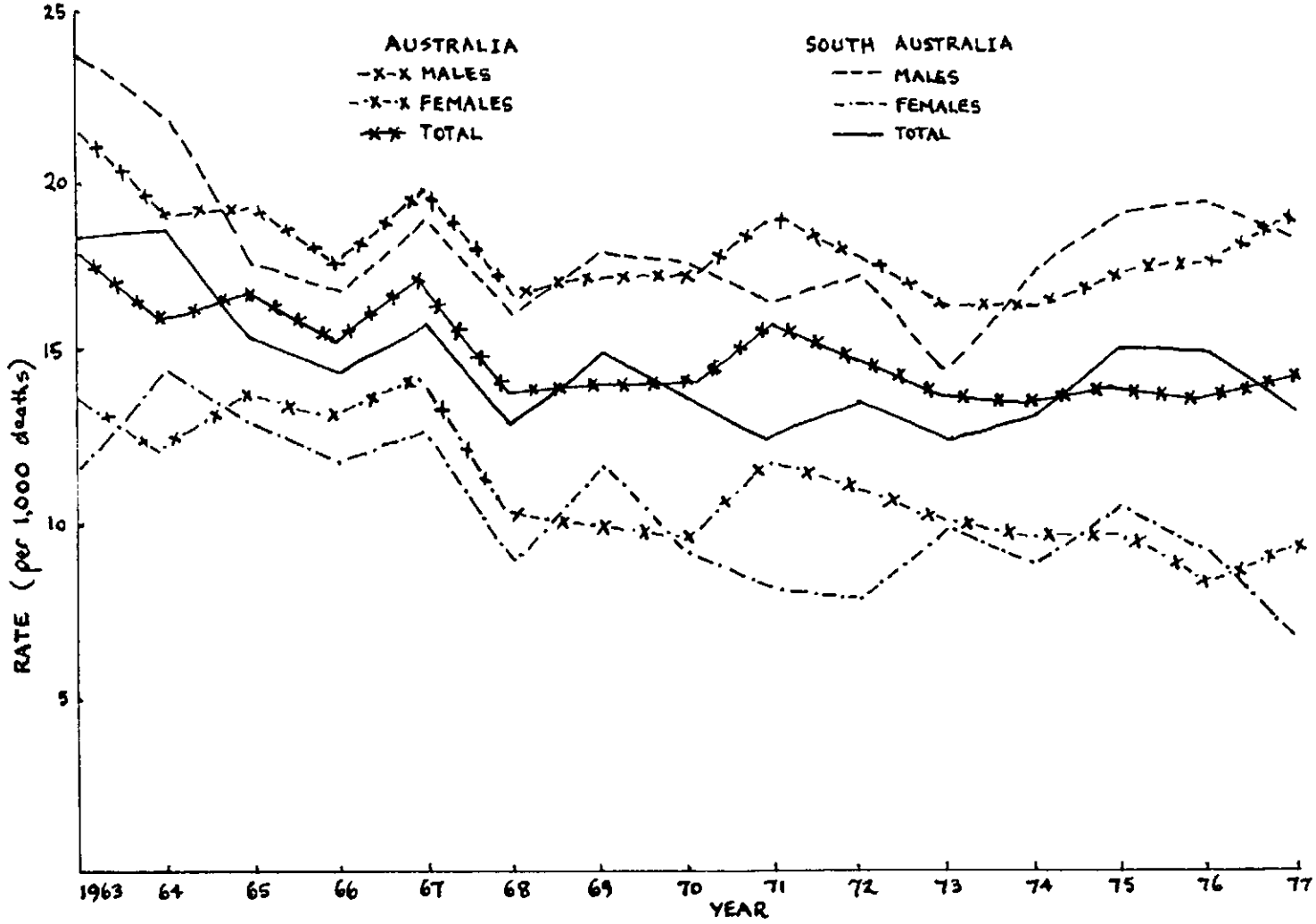
1963-1977

Year	Australia			South Australia		
	Males	Females	Total	Males	Females	Total
1963	21.5	13.8	18.1	23.5	11.9	18.5
1964	19.0	12.4	16.1	21.8	14.6	18.6
1965	19.3	13.9	16.9	17.6	12.9	15.5
1966	17.6	13.2	15.6	16.8	11.7	14.6
1967	19.6	14.4	17.3	18.9	12.4	16.0
1968	16.7	10.4	13.9	16.2	8.9	13.0
1969	17.2	10.2	14.1	17.7	11.6	15.0
1970	17.1	9.5	13.7	17.4	9.0	13.6
1971	18.8	11.9	15.7	16.4	8.0	12.6
1972	17.8	11.1	14.8	17.2	7.7	13.0
1973	16.8	10.0	13.8	14.4	9.7	12.3
1974	16.7	9.6	13.5	16.6	8.7	13.1
1975	17.3	9.9	14.0	18.8	10.3	15.0
1976	17.6	8.1	13.3	19.2	9.0	14.9
1977	18.7	9.0	14.4	18.4	6.3	13.2

Source: Australia. Bureau of Statistics. Causes of Death 1963-1977. Canberra, A.B.S., 1964-1978.

FIGURE 5

SEX SPECIFIC AND TOTAL SUICIDE RATES PER 1,000 DEATHS FOR AUSTRALIA AND SOUTH AUSTRALIA 1963 - 1977



It can be seen that during most of this period suicide was a more significant cause of death among Australians than it was among South Australians, although in 1964, 1969 and 1975-1976 the suicide rate per 1,000 deaths was higher in South Australia. Amongst males the suicide rate per 1,000 deaths was also generally higher in Australia as a whole but in 1963-1964, 1969 and 1975-1976 the South Australian rate exceeded the national rate. In 1964, 1969 and 1975-1976 the female suicide rate per 1,000 deaths was also higher in South Australia but these years were exceptions to the normal pattern of the national female rate exceeding that for South Australia.

During the period 1963-1977 suicides accounted for an annual average of 1.5 per cent of deaths in both Australia and South Australia. The country as a whole and South Australia in particular had an annual average of 1.8 per cent of male deaths. This coincidence still held with females who committed suicide. i.e. 1.1 per cent of female deaths in Australia and 1.0 per cent of female deaths in South Australia.

Suicide in South Australia and Other States

This section briefly compares suicide in South Australia and the five other States and two territories of Australia. For the purposes of this review the Northern Territory and the Australian Capital Territory will be referred to as "States" of Australia.

To compare South Australia's suicide rate with rates for other States average annual rates for the period 1963-1977 have been computed and ranked. These rates and their respective rankings are given in Table 14.

TABLE 14

AVERAGE ANNUAL SUICIDE RATES* AND RANKS FOR AUSTRALIAN STATES - 1963-1977

States	Rate	Rank
South Australia	12.0	4
New South Wales	14.0	2
Victoria	11.1	6
Queensland	15.1	1
Western Australia	12.5	3
Tasmania	11.8	5
Northern Territory	10.4	7
Australian Capital Territory	9.3	8

Notes: * Rates per 100,000 persons

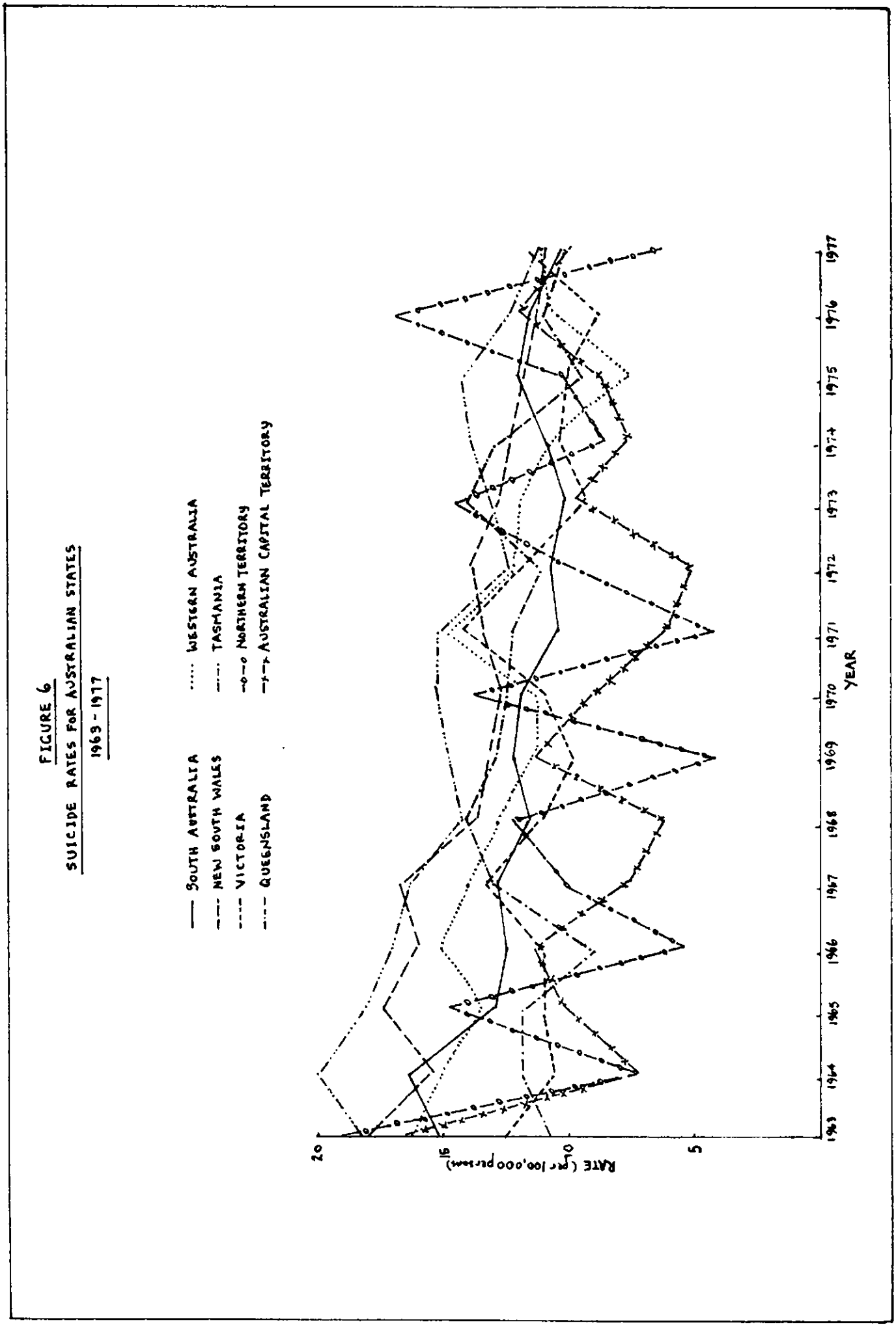
Source: Australia. Bureau of Statistics. Causes of Death 1963-1977. A.B.S. Canberra, 1964-1978.

South Australia's average annual suicide rate (12.0) during this period was the fourth highest among the States. Over this period South Australia accounted for an average 8.6 per cent of Australia's suicides. Figure 6 presents these rates for each State of Australia over the period 1963-1977.

FIGURE 6

SUICIDE RATES FOR AUSTRALIAN STATES

1963 - 1977



Sex specific average annual rates have also been computed for each state over the same period and are given in Table 15.

TABLE 15

AVERAGE ANNUAL SEX SPECIFIC SUICIDE RATES*
AND RANKS FOR AUSTRALIAN STATES
1963-1977

	Males	Rank	Females	Rank
South Australia	16.5	4	7.5	4
New South Wales	18.3	2	9.6	2
Victoria	14.7	7	7.5	4
Queensland	20.2	1	9.8	1
Western Australia	17.3	3	7.5	4
Tasmania	16.2	5	7.3	6
Northern Territory	15.7	6	4.0	8
Australian Capital Territory	11.7	8	6.5	7

Notes: * Rates per 100,000 persons

Source: Australia. Bureau of Statistics. Causes of Death. 1963-1977 A.B.S. Canberra 1964-1978.

Thus average annual male suicide rate for South Australia (16.5) was again the fourth highest among the States and the female rate (7.5) was equal fourth along with Victoria and Western Australia. As in all other

States except the Northern Territory the male rate in South Australia was approximately twice the magnitude of the female rate.

Average annual age and sex specific suicide rates for each State during the most recent triennuim for which data is available (viz. 1975-1977) have been computed and are given in Table 16. It can be seen that for males, South Australia had the second highest rate for the 15-24 and 25-34 years age groups (20.6 and 24.9 respectively) but the third lowest rate among all States for the 35-44, 45-54, 55-64 and over 64 years age groups. The female pattern for South Australia is however, more complex. For females South Australia had the highest rate for the over 64 years group the second highest rate for the 25-34 years age group, but the remaining age groups had rates which were ranked in fifth, sixth or seventh position among all States.

Finally, it is appropriate to compare methods employed to commit suicide in South Australia with methods used in other States. The percentage distribution of suicides by method employed in each State during 1977, the most recent year for which data has been published to date, is given in Table 17. The proportions of suicides in South Australia using solid or liquid poisoning, non-domestic gas poisoning, hanging strangulation or suffocation, drowning and cutting or piercing instruments

TABLE 16

AVERAGE ANNUAL AGE AND SEX SPECIFIC SUICIDES RATES* FOR AUSTRALIAN STATES - 1975-1977

Males

	<15	15-24	25-34	35-44	45-54	55-64	65+
South Australia	0.2	20.6	24.9	18.2	26.3	20.7	26.4
New South Wales	0.3	13.9	28.3	25.3	27.2	21.3	30.3
Victoria	0.5	12.6	24.6	19.3	22.3	22.0	30.2
Queensland	0.2	16.7	24.6	32.7	31.9	27.6	31.9
Western Australia	-	12.5	18.8	22.6	31.1	21.2	30.9
Tasmania	1.1	17.2	18.0	14.7	23.2	20.7	35.8
Northern Territory	-	33.1	8.6	29.0	43.3	11.9	26.3
Australian Capital Territory	2.0	12.8	13.2	15.5	37.5	33.3	-

Females

	<15	15-24	25-34	35-44	45-54	55-64	65+
South Australia	-	3.6	7.6	9.7	11.9	9.3	10.7
New South Wales	0.2	4.4	7.4	10.9	13.5	13.4	8.1
Victoria	0.1	4.4	7.3	9.5	13.3	12.5	8.9
Queensland	0.1	3.9	6.8	11.9	17.3	13.8	7.4
Western Australia	-	4.2	4.1	5.7	11.7	12.8	5.2
Tasmania	-	-	2.4	7.3	22.0	18.4	8.2
Northern Territory	-	18.5	-	16.2	-	16.8	-
Australian Capital Territory	-	3.5	8.4	23.3	21.8	6.3	9.2

Notes: Rates per 100,000 persons

Source: Australia, Bureau of Statistics. Causes of Death 1975-1977 A.B.S., Canberra, 1976-1978.

other states except the Northern Territory the male rate in South Australia was approximately twice the magnitude of the female rate.

Average annual age and sex specific suicide rates for each State during the most recent triennuim for which data is available (viz. 1975-1977) have been computed and are given in Table 16. It can be seen that for males, South Australia had the second highest rate for the 15-24 and 25-34 years age groups (20.6 and 24.9 respectively) but the third lowest rate among all states for the 35-44, 45-54, 55-64 and over 64 years age groups. The overall pattern with respect to South Australia's female age specific suicide rates as compared to those in other states is, however, more complex. For females South Australia experienced the highest rate for the over 64 years group and the second highest rate for the 25-34 years age group, but the remaining age groups had rates which were ranked in fifth, sixth or seventh position among all states. Briefly, in South Australia males in the 15-24 and 25-34 years age groups and females in the over 64 years and 25-34 years age groups were more prone to suicide during the period 1975-1977 than their counterparts in most, if not all, other states.

Finally, it is appropriate to compare methods employed to commit suicide in South Australia with methods used in other states. The percentage distribution of suicides by method employed in each state during 1977, the most recent year for which data has been published to date, is given in Table 17. The proportions of suicides in South Australia using solid or liquid poisoning, non-domestic gas poisoning, hanging strangulation or suffocation, drowning and cutting or piercing instruments

TABLE 17

PERCENTAGE DISTRIBUTION OF SUICIDES BY METHOD EMPLOYED FOR AUSTRALIAN STATES - 1977

Method	S.A.	N.S.W.	VIC.	QLD.	W.A.	TAS.	N.T.	A.C.T
Poisoning (solid or liquids)	24.8	22.4	28.4	33.9	30.6	31.0	28.6	28.6
Poisoning (domestic gas)	-	4.3	0.4	0.8	-	-	-	-
Poisoning (other gases)	11.6	15.5	12.7	8.9	24.6	19.0	-	28.6
Hanging, strangulation or suffocation	12.4	15.7	17.1	9.3	15.7	9.5	-	14.3
Submersion (drowning)	0.8	3.4	3.5	1.6	2.2	2.4	-	4.8
Firearms and explosives	41.1	21.9	26.9	36.7	14.9	31.0	57.1	4.8
Cutting and piercing instruments	0.8	3.2	2.4	2.0	5.2	7.1	-	9.5
Jumping from High Places	3.9	8.6	2.4	3.2	3.7	-	-	4.8
Other	4.6	5.0	6.0	3.6	3.0	-	14.3	4.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Australia. Bureau of Statistics. Causes of Death 1977 A.B.S. Canberra, 1978.

are all lower than those for most other states. However, the proportion of South Australian suicides using firearms or explosives (41.1 per cent) was the second highest, well below that for the Northern Territory (57.1 per cent) but considerably higher than the proportions for New South Wales (21.9 per cent), Victoria (26.9 per cent), Western Australia (14.9 per cent) and the Australian Capital Territory (4.8 per cent). Suicide by "jumping from high places" accounted for 3.9 per cent of South Australian suicides in 1977 and this was the third highest proportion among the states. Hence the propensity for South Australians to commit suicide by shooting themselves, as compared to this tendency in most other states, is by far the most significant difference in the methods employed. Approximately two thirds of suicides on South Australia during 1977 employed either this method or solid or liquid poisoning.

Summary of Findings

(a) During the period 1970-1975 South Australia's suicide rate was higher than about three-fifths of the countries in the world for which data was available. The United States of America, Poland, Hong Kong and Uruguay experienced suicide rates of similar magnitude to South Australia's. Within an international perspective South Australia's suicide rate may be considered as being medium-high although considerably lower than the very high rates for countries like Hungary, Czechoslovakia, Denmark, Austria and Finland.

(b) Since the mid 1960's the suicide rate in South Australia has generally been lower than the national average as have been the male and female suicide rates.

(c) During the triennium 1975-1977 the suicide rates in South Australia for males aged 15-24 and 25-34 years were markedly higher than the national rates and the female rate for the 25-34 years age group was slightly higher than the national rate. The South Australian population in these groups thus appear more prone to suicide than the total Australian population in these groups.

(d) Between 1963 and 1977 the proportions of suicide in both South Australia and Australia employing solid and liquid poisoning have declined significantly while the proportion employing non-domestic gas (principally carbon monoxide) has more than doubled in Australia and almost trebled in South Australia. In South Australia the proportion of suicides involving firearms has almost doubled during this period.

(e) In 1977 almost one half of the male suicides in South Australia involved firearms compared to about one third of all male suicides in Australia. One fifth of female suicides in South Australia involved firearms compared to less than one tenth of all female suicides in Australia. Thus a disproportionate number of both male and female suicides in South Australia involve shooting compared to the national distribution.

(f) Suicides as a cause of death in South Australia are as significant as suicides nationally for both sexes and the total population.

(g) South Australia's average annual suicide rate during the period 1963-1977 was fourth highest among all the Australian States. Queensland, New South Wales and Western Australia had higher rates and Victoria, the Northern Territory, the Australian Capital Territory and Tasmania experienced lower rates than South Australia. During this period South Australia accounted for slightly less than one tenth of all suicides in Australia.

(h) The average annual male suicide rate in South Australia during this fifteen year period was the fourth highest among all States (behind Queensland, New South Wales and Western Australia) and the female rate was equal fourth along with Victoria and Western Australia.

(i) During 1975-1977 South Australia had the second highest male suicide rate among the 15-24 and 25-34 years age groups, and the highest female rate among the 65 years and over group. South Australia also had the second highest female rate of suicide for those aged 25-34 years. Thus aged females, young males and members of both sexes in the 25-34 years age group in South Australia have higher suicide rates than most, if not all, of these groups in the other States. This is a matter of great importance for South Australia showing vulnerability to suicide amongst young people especially young males.

(j) In 1977 the proportion of South Australian suicides involving firearms was the second highest among all States. Shooting and solid or liquid poisoning accounted for some two thirds of suicides during that year.

NOTES ON CHAPTER 4

(1) Knibbs, G.H. "Suicide in Australia - A Statistical Analysis of the Facts". Journal of the Royal Society of New South Wales, 45, 1912 : pp 225-246.

(2) Dublin, L.I. Suicide - A Sociological and Statistical Study. Ronald Press, New York, 1963.

(3) United Nations. Demographic Yearbook (1948- United Nations, New York 1948-

(4) World Health Organisation. Annual Epidemological and Vital Statistics Report. (1939-1964), World Health Organisation, Geneva 1940-1965.

(5) World Health Organisation. World Health Statistics Annual 1965- World Health Organisation, Geneva, 1965 -

(6) Australia. Bureau of Statistics. Causes of Death 1963- Australian Bureau of Statistics, Canberra, 1963.-

(7) This and the succeeding paragraphs on method should be compared with the references in Chapter 8 below to the methods used by those committing suicide in 1978. In these particular cases poisoning (liquid and solid) and firearms were prominent.

CHAPTER 5

SUICIDE, VIOLENCE AND AGGRESSION IN SOUTH AUSTRALIA.

The relationships between suicide, violent crime, road deaths and alcohol abuse have long been considered as being possibly significant in the explanation of aggressiveness and violence in society. Henry and Short[1] for example, argued that homicides and suicides are respectively the outward and inward aggressive reactions to frustration generated by the economic situation. Gold[2] too had the idea of a societal reservoir of aggression. He argued that socialisation is the fundamental determinant of the preference for homicide or suicide. He chose a class determinant of the way in which the general violence would be expressed. His contention was that the type of socialisation normally associated with the outward expression of aggression (as exhibited e.g. in homicide) is found more among the lower classes while that associated with the inward expression of aggression (as exhibited e.g. in suicide) is found more among the upper classes. Porterfield [3] has investigated the relationships between road deaths, suicides and homicides in the United States, finding a strong correlation between the incidence of male deaths by homicide and male road deaths.

The theory is intriguing. Way back in the 18th century when Quetelet the Belgian "father of statistics" was looking at figures for crime he came to the conclusion that there might be, in a community, a "constant propensity" for crime - though it could find different expressions at different times. Freud,of course, believed that suicide

was internalised aggression and the idea persists.

For Australia, Dr. Cunningham Dax, who has had national and international experience of administering mental health services, suggests that:

> "A rough estimate of the aggressive tendencies of any community can be made by totalling up the homicides, suicides and deaths by road accidents in proportion to total population."(4)

and again he extends the idea:

> "Probably if alcoholism were considered in relation to these factors it would give even more meaning to the findings."(5)

Explaining that:-

> "....homicide can be equated with aggression turned outwards against individuals, suicide to aggression turned inwards against the self, and road accidents to aggression directed onto the community in general. Alcoholism tends to decrease control and therefore adds to the frequency of aggressive anti-social acts."(6)

Dr. F. Whitlock of the Department of Psychiatry at the University of Queensland, in a somewhat similar vein, has stated that:

> "Violent death by suicide, homicide, other forms of accidental death and violent crime can all be looked upon as manifestations of the quality and quantity of aggression in a given society....road death and injury rates are recognizable indices of the total sum of the aggression in a given society; and that the higher these death and injury rates rise, the higher in general will be other manifestations of social aggression

> as measured by violent death and violent crime. The measures of misuse of alcohol, a drug known to lead to the release of aggressive behaviour in susceptible persons, could also be regarded as indicators of the extent of violent behaviour in society."(7)

Again, in a more recent study, Whitlock observes:

> "....one might suggest that in general the higher the manifestation of violent behaviour in a society, the greater will be the suicide rate. Of the measures of violence in society one might wish to consider homicide rates, accident rates violent crime rates and, particularly in the past 40 years, road crash death rates."(8)

Obviously suicide, homicide, violent crime, road deaths and alcohol abuse mean violence and aggression in society, but how are they to be measured? Official statistics are admittedly inadequate as we are now learning from a variety of crime victimisation studies and from more investigative accounts of domestic violence. It is beyond the scope of the present study to conduct a full investigation into violence and aggression in South Australia. Later publications will deal more fully with the relationships between these factors. However, it has been possible to go some way into this complicated, inter-related phenomenon of violence, internal and external, general and particular. Nevertheless the emphasis must be maintained that there is a "dark figure" for both suicide and crime unreported and it cannot be assumed that official records reflect all aggression in society. With the information available however, the relationships between officially known forms of aggression were traced.

Suicide and Homicide

(A) South Australia

In Australia there are several types of homicide statistics including the following:

(a) the number of homicide offences reported or becoming known to police. These statistics are compiled by the respective State police departments and initially published in police annual reports;

(b) the number of court convictions for homicide which are compiled in court records and published in State and Commonwealth Yearbooks;

(c) the number of deaths due to homicide and injury purposefully inflicted by other persons. These are recorded by Registrars of Births, Deaths and Marriages and published by the Australian Bureau of Statistics in various reports dealing with causes of death.

Each set of figures has its particular advantages and limitations in portraying the incidence of homicide. For the purposes of this investigation statistics on the number of homicide offences reported or becoming known to police are employed. These data are comparable between the States, accepted as being a reasonably reliable measure of the incidence of homicide and are compiled in a similar fashion to statistics of other violent crime dealt with later.

South Australia distinguishes between murder and manslaughter, the former being the intentional or premeditated killing of a person and the latter including "those homicides committed in the heat of passion or under some great provocation or deaths arising from acts of

extreme negligence or recklessness."[9] A separate offence exists for deaths caused by negligent driving of a motor vehicle.[10]

Unfortunately, tabulations of the numbers of offences reported to police within the annual reports of the South Australian Police Department do not differentiate between the offences of murder and attempted murder: the relevant offence categories employed are "murder and attempted murder", "manslaughter" and "cause of death by negligent driving". More importantly, these figures are for offences during each financial year rather than each calendar year and are thus not comparable with suicide statistics which refer to deaths during each calendar year.

However, the Yearbook Australia does provide homicide statistics for Australia and the Australian States for calendar years up to and including 1973,[11] these figures thus being comparable with published suicide statistics. In this instance homicide is defined as "unlawful killing" and therefore includes murder, attempted murder and manslaughter. As from July 1973 this offence category also includes manslaughter arising from road accidents and therefore the 1973 figures are not strictly comparable with those for previous years. The annual suicide and homicide offence rates for South Australia during the ten-year period 1964-1973 are given in Table 18.

TABLE 18

SUICIDE AND HOMICIDE OFFENCE RATES* FOR SOUTH AUSTRALIA, 1964 - 1973

	1964	1965	1966	1967	1968
Suicide Rate	16.0	12.7	12.4	13.0	11.4
Homicide Offence Rate	1.3	1.3	1.2	2.3	1.6

	1969	1970	1971	1972	1973
Suicide Rate	12.2	11.8	10.4	10.7	10.1
Homicide Offence Rate	1.3	2.9	2.3	2.4	2.4

Notes: * Rates per 100,000 persons

Sources: Australia. Bureau of Statistics. Causes of Death 1964-1973, A.B.S., Canberra, 1965-1974.

Yearbook Australia, 1964-1973, A.B.S. Canberra, 1965-1974.

There are always more suicides than homicides. It will be seen that depending on the particular year under consideration, the suicide rate was between four and twelve times the magnitude of the homicide offence rate. The suicide rate over the whole period averaged out at seven times the homicide rate. i.e. during this period seven times as many persons in South Australia took their own lives as were victims of homicide. Significantly during this period, the suicide rate tended to decline and the homicide rate tended to increase, permitting a possible interpretation of externalised aggression reducing internalised aggression - or vice versa. During the mid to late 1960's the gap between the suicide and homicide offence rates was greater than during the early 1970's.

The more speculative may wish to relate this to the period of violent public protest in the late 1960's.

If one were to take homicide then as the sole indicator of violence in a society this closing of the gap in the later years would support some of the above theories but would contradict Whitlock's conclusion that suicide increased with the extent of violence.[12]

The tendency for the suicide and homicide rates to diverge is confirmed by the findings of a recently published study on homicide in South Australia by Dr. Peter Grabosky, Director of the South Australian Office of Crime Statistics.[13] Using data from annual reports of the South Australian Police Department for the period 1943/1944 - 1976/1977, Grabosky computed two homicide rates, one including the offences of murder and attempted murder and one including both these offences as well as that of manslaughter. He found that there had been "some year to year fluctuation around a slight upward trend in rates of homicide."[14] The preceding historical analysis of suicide has revealed that South Australia's suicide rate tended to increase between the early 1940's and mid 1960's but experienced a decline from the mid 1960's to the present. It would have been easy to compare our work with that of Dr. Grabosky but there were two obstacles. First our periods of years differed. His work is for financial years; ours is for calendar years. Secondly the information is published in graph form whereas we needed raw data for a valid comparison. This should not be a difficult comparison to make in the future however.

Grabosky also determined the number of murder and attempted murder offences during each quarter for the period October 1970 to March 1979 and found the known incidence of both remained fairly stable with no consistent fluctuations evident. He concluded from his study that:

> "...murder constitutes a minimal threat to the South Australian public. Ten times as many South Australians lose their lives in traffic accidents and five times as many take their own lives as fall victims to wilful homicide."(15)

This is true but we can now add that as murders rise suicides will be likely to fall - and vice versa. This has to be qualified however, for times and periods have not all been taken into account. We cannot leave this section without casting a shadow of doubt provided by the fact that in the longer term Grabosky traced a rise in homicides and as our Figure 2 shows there are periods when suicide was rising for which we cannot yet show a declining homicide rate.

(B) Other States and the Nation

A comparison between average annual homicide offence and suicide rates in each State and Australia for the ten year period 1964-1973 is given in Table 19, the homicide offence data having been compiled by Biles(16) from the Yearbook Australia.

TABLE 19 (17)

AVERAGE ANNUAL HOMICIDE OFFENCE AND SUICIDE RATES* AND RANKS. AUSTRALIAN STATES AND AUSTRALIA.

1964-1973

State	Average Annual Homicide Offence Rate	Rank	Average Annual Suicide Rate	Rank
South Australia	2.0	7	12.1	5
New South Wales	3.0	3	14.5	2
Victoria	2.6	4	11.4	6
Queensland	3.1	2	15.6	1
Western Australia	1.7	8	13.2	3
Tasmania	2.5	5	12.2	4
Northern Territory	13.9	1	9.6	7
Australian Capital Territory	2.2	6	8.4	8
Australia	2.7	-	13.3	-

Notes: * Rates per 100,000 persons

Source: Australia. Bureau of Statistics. Causes of Death 1964-1973. A.B.S. Canberra, 1965-1974 Biles (1977) : p.16.

It can be seen that South Australia's homicide offence and suicide rates were both lower than the rates for Australia, with South Australia having the second lowest homicide offence rate and the fourth lowest suicide rate among all States. Only Western Australia experienced a lower homicide offence rate than South Australia, while the suicide rates in Victoria, Northern

Territory, and the Australian Capital Territory were all lower than South Australia's.

In all States except the Northern Territory, the average annual suicide rate was greater than the average annual homicide offence rate, the former being between four and eight times the magnitude of the latter, depending on the particular State under consideration. South Australia's average annual suicide rate was approximately six fold the magnitude of its average annual homicide rate, while for Australia as a whole the former was approximately five fold the magnitude of the latter.

While there is no statistically significant relationship between these rates it is worthy to note that South Australia's rates for suicide and homicide are both below the national rates. Particularly interesting is the Northern Territory homicide rate exceeding its suicide rate - which is at variance with the rest of Australia. However, these are ten year averages and it must be remembered that there were year by year fluctuations in each State.

Suicide, Homicide and Violent Crime

(A) South Australia

As in the case of homicide offence statistics, figures of serious assault, robbery and rape offences are published on a financial year basis in police department annual reports but up until 1973 were also published on a calendar basis in the Yearbook Australia.

In the latter publication serious assault is defined as the unlawful attack by one person upon another for the purpose of inflicting severe bodily injury, usually accompanied by the use of a weapon or by other means likely to produce death or great bodily harm. Robbery is defined to include situations where the offender uses or threatens to use violence, either immediately before, during or after the time of stealing, to any person or property in order to obtain the things stolen, or to prevent or overcome resistance to its being stolen. The offence of robbery also includes attempted robbery. The offence of rape is defined as including both attempted rape and assault with intent to rape.

For the purposes of the following analysis violent crime is defined as including these three offences in addition to the offence of homicide. The annual suicide and violent crime offence rates for South Australia during 1964-1973 are present in Table 20.

A number of points should be noted from this table. While the suicide rate has tended to decline, each of the violent offence rates and consequently the total violent offence rate have tended to increase during this period. During each year the homicide and rape offence rates were considerably lower than the suicide rate but in 1972 and 1973 the rate of serious assaults exceeded the suicide rate: and in 1970-1973 the robbery rate was above the suicide rate. Indeed the rate of serious assaults in 1973 was more than four fold the magnitude of the 1964 rate, and the 1973 robbery rate was over five times the 1964 rate. Conversely, the suicide rate in 1973 was only two thirds of what it has been in 1964 and in the early 1970's it remained below the corresponding period in the 1960's.

TABLE 20

SUICIDE AND VIOLENT CRIME OFFENCE RATES* FOR SOUTH AUSTRALIA, 1964-1973.

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Suicide Rate	16.0	12.7	12.4	13.0	11.4	12.2	11.8	10.4	10.7	10.1
Homicide Offence Rate	1.3	1.3	1.2	2.3	1.6	1.3	2.9	2.3	2.4	2.4
Serious Assault Offence Rate	3.3	5.0	4.8	6.4	4.6	8.1	7.5	9.8	12.5	13.9
Robbery Offence Rate	3.6	3.0	4.6	4.6	7.0	11.1	12.1	12.8	13.6	20.4
Rape Offence Rate	2.0	2.2	1.5	3.9	3.8	2.8	1.8	3.7	4.8	6.2
Total Violent Crime Offence Rate (unweighted)	10.2	11.5	12.1	17.2	17.0	23.3	24.3	28.6	30.9	42.9

Notes: * Rates per 100,000 persons.

Sources: Australia. Bureau of Statistics. Causes of Death 1964-1973, A.B.S. Canberra, 1965-1974 Biles, (1977) : pp. 17-23.

The total (unweighted) violent crime rate in South Australia has exceeded the suicide rate since 1967, the former increasing more than four-fold during the ten year period under consideration. While in 1964 the total violent crime rate was about two-thirds the suicide rate, in 1973 the relationship was more than reversed with suicides being less than 25 per cent of the rate for violent crime.

If one excludes the homicide rate from the total violent crime rate, the situation remains essentially the same. Typically the homicide rate as one would expect, was less than the rates for serious assault, robbery and rape and homicide over the years increased less than these other violent crime rates.

(B) Other States and the Nation

A comparison between the average annual violent crime rates and the average annual suicide rates in each State and Australia for the decade 1964-1973 is presented in Table 21.

These figures, however, must be read and interpreted with the utmost caution. The definition of the offence of serious assault varies between the States. In the Northern Territory and Victoria this offence category includes certain less serious types of assault which are not included in the figures for the other States. This variation in definition largely accounts for the high serious assault rates in these two jurisdictions. Unfortunately there is as yet no better data on violent crime in the respective States.

TABLE 21 (18)

AVERAGE ANNUAL VIOLENT CRIME OFFENCE AND SUICIDE RATE* AND RANKS FOR AUSTRALIAN STATES AND AUSTRALIA

1964-1973

State	Average Annual Violent Crime Offence Rate	Rank	Average Annual Suicide Rate	Rank
South Australia	22.1	6	12.1	5
New South Wales	39.9	3	14.5	2
Victoria	73.2	2	11.4	6
Queensland	22.3	5	15.6	1
Western Australia	15.6	8	13.2	3
Tasmania	19.4	7	12.2	4
Northern Territory	93.9	1	9.6	7
Australian Capital Territory	33.6	4	8.4	8
Australia	41.9	-	13.3	-

Notes: * Rates per 100,000 persons

Source: Australia. Bureau of Statistics. Causes of Death 1964-1973. A.B.S. Canberra, 1965-1974 Biles (1977) : pp. 17-23.

Bearing in mind the very real limitations of this data it can be seen that South Australia had the third lowest average annual violent crime rate among all States and, as noted previously, the fourth lowest average suicide rate during this period. Western Australia and Tasmania had lower violent crime rates than South Australia, Victoria, Northern Territory and the Australian Capital Territory had lower suicide rates. There is a sizeable, but statistically insignificant negative correlation between these State-wide rates, the States with high suicide rates tending to have low violent crime rates and vice-versa. Whilst this is far from the inverse relationship which might be necessary for any theory of a fixed reservoir of aggression being divided between internal and external violence it is pointing in that direction.

In South Australia the violent crime rate was almost twice the suicide rate. In Queensland, Western Australia and Tasmania the violent crime rate was 1.25 - 1.5 the magnitude of the suicide rate. The remaining States experienced violent crime rates which were more than double the respective suicide rates.

So far in this analysis we have been using a measure of violent crime which includes homicide, serious assault, robbery and rape. Homicide we have already treated separately showing South Australia to have a low rate compared with other States. This tendency is again reflected in the fact that South Australia had correspondingly relative low rates for other forms of serious crime. South Australia had the third lowest serious assault rate, the fifth lowest robbery rate and the fourth lowest rape rate among all States - with each of these rates being equivalent to, or less than, the average rates for Australia.

Suicide and Road Deaths

The usefulness of road death rates as indices of aggression in society has been mentioned previously, as has Grabosky's finding that deaths arising from motor vehicle accidents are far more numerous than deaths from homicide or suicide in South Australia.

A full investigation of motoring offences, road deaths and road injuries has been made previously by the authors,[19] the following discussion focussing on the incidence of road deaths in South Australia and the difference between road death rates in South Australia and the other States. Injuries from motor vehicle accidents are not considered here as information is not available as to the different levels of seriousness of the injury suffered.

The number of deaths due to motor vehicle accidents, like the figures for deaths from suicide, are published annually on a calendar year basis in the Australian Bureau of Statistics publication Road Traffic Accidents Involving Casualties and other relevant bulletins.

(A) South Australia

Road death and suicide rates in South Australia for the fifteen year period 1963-1977 are presented in Table 22.

TABLE 22

SUICIDE AND ROAD DEATH RATES* FOR SOUTH AUSTRALIA. 1963-1977

	1963	1964	1965	1966	1967	1968	1969	1970
Suicide Rate	15.0	16.0	12.7	12.4	13.0	11.4	12.2	11.8
Road Death Rate	22.1	22.9	22.8	24.7	22.8	24.4	21.9	29.9

	1971	1972	1973	1974	1975	1976	1977
Suicide Rate	10.4	10.7	10.1	11.0	12.0	11.6	10.1
Road Death Rate	24.8	26.2	27.4	31.3	27.4	24.3	24.0

Notes: * Rates per 100,000 persons

Source: Australia. Bureau of Statistics. Causes of Death 1963-1977, A.B.S. Canberra, 1964-1978 and Road Traffic Accidents Involving Casualties 1968-1977, A.B.S. Canberra, 1969-1978.

The suicide rate tended to decrease slightly but remained fairly static as compared to the road death rate. During the first half of this period the road death rate was one and one half times to twice the magnitude of the suicide rate. From 1970, the road death rate has been more than double the suicide rate. And in recent years the total numbers of road deaths in South Australia have been twice as numerous as suicides; and each have been many times as numerous as deaths from homicide. A positive correlation between suicide and other indicators of aggression is not therefore provable but the fall in internalised aggression during periods of external violence is, though not confirmed, at least suggested.

(B) Other States and the Nation

Average annual road death and suicide rates and ranks in each State and for Australia during the period 1964-1973 are given in Table 23.

TABLE 23[20]

AVERAGE ANNUAL ROAD DEATH AND SUICIDE RATES* AND RANKS FOR AUSTRALIAN STATES AND AUSTRALIA, 1963-1977

State	Average Annual Road Death Rate.	Rank	Average Annual Suicide Rate.	Rank
South Australia	25.1	7	12.0	4
New South Wales	26.1	6	14.0	2
Victoria	27.0	5	11.1	6
Queensland	29.3	3	15.1	1
Western Australia	30.1	2	12.5	3
Tasmania	27.6	4	11.8	5
Northern Territory	49.9	1	10.4	7
Australian Capital Territory	17.6	8	9.3	8
Australia	27.1	-	12.9	-

Notes: * Rate per 100,000 persons

Source: Australia. Bureau of Statistics. Causes of Death 1963-1977. A.B.S. Canberra, 1964-1978 and Road Traffic Accidents Involving Casualties 1968-1977 A.B.S. Canberra, 1969-1978.

During this period South Australia had the fourth-highest (i.e. fifth lowest) average annual suicide rate among all States and the second lowest average annual road death rate. Unlike homicide and violent crime rates, road death rates are available on a calendar year basis for years since 1963: it is therefore possible to compare suicide and road death rates over a fifteen rather than a ten year period. This does however, mean a slight difference in the rate being considered. During the ten year period 1964-1973 South Australia's suicide rate was ranked fifth among all States but during the fifteen year period 1963-1977 its suicide rate was ranked fourth among the States. In all States except the Northern Territory (which had a very high road death rate) the ratio of road deaths to suicides was 2 - 2.5. In South Australia the road death to suicide relationship was nearer to the national ratio (2.1:1) than any other State.

Suicide and Alcohol

In Australia there is comparatively little data on alcohol consumption, alcohol abuse and alcoholism which is available for each State and comparable between States, although there is a good deal of relevant data for Australia as a whole.

The current International Classification of Diseases, Injuries and Causes of Death (I.C.D.) which is used by the Australian Bureau of Statistics to categorise causes of death includes discrete categories for deaths from suicide and motor vehicle accidents, but not a discrete category for alcohol induced deaths. The I.C.D. does, however, include categories for deaths caused by "alcoholic psychosis", "alcoholism" and "cirrhosis of the liver" and the aggregate number of deaths in these three categories gives a reasonable approximation of the number of deaths attributable to excessive alcohol consumption. It must be stressed, however, that rates for deaths attributable to alcohol based on these figures must be treated with some caution as they are approximations only and somewhat more vague than rates for deaths by suicide or motor vehicle accidents.

A. South Australia

Annual suicide rates and alcohol related death rates for South Australia during the period 1963-1977 are given in Table 24. As with road death rates, alcohol related death rates can be computed for years since 1973 and thus data has been assembled for a fifteen year period up to and including 1977, the most recent year for which data is currently available.

Figures for deaths from "alcoholic psychosis" and "alcoholism" have been grouped together given the similarity between the two causes and the comparative few deaths due to the former, and separate rates have been computed for death from "cirrhosis of the liver". The total rate for alcohol related deaths is based on the combined rates of both these groupings.

It can be seen that the death rate from alcoholic psychosis and alcoholism has generally been less than half the magnitude of the death rate from cirrhosis of the liver, and that the suicide rate has consistently been higher, and in some years considerably higher, than the latter. However, since 1970 the combined alcohol related death rate has usually exceeded the suicide rate. The situation prior to 1970 was that the suicide rate ran at about one and one half to twice the rate for alcohol related deaths. Thus from 1963-77 South Australia has seen a reversed relationship between suicides and alcohol related deaths the latter from 1970 climbing above the former. More precisely South Australia has had a slight decline in its suicide rate but a marked increase in its alcohol related death rate. This increase in the alcohol related death rate has been largely due to the increase in the rate of deaths from cirrhosis of the liver. Death rates due to alcoholic psychosis and alcoholism have been fairly static.

TABLE 24

SUICIDE AND ALCOHOL RELATED DEATH RATES* FOR SOUTH AUSTRALIA, 1963-1977

	1963	1964	1965	1966	1967	1968	1969	1970
Suicide Rate	15.0	16.0	12.7	12.4	13.0	11.4	12.2	11.8
Alcoholic Psychosis and Alcoholism Death Rate	2.2	2.4	2.5	1.6	3.0	3.5	2.7	2.7
Cirrhosis of the Liver Death Rate	5.1	4.5	5.3	6.5	5.9	6.4	5.9	7.9
Total Alcohol Related Death Rate	7.3	6.9	7.8	8.1	8.9	9.9	8.6	10.6

	1971	1972	1973	1974	1975	1976	1977
Suicide Rate	10.4	10.7	10.1	11.0	12.0	11.6	10.1
Alcoholic Psychosis and Alcoholism Death Rate	4.3	2.6	4.7	3.2	3.2	4.0	2.9
Cirrhosis of the Liver Death Rate	8.5	4.9	8.2	10.2	9.5	10.3	8.7
Total Alcohol Related Death Rate	12.8	7.5	12.9	13.4	12.7	14.3	11.6

Notes: * Rates per 100,000 persons

Source: Australia. Bureau of Statistics. Causes of Death 1963-1977, A.B.S. Canberra, 1964-1978

B. Other States and the Nation

A comparison between the average annual suicide rates and average annual alcohol related death rates in each State and Australia for the fifteen year period 1963-1977 is presented in Table 25. The alcohol related death rates are based on the total number of deaths from alcoholic psychosis, alcoholism and cirrhosis of the liver.

TABLE 25 (21)

AVERAGE ANNUAL ALCOHOL RELATED DEATH AND SUICIDE RATES* AND RANKS FOR AUSTRALIA AND AUSTRALIAN STATES 1963-1977.

State	Average Annual Alcohol Related Death Rate	Rank	Average Annual Suicide Rate	Rank
South Australia	10.2	2	12.0	4
New South Wales	9.5	3	14.0	2
Victoria	8.8**	4	11.1	6
Queensland	8.1	6	15.1	1
Western Australia	8.2	5	12.5	3
Tasmania	7.6	7	11.8	5
Northern Territory	10.3**	1	10.4	7
Australian Capital Territory	5.8**	8	9.3	8
Australia	8.9	-	12.9	-

Notes: * Rates per 100,000 persons
** Excludes 1965-1967

Source: Australia. Bureau of Statistics. Causes of Death 1963-1977. A.B.S. Canberra, 1964-1978.

During this period South Australia had the second highest average annual alcohol related death rate and the fourth highest average annual suicide rate. South Australia's alcohol death rate was exceeded only by the Northern Territory. South Australia's suicide rate was exceeded however, by Queensland, New South Wales and Western Australia. At a time when South Australia's suicide rate was lower than the national average its alcohol related death rate was noticeably higher than the Australia-wide rate.

In all States the alcohol related death rate was lower than the suicide rate, the latter being about one and one half times the magnitude of the former in most States. For South Australia, however, the suicide rate was only marginally higher than the alcohol related death rate while in the Northern Territory the two rates were identical. Again there was found to be no statistically significant correlation between these rates.

Given the limitations of the alcohol related death rates as compared to the homicide, violent crime and road death rates it was decided to compare suicide rates with other measures related to alcohol consumption and abuse. This decision was also prompted by the relative absence of previous research exploring the relationship between suicide and alcohol consumption and abuse in Australia and the Australian States.

Besides the alcohol related death statistics considered previously, the following alcohol related statistics are available on a State by State basis:

(a) the number of cases of drunkenness cases in Magistrates' Courts on which convictions were made. These are available for each year during the ten year period 1964-1973 although there are no figures for New South Wales in 1972-1973 and for Victoria and the Northern Territory in 1973,

(b) the average daily consumption of alcohol (in grams). These figures are derived from the Australian Bureau of Statistics survey of alcohol and tobacco consumption patterns undertaken in February 1977 and are based on alcohol consumption during the week prior to interview.

(c) the private final consumption expenditure on alcoholic drinks (in dollars). These figures are derived from the Australian Bureau of Statistics publication Australian National Accounts - National Income and Expenditure 1975-1976 which refers to expenditure during that financial year.

The following brief discussion is concerned with comparing, on a State by State basis, relevant rates derived from (a) - (c) above and suicide rates for corresponding periods of time.

Table 26 presents average annual rates of drunkenness cases in Magistrates' Courts in which convictions were made and average annual suicide rates for the ten year period 1964-1973. The former are based on the number of cases in which convictions were made per 1,000 persons and for convenience are referred to below as "drunkenness rates".

Contrary to the high alcohol related deaths in the State, South Australia in drunkenness as measured by convictions had the third lowest average annual drunkenness rate. This was more than both Tasmania and the Australian Capital Territory but lower than other States.

It should be noted however, that New South Wales, Queensland and Western Australia with high rates of convictions for drunkenness also had relatively high suicide rates.

TABLE 26[22]

AVERAGE ANNUAL DRUNKENNESS AND SUICIDE RATES[1]

AND RANKS FOR AUSTRALIAN STATES AND AUSTRALIA

1964-1973

State	Average Annual Drunkenness Rate[2]	Rank	Average Annual Suicide Rate	Rank
South Australia[6]	7.0	6	12.1	5
New South Wales	13.5[3]	3	14.5	2
Victoria	7.5[4]	5	11.4	6
Queensland[5] [6]	17.1	2	15.6	1
Western Australia	12.5	4	13.2	3
Tasmania	1.5	8	12.2	4
Northern Territory	79.8[4]	1	9.6	7
Australian Capital Territory	3.8	7	8.4	8
Australia	11.5[3]	-	13.3	-

Notes:
(1) Drunkenness rate per 1000 persons. Suicide Rate per 100,000 persons.
(2) Drunkenness cases in Magistrates' Courts in which convictions were made excluding minor traffic offences settled without court proceedings
(3) 1964-1971
(4) 1964-1972
(5) Year ended 30 June.
(6) A person convicted on several counts at the one hearing is included only once.

Source: Australia. Bureau of Statistics. Causes of Death 1964-1973, A.B.S Canberra 1965-1974 and Yearbook Australia 1964-1973, A.B.S. Canberra, 1965-1974.

A comparison between average daily alcohol consumption rates during February 1977 and suicide rates for 1977 in each State and for Australia is made in Table 27. The former must be treated with some caution, however, as comparison of the quantities of alcohol consumed with the estimates of the supply of alcohol products indicates that there has been some under-reporting of quantities of alcohol

consumed. Furthermore, the fact that this data was collected by survey methods, and refers only to consumption patterns during one week prior to interview, must be borne in mind. Although these figures have considerable limitations they are the best consumption figures currently available. The calculation of this measure (for convenience referred to below as the "alcohol consumption rate") relates only to those persons who drank during the week before interview.

TABLE 27 (23)

ALCOHOL CONSUMPTION AND SUICIDE RATES (1) AND RANKS FOR AUSTRALIAN STATES AND AUSTRALIA

1977

State	Alcohol Consumption Rate (2)	Rank	Suicide Rate	Rank
South Australia	18.68	7	10.1	6
New South Wales	22.01	3	10.8	4
Victoria	20.27	5	11.9	1
Queensland	20.13	6	11.6	2
Western Australia	23.01	2	11.2	3
Tasmania	16.80	8	10.2	5
Northern Territory	37.75	1	6.6	8
Australian Capital Territory	20.60	4	10.0	7
Australia	20.98	-	11.1	-

Notes: (1) Alcohol consumption rate in grams
Suicide rate per 100,000 persons.

(2) Average daily alcohol consumption, February, 1977.

Source: Australia. Bureau of Statistics. Causes of Death 1977. A.B.S. Canberra 1977 and Alcohol and Tobacco Consumption Patterns (Preliminary), A.B.S. Canberra, 1978

South Australia's alcohol consumption rate was second lowest and its suicide rate was third lowest among all States, both rates being below the national averages. Interestingly enough there is a strong, statistically significant correlation between these rates ($r = -0.81$) suggesting that there may be an inverse relationship between alcohol consumption and suicide. This finding must be treated very cautiously given the abovementioned limitations of the alcohol consumption rates and bearing in mind that the consumption data was for only one week and the suicide rate could only be taken for the year within which that particular week fell.

A comparison between alcohol expenditure and suicide rates in each State is made in Table 28. The former rate is for private final consumption expenditure (at current prices) on alcoholic drinks (in dollars) per head of population 18 years and over for the financial year 1975-1976 and the latter is the average annual suicide rate for the two year period 1975-1976. Unfortunately, the alcohol expenditure figures for the Australian Capital Territory and the Northern Territory are included with New South Wales and South Australia respectively, necessitating appropriate manipulation of the corresponding suicide statistics.

Again little can be inferred from this table, particularly as separate alcohol expenditure figures for all States are not available, but it is noteworthy that the South Australia-Northern Territory alcohol consumption rate was the second lowest and well below the national

average, although the combined South Australia-Northern Territory suicide rate for 1975-1976 was the second highest.

TABLE 28[24]

ALCOHOL EXPENDITURE AND SUICIDE RATES[1] AND RANKS FOR AUSTRALIA AND AUSTRALIAN STATES.

1975-1976

State	(2) Alcohol Expenditure ($)	Rank	Suicide Rate	Rank
South Australia (including Northern Territory	255.1	5	12.0	2
New South Wales (including Australian Capital Territory)	311.0	1	11.6	3
Victoria	242.0	6	9.5	5
Queensland	301.1	3	13.3	1
Western Australia	304.1	2	9.2	6
Tasmania	264.9	4	10.6	4
Australia	282.0	-	11.1	-

Notes: (1) Alcohol expenditure in dollars
Suicide rate per 100,000 persons

(2) Private final consumption expenditure (at current prices) on alcoholic drinks per head of population 18 years and over, 1975-1976.

Source: Australia. Bureau of Statistics. Causes of Death 1975-1976, A.B.S. Canberra, 1976-1977 and Australian National Accounts - National Income and Expenditure 1975/1976, A.B.S. Canberra 1977

The preceding exploratory analysis of drunkenness, alcohol consumption and alcohol expenditure rates highlights the fact that South Australia, as compared to the other States and Australia as a whole, has comparatively low drunkenness conviction, and alcohol consumption and expenditure rates and corresponding medium to low suicide rates. Any further conclusions are difficult to draw as the alcohol related data from which these measures have been derived is very limited and not always available over a period of several years (as is the case with homicide and violent crime offence rates, and road death and alcohol related death rates). Furthermore, these offence and death rates are computed per 100,000 persons, as are the suicide rates employed, whereas the drunkenness, alcohol consumption and alcohol expenditure rates are not so standardized.

Inter-Relationships

The complications of probing relationships between suicide and the various other indicators of violence and drunkenness in the community is their inter-relatedness. To measure suicide against each separately does not allow statistically a simple summation at the end: each of the separate indicators may be related quite apart from their relationship with suicide: and the relationship of suicide with say, homicide or robbery may well be connected with a simultaneous relationship with alcohol deaths or road deaths. People get drunk to find courage for suicide (or, as shown above, may become too happy in drink to kill themselves). People commit homicide in drink or commit suicide after homicide. Violence in crime can lead to homicide and suicides in

some cases dealt with by the authors have followed upon crimes, some of which could have been violent. Therefore no simple presentation of each indicator in relation to one another is sufficient. Their matrix of inter-connectedness needs to be probed and demonstrated.

In this study only a very tentative approach could be made.

The inter-relationships between the various measures of aggression and violence for each State are presented in Table 29. This table gives the correlation coefficients between the average rates for each measure during the ten year period 1964-1973.

It will be seen that there are no statistically significant correlations between suicide rates and the rates for the other indicators in each State. However, within this general statement the links between suicides and serious assaults ($r = -.52$) suicides and rapes ($r = -.55$) and suicides and deaths from alcoholism and alcohol psychosis ($r = +.61$) are fairly strong.

Particularly noteworthy are the negative correlations between suicides and the separate indicators and the combined measure for all four categories of violent crime: also the low negative association between suicides and road deaths. It is noteworthy that these findings confirm our departure from the proposition advanced by Whitlock. It seems that there is generally an inverse, rather than direct, relationship between suicides and the other indicators of violent behaviour.

TABLE 29

MATRIX OF PRODUCT MOMENT CORRELATION COEFFICIENTS FOR INDICATORS OF VIOLENCE AND AGGRESSION[+] AUSTRALIAN STATES 1964-1973.

	Homicide	Serious Assault	Robbery	Rape	Total Violent Crime	Road Deaths	Alcoholism and Alcohol Psychosis	Cirrhosis of the Liver	Total Alcohol Related Deaths
Suicide	- .37	- .52	- .15	- .55	- .47	- .10	+ .61	+ .11	- .32
Homicide		+ .70*	+ .48	+ .97*	+ .78*	+ .90*	+ .08	+ .09	+ .16
Serious Assault			+ .75*	+ .78*	+ .98*	+ .59	- .40	- .30	+ .17
Robbery				+ .52	+ .82*	+ .34	- .12	+ .62	+ .51
Rape					+ .84*	+ .81*	- .04	+ .10	+ .16
Total Violent Crime						+ .65*	- .28	+ .35	+ .25
Road Deaths							+ .24	+ .12	+ .18
Alcoholism and Alcohol Psychosis								+ .30	+ .56
Cirrhosis of the Liver									+ .94*

Notes: + Average Annual Rates
* Significant at the .05 level

Source: Australia. Bureau of Statistics. Various Publications.

The very strong positive correlation between homicides and serious assaults and rapes may not be surprising but the statistically significant correlation between homicides and road deaths ($r = +.90$) is particularly striking especially as there is little if any overlap: only in one year of the ten years considered could the manslaughter on the roads have been counted in both categories. As Dax and others have explained suicide may be considered as aggression expressed internally and both homicide and road deaths as forms of externally expressed aggression. Homicide is often regarded as aggression towards particular individuals and road deaths as violence aimed at the community in general. These data reveal a strong positive relationship between these two measures of external aggression i.e. homicide and road deaths (reinforced by the evidence of a possible relationship between all indicators of violence which has been discussed above). States with high homicide rates tend to have high road death rates and those with low homicide rate are characterised by low road death rates. Also where there is a high homicide rate there is likely to be a high rate for other forms of violence - and vice versa.

Summary of Findings

(A) South Australia

(a) In recent years South Australia has had a slightly declining suicide rate, a rapidly rising violent crime rate and fluctuating, but generally rising road and alcohol related death rates. (Figures 7-10). These trends are at variance with the proposition advanced by Whitlock as the suicide rate does not increase with other indicators of violence and aggression.

(b) During the period 1964-1973 the suicide rate consistently exceeded the rates of homicide and rape offences. On average the suicide rate has been about seven-fold the homicide rate and five-fold the rape rate. The differences between the suicide rate on the one hand and the homicide and rape rates on on the other were much greater during the mid 1960's than during the early 1970's. (Figure 7).

(c) While the suicide rate has declined, the serious assault and robbery rates have both increased markedly. In 1964 the suicide rate was more than three-fold the serious assault and robbery rates but by 1973 the robbery rate was double the suicide rate and the serious assault rate was slightly higher than the suicide rate. (Figure 7).

(d) The road death rate has consistently exceeded the suicide rate since 1963, the differences between the two rates being greatest during the period 1970-1974. Since 1970 the road death rate has been about twice the magnitude of the suicide rate but during the 1960's the difference between the two rates was less marked. The road death and injury rates have tended to be more static than most of the violent crime rates and have tended to decline since about 1974. (Figure 8).

(e) Since 1963 the suicide rate has consistently exceeded the death rates from alcoholism/alcohol psychosis has been more static and consistently lower than the cirrhosis of the liver death rate. Unlike the suicide rate the drunkenness rate (per 1,000 persons) has generally increased although it has been consistently lower than the former. (Figure 9).

(f) While the road death rate has consistently exceeded the suicide rate the total violent crime rate has been higher than the suicide rate since 1966 and by 1973 was also noticeably greater than the road death rate. The total alcohol related death rate was slightly lower than the suicide rate during the 1960's but since 1973 has just exceeded the suicide rate (Figure 10).

FIGURE 7

SUICIDE AND VIOLENT CRIME RATES FOR SOUTH AUSTRALIA 1963 - 1977

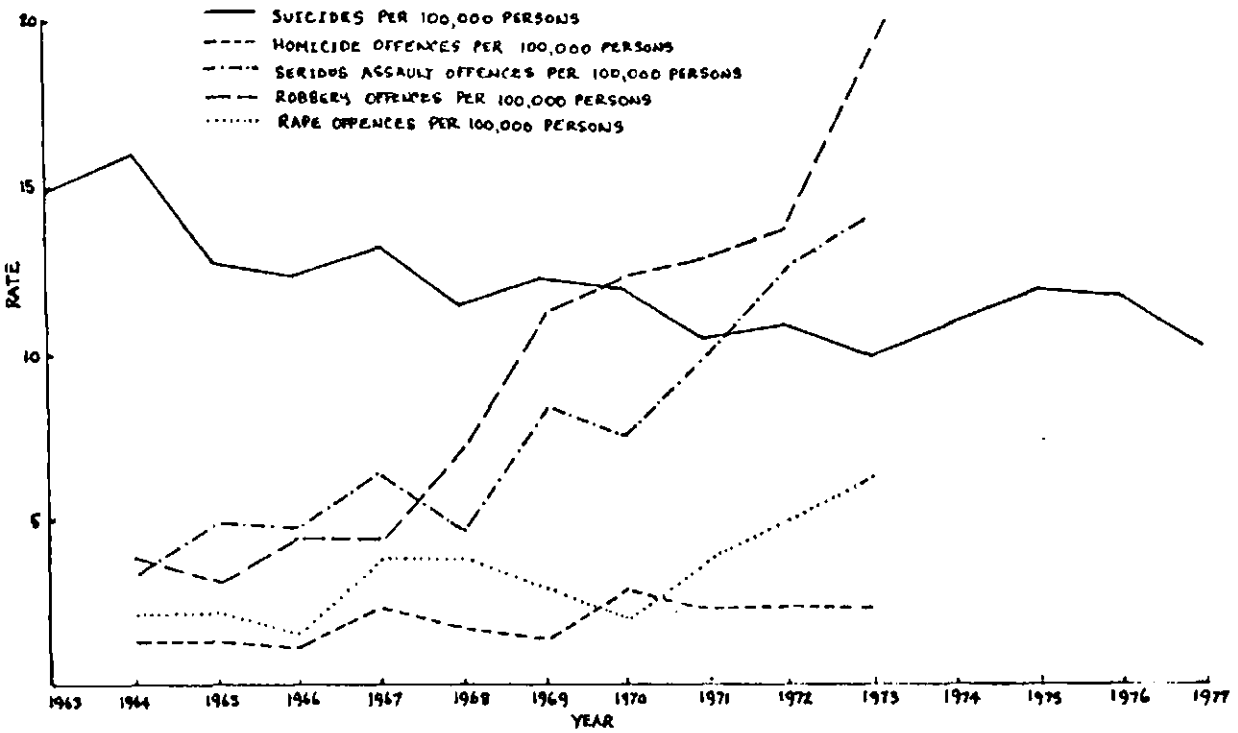


FIGURE 8

SUICIDE AND ROAD DEATH AND INJURY RATES FOR SOUTH AUSTRALIA 1963 - 1977

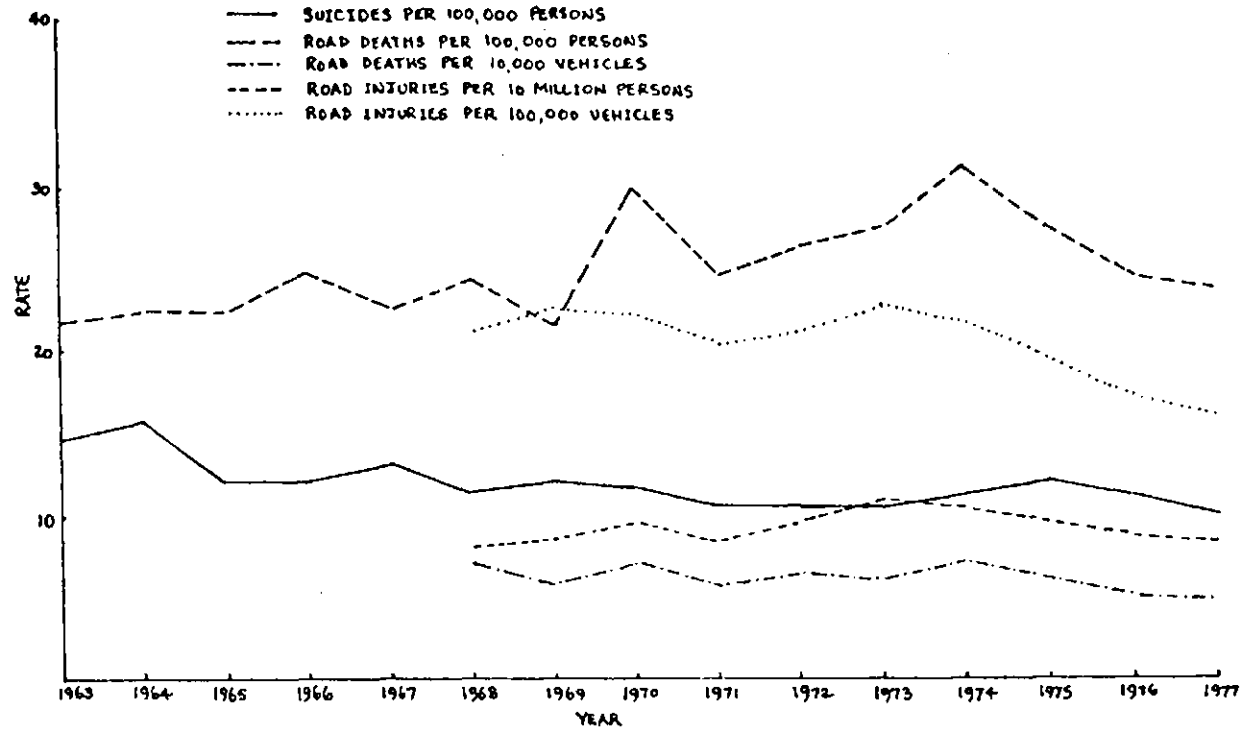


FIGURE 9

SUICIDE AND ALCOHOL DEATH AND OFFENCE RATES FOR SOUTH AUSTRALIA 1963 - 1977

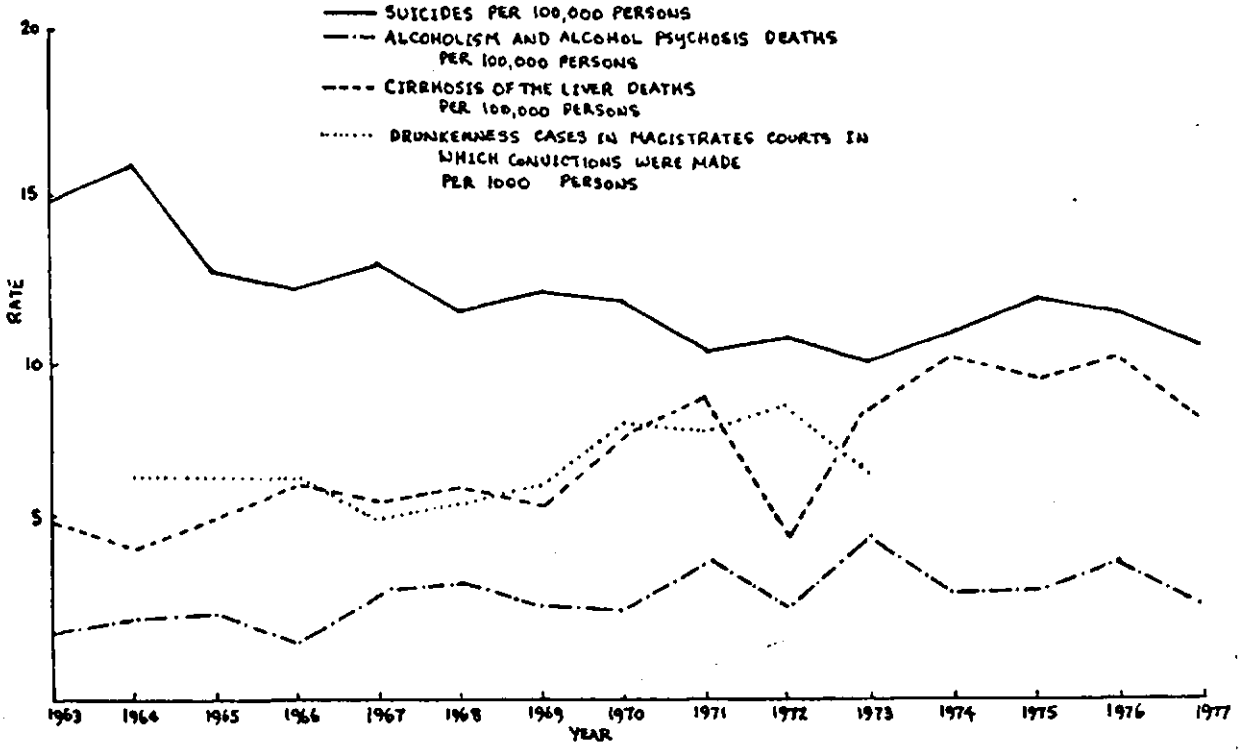
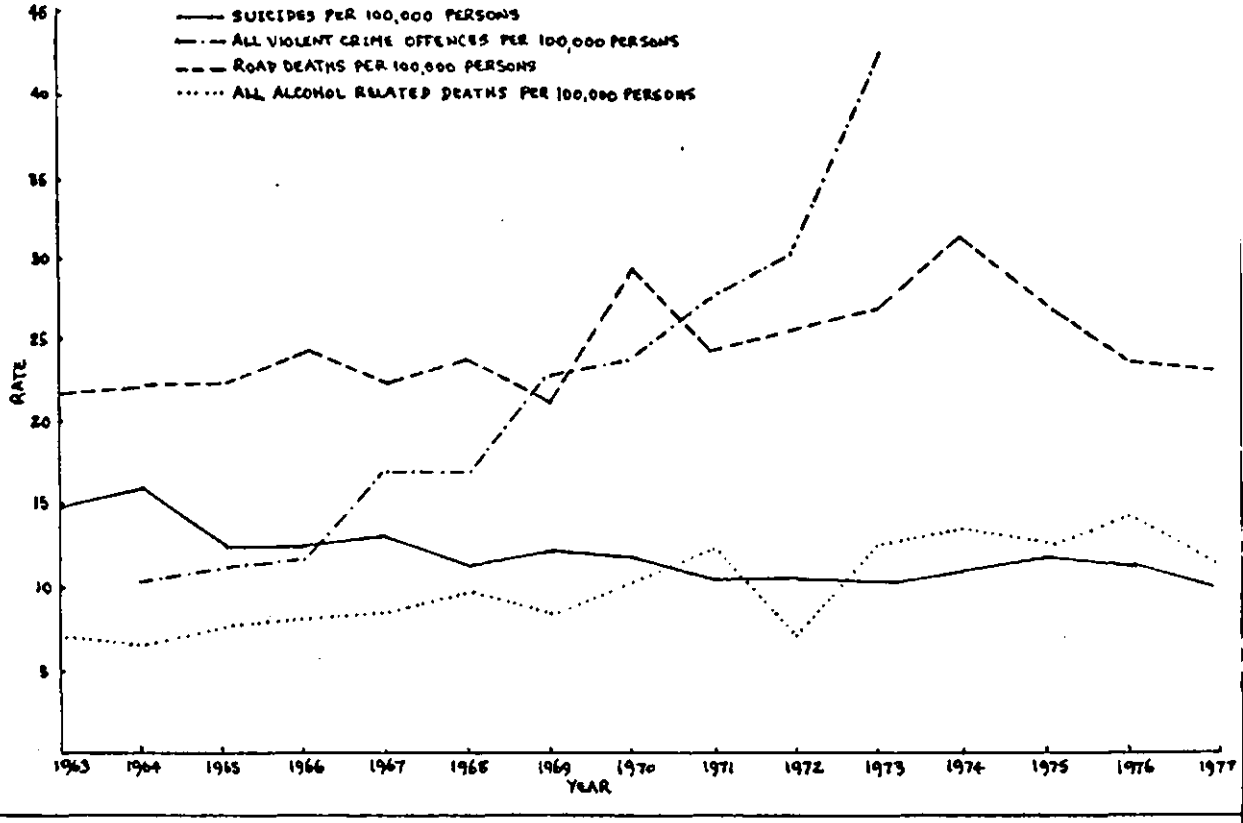


FIGURE 10

SUICIDE, VIOLENT CRIME, ROAD DEATH AND ALCOHOL RELATED DEATH RATES FOR SOUTH AUSTRALIA 1963 - 1977



(B) South Australia and the Other States

(a) During the period 1964-1973 South Australia had the fourth lowest suicide rate (12.1) the second lowest homicide rate (2.0), the third lowest total violent crime rate (22.1), and the second lowest road death rate (24.8) among all States. (Table 30). It would thus appear that with reference to Dax's interpretation of aggression South Australia has lower rates of externally expressed aggression (as measured by homicides and road deaths) as well as a lower rate of aggression expressed internally (as measured by suicides) than most other States.

(b) South Australia also experienced comparatively low rates of serious assault and rape, and to a slightly lesser extent robbery, which further suggests that it is a State with a relatively low level of aggression as expressed in the form of violent crimes against the person.

(c) The total alcohol-related death rate in South Australia was the highest among the States during the period 1964-1973. (Table 30), as were the individual rates for deaths from alcoholism/alcohol psychosis and cirrhosis of the liver. Both Dax and Whitlock have pointed out that alcoholism or measures of alcohol misuse are essentially indicators of societal violence and it is thus surprising and rather inexplicable that South Australia has the highest alcohol-related death rate but low or very low rates for all other measures.

(d) Conversely South Australia had the third lowest drunkenness conviction rate and the second lowest alcohol consumption rate among the States and it appears that the alcohol expenditure rate is also comparatively low. While it is true, as Dax and Whitlock points out, that alcohol abuse adds to the frequency of aggressive behaviour, the relationships between the misuse of alcohol and the incidence of suicide, violent crime and road deaths in the respective States remain unclear.

TABLE 30

AVERAGE ANNUAL RATES[1] AND RANKS FOR SUICIDE, HOMICIDE AND VIOLENT CRIMINAL OFFENCES, AND ROAD AND ALCOHOL-RELATED DEATHS - AUSTRALIAN STATES 1964-1973

State	Suicide		Homicide		Violent Crime[2]		Road Death		Alcohol Deaths[3]	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
South Australia	12.1	5	2.0	7	22.1	5	24.8	7	9.4	1
New South Wales	14.5	2	3.0	3	39.9	3	26.4	6	8.6	2
Victoria	11.4	6	2.6	4	73.2	2	28.2	5	8.0[4]	4
Queensland	15.6	1	3.1	2	22.3	5	29.9	3	7.0	6
Western Australia	13.2	3	1.7	8	15.6	8	31.9	2	7.2	5
Tasmania	12.2	4	2.5	5	19.3	7	28.1	4	6.9	7
Northern Territory	9.6	7	13.9	1	93.9	1	50.5	1	8.1[4]	3
Australian Capital Territory	8.4	8	2.2	6	33.6	4	18.6	8	6.3[4]	8

Notes:

(1) All rates per 100,000 persons.

(2) Includes the offences of homicide, serious assault, rape and robbery

(3) Includes deaths from alcoholism, alcoholic psychosis and cirrhosis of the Liver.

(4) Date not available for 1965-1967. Rate given for seven pear period only.

Source: Australia. Bureau of Statistics. Causes of Death 1965-1973. A.B.S. Canberra, 1965-1973

Biles (1979) : pp 14-23.

(e) Aggregating the rates of suicide, homicide, and road and alcohol-related deaths as suggested by Dax, South Australia has the second lowest total rate of aggression among all States. (Table 31). If other violent crime rates besides the homicide rate are included the unweighted aggregate rate for South Australia is the fourth lowest, as is the ranking of the aggregate rate which excludes all violent except serious assault (the definition of this offence being the most variable between the States.) (Table 31) These crude, though useful, aggregate rates also indicate that South Australia has a comparatively low level of violence and aggression.

(f) South Australia experienced the second lowest aggregate rate of suicides, homicides and road deaths among all States during the period 1964-1973 and the lowest aggregate rate of suicides, all violent crime and road deaths. (Table 31) Thus by totalling various combinations of the rates of violence and aggression, South Australia can be seen to have lower aggregate rates than most, if not all, other States. This is particularly so if the alcohol-related death rates are excluded from the aggregate rates.

(g) There were no statistically significant correlations between the average annual suicide rates and other measures of violence and aggression in the respective States. Generally speaking there is an inverse, rather than direct, relationship between suicides and these other measures. However, there was a strong positive correlation between the average annual homicide and road death rates and also positive and statistically significant correlations between most of the violent crime rates in the various States.

TABLE 31

AGGREGATE AVERAGE ANNUAL SUICIDE, HOMICIDE AND VIOLENT CRIMINAL OFFENCES AND ROAD AND ALCOHOL-RELATED DEATH RATES* AND RANKS, AUSTRALIAN STATES, 1964-1973

State	A		B		C		D		E	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
South Australia	48.3	7	68.4	5	60.9	5	38.9	7	59.0	8
New South Wales	52.5	4	89.4	3	72.4	2	43.9	4	80.8	3
Victoria	50.2	5	120.8	2	71.2	3	42.2	6	112.8	2
Queensland	55.6	2	74.8	4	65.9	4	48.6	2	67.8	4
Western Australia	54.0	3	67.9	6	60.7	6	46.8	3	60.7	5
Tasmania	49.7	6	66.5	8	60.6	7	42.8	5	59.6	7
Northern Territory	82.1	1	162.1	1	115.5	1	74.0	1	154.0	1
Australian Capital Territory	35.5	8	66.9	7	48.2	8	29.2	8	60.6	6

Notes: * All rates per 100,000 persons (unweighted).

A. Suicides; homicide offences; road deaths and alcohol related deaths.
B. Suicides; total violent crime offences; road deaths and alcohol-related deaths
C. Suicides; homicide, robbery and rape offences; road deaths and alcohol related deaths.
D. Suicides; homicide offences and road deaths.
E. Suicides; total violent crime offences and road deaths.

Source: Australia. Bureau of Statistics. Causes of Death 1964-1973. A.B.S. Canberra, 1965-1973
Biles, (1979) : pp 14-23

(C) South Australia and Australia

(a) With the notable exception of the alcoholism/ alcoholic psychosis, cirrhosis of the liver and total alcohol related death rates, South Australia had rates for all measures of violence and aggression which were either equal to or lower than the Australia wide rates.

(b) During the period 1964-1973 the South Australian rates of suicide, homicide and road deaths were all slightly lower than the respective national rates.

(c) South Australia's total violent crime rate and serious assault rate during 1964-1973 were both very much lower than the national rates although this is partly due to variations in the definitions of the latter between the States. The rates of rape in South Australia and Australia were the same while the robbery rate in South Australia was noticeably lower than the national rate.

(d) Thus it seems that South Australia has, generally speaking, a lower level of violence and aggression than the country as a whole as well as comparing favourably to most other States.

NOTES ON CHAPTER 5

(1) Henry, A.F. and Short, J.F. Suicide and Homicide, New York, Free Press, 1954.

(2) Gold, M. "Suicide, Homicide and the Socialisation of Aggression", American Journal of Sociology, 63, 1958 : pp 651-661.

(3) Porterfield, A.L. "Traffic Fatalities, Suicide and Homicide", American Sociological Review 25, 1960 : pp 987-1001.

(4) Dax, E.C. "Suicide in Today's Society", Medical Journal of Australia, 2 December, 1968 : p. 1199.

(5) Ibid.

(6) Ibid.

(7) Whitlock, F.A. Death on the Road - A Study in Social Violence, London, Tavistock, 1971 : p3.

(8) Whitlock, F.A. "Suicide, Culture and Society" in I. Pilowski (ed), Cultures in Collision. Adelaide, Australian National Association for Mental Health, 1975 : p.385.

(9) Grabosky, P.N. Homicide in South Australia - Rates and Trends in Comparative Perspective. Adelaide, Office of Crime Statistics, Department of the Attorney General of South Australia, 1979.

(10) For a more complete statement of the law of homicide in South Australia see : Criminal Law and Penal Methods Reform Committee of South Australia : Fourth Report - The Substantive Criminal Law. Adelaide, Government Printer, 1977.

(11) After 1973 statistics of offences known or reported to police are published in the Yearbook Australia on a financial year basis.

(12) But see last sentence of this section.

(13) Grabosky, op. cit.

(14) Ibid. p.3

(15) Ibid. p.11

(16) Biles, D. "Serious Crime Rates in D. Biles (ed) Crime and Justice in Australia Canberra, Australian Institute of Criminology and Sun Books, 1977 : pp.13-15.

(17) With this table and all succeeding tables dealing with all States and Australia it should be remembered that ten year or fifteen year averages are being used. Therefore the conclusion drawn from these may sometimes vary from the conclusion drawn for comparisons within South Australia - which are based on annual figures - not averages.

(18) See footnote (17).

(19) Clifford, W. and Marjoram, J. Road Safety and Crime, Canberra, Australian Institute of Criminology, 1978.

(20) See footnote (17)

(21) See footnote (17)

(22) See footnote (17)

(23) See footnote (17)

(24) See footnote (17)

CHAPTER 6

THE SPATIAL DISTRIBUTION OF SUICIDE IN SOUTH AUSTRALIA

Sources of Data

Though limited, the data available on the geographical distribution of suicide in South Australia is more detailed than that in several other States. The following description is based on an analysis of data from the following sources:

(a) Unpublished computerised and manual tabulations on cause of death for the years 1971 and 1976 provided by the Australian Bureau of Statistics;

(b) Tabulations of causes of death for statistical divisions contained in the Statistical Register of South Australia for the years 1971 to 1975;

(c) Tabulations of causes of death for principal local government areas contained in the Statistical Register of South Australia for the years 1966-1975.

Unfortunately data on the causes of death in the several statistical divisions of the State were not published prior to 1971 and tabulations of the causes of death in the principal local government areas do not include suicide as a separate category in the causes of death prior to 1966. Furthermore, these two series of tabulations only give total number of suicides rather than age and sex specific statistics. Nevertheless the information which is available tells us more about the spatial distribution of suicide in South Australia than the distribution in other States of Australia.

The Regional Distribution of Suicide

Suicide rates per 100,000 persons and per 1,000 deaths in the nine statistical divisions of South Australia were computed for each year during the period 1971-1975, the former being based on mid-year estimates of population and the latter on the total number of deaths registered in each statistical division during calendar years. These rates were averaged and are presented in Table 32 along with the rank for each region on each score. These data should be interpreted carefully as the annual numbers of suicides in some statistical divisons were frequently small. Maps 1 and 2 depict the spatial distribution of both measures for statistical divisions.

A surprising result of the distribution is that the rural Far Northern statistical division scored highest on both measures whilst the urban Adelaide statistical division was only the second or third highest. The statistical divisions with the lowest average annual rate per 100,000 persons were Eyre, Murray and Kangaroo Island while the ones with the lowest suicide rates per 1,000 deaths were Central, Kangaroo Island and Mt. Lofty Ranges. What is more significant is that while Adelaide had a comparatively high suicide rate during the period 1971-1975 and suicide was a more significant cause of death in Adelaide than most other regions, the sparsely populated Far North Region experienced suicide at a rate almost fifty per cent higher than that of Adelaide and had a rate per 1,000 deaths more than double that for the metropolitan region.

TABLE 32

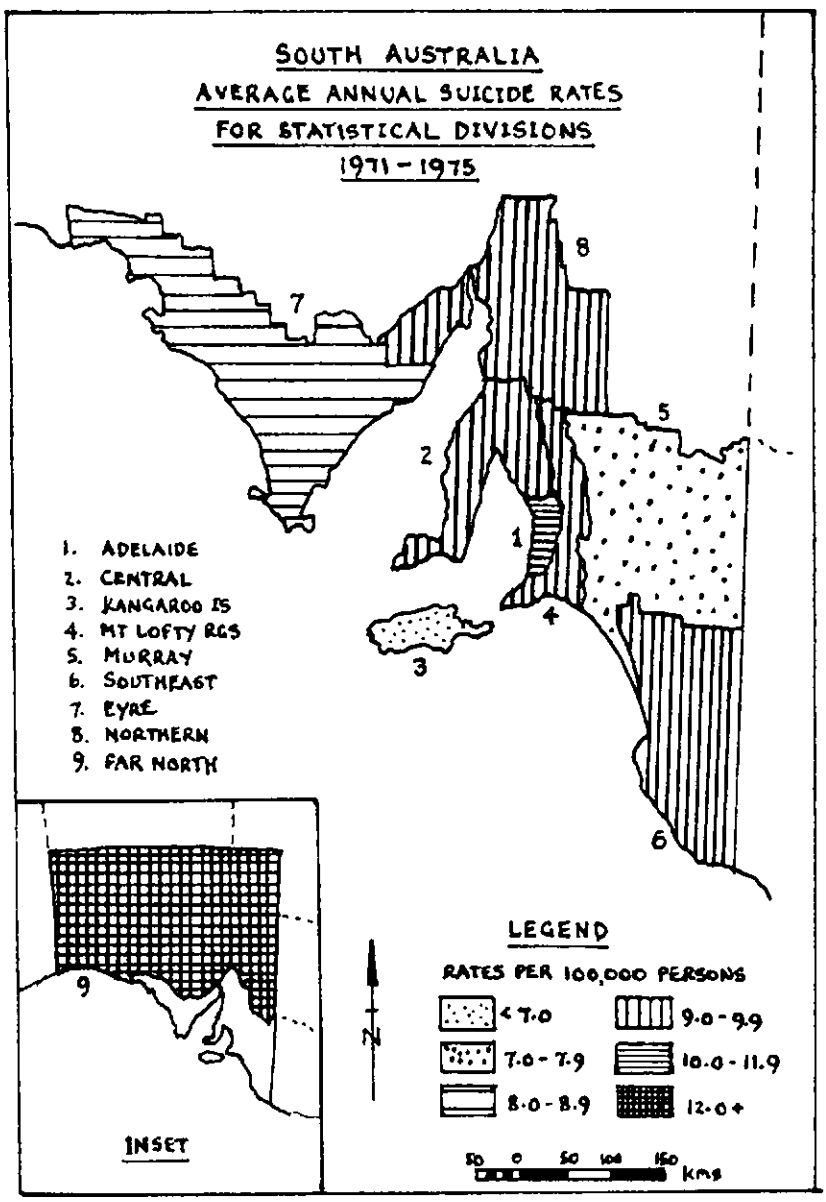
AVERAGE ANNUAL SUICIDE RATES AND RANKS FOR STATISTICAL DIVISIONS OF SOUTH AUSTRALIA, 1971-1975.

Statistical Division	Average Annual Suicide Rate per 100,000 Persons 1971-1975	Rank	Average Annual Suicide Rate per 1,000 Deaths 1971-1975	Rank
Adelaide	11.4	2	13.7	3
Central	9.7	3	9.2	7
Kangaroo Island	6.3	9	9.1	8
Mt. Lofty Ranges	9.4	5	8.9	9
Murray	7.4	8	9.3	6
South East	9.0	6	12.4	4
Eyre	8.8	7	12.1	5
Northern	9.5	4	14.1	2
Far Northern	16.8	1	33.5	1
TOTAL SOUTH AUSTRALIA	10.8	-	13.2	-

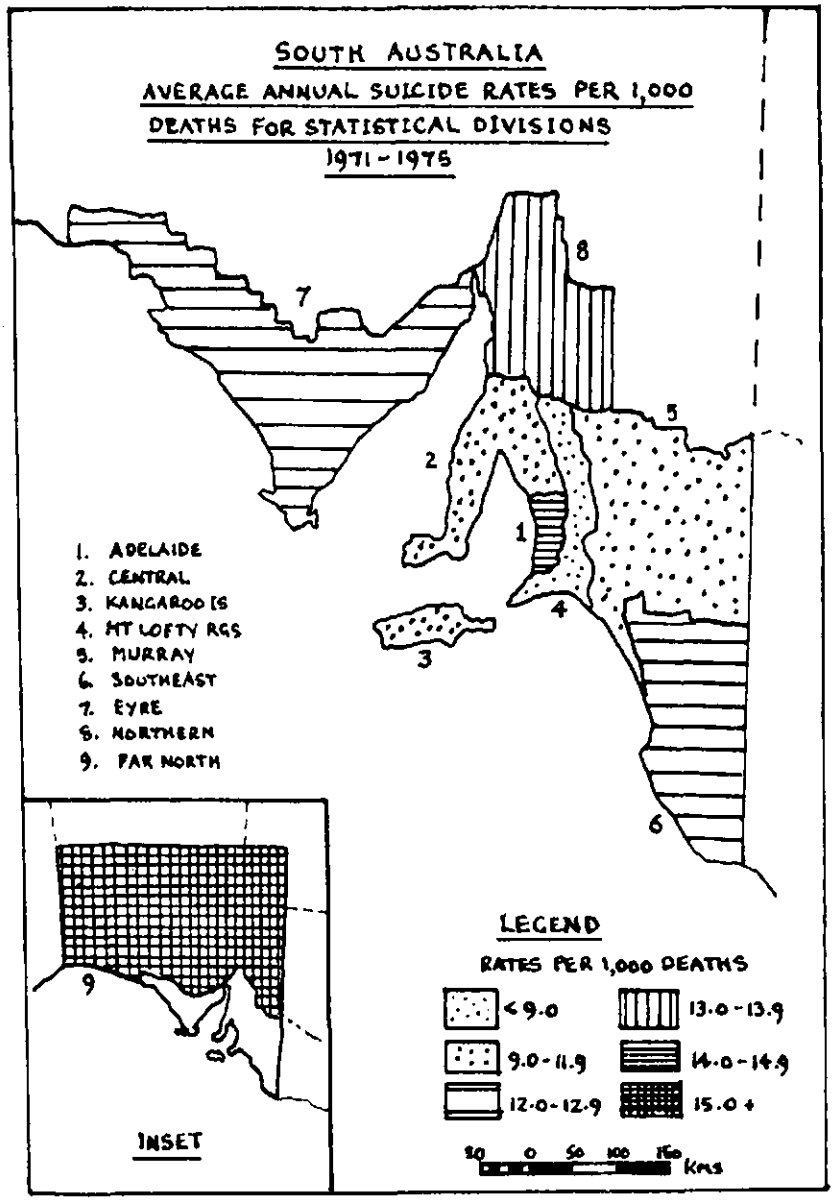
Notes: Rates based on estimates of population as at 30 June and number of deaths as registered within statistical divisions during calendar years.

Source: Australia. Bureau of Statistics (South Australian Office) Statistical Register of South Australia (Part 2 - Demography) 1971-72 - 1975-76. Adelaide A.B.S., 1972-1976.

MAP 1


SOUTH AUSTRALIA
AVERAGE ANNUAL SUICIDE RATES
FOR STATISTICAL DIVISIONS
1971 - 1975
1. ADELAIDE
2. CENTRAL
3. KANGAROO IS
4. MT LOFTY RGS
5. MURRAY
6. SOUTHEAST
7. EYRE
8. NORTHERN
9. FAR NORTH
INSET
LEGEND
RATES PER 100,000 PERSONS
< 7.0
7.0 - 7.9
8.0 - 8.9
9.0 - 9.9
10.0 - 11.9
12.0 +
50 0 50 100 150 kms

MAP 2


SOUTH AUSTRALIA
AVERAGE ANNUAL SUICIDE RATES PER 1,000 DEATHS FOR STATISTICAL DIVISIONS 1971 - 1975
1. ADELAIDE
2. CENTRAL
3. KANGAROO IS
4. MT LOFTY RGS
5. MURRAY
6. SOUTHEAST
7. EYRE
8. NORTHERN
9. FAR NORTH
INSET
LEGEND
RATES PER 1,000 DEATHS
< 9.0
9.0 - 11.9
12.0 - 12.9
13.0 - 13.9
14.0 - 14.9
15.0 +
50 0 50 100 150 Kms

But how does Adelaide's suicide rate compare with that for the other predominantly rural regions as a whole? By manipulating the data so that all statistical divisions besides Adelaide were grouped into a non-metropolitan category it was possible to compute essentially "urban" (i.e. metropolitan) and "rural" (i.e. non metropolitan) suicide rates for South Australia. These are given in Table 33.

TABLE 33

SUICIDE RATES PER 100,000 PERSONS AND PER 1,000 DEATHS FOR METROPOLITAN AND NON METROPOLITAN REGIONS OF SOUTH AUSTRALIA. 1971-1975

	1971	1972	1973	1974	1975
Suicide Rate per 100,000 persons.					
Metropolitan	10.4	11.6	10.3	11.9	12.9
Non Metropolitan	10.3	8.1	9.7	8.7	9.9
Suicide Rate per 1,000 deaths					
Metropolitan	12.4	14.0	12.3	13.9	16.0
Non Metropolitan	13.0	10.3	12.3	10.7	12.3

Source: Australia. Bureau of Statistics (South Australian Office), Statistical Register of South Australia (Part 2, Demography) 1971-1972 - 1975-76. Adelaide, A.B.S. 1972-1976.

During each year under consideration Adelaide's suicide rate per 100,000 persons was higher than that for the rest of the state, while in three of the five years the suicide rate per 1,000 deaths was also higher in Adelaide. The average annual suicide rate per 100,000 persons over the period 1971-1975 was 11.4 for Adelaide and 9.3 for the rest of the state, while the rates per 1,000 deaths were 13.7 and 11.7 respectively. Hence Adelaide experienced a higher suicide rate than did all other regions combined and suicide was a more significant cause of death in Adelaide than the rest of the state during this period. In comparing "urban" and "rural" suicide rates it can now be seen that the high rates for the Far Northern statistical division are "neutralised" somewhat by the comparatively low rates for other non-metropolitan regions.

A more detailed analysis of "urban" and "rural" suicides in South Australia was undertaken from the abovementioned unpublished tabulations which give suicides by both age and sex in addition to total numbers. Age and sex specific suicide rates per 100,000 persons for metropolitan (i.e. Adelaide Statistical Division) and non-metropolitan (i.e. all other Statistical Divisions) regions of the state for the years 1971 and 1976 (the only years for which data is available) are given in Table 34 and age specific rates for both regions are depicted in Figure 11.

In 1971 the suicide rates for four of the six age groups employed (viz. 15-24, 35-44, 45-54 and 65+ years) were higher in the non-metropolitan region, and in 1976 this was the case with three groups (viz. 15-24, 25-34 and 45-54 years). The most marked difference was between those aged more than 65 years in 1971, the non-metropolitan rate of 28.5 being almost twice the metropolitan rate of 16.0.

TABLE 34

AGE AND SEX SPECIFIC SUICIDE RATES FOR METROPOLITAN AND NON-METROPOLITAN REGIONS OF SOUTH AUSTRALIA 1971 and 1976*

Age (Years)	1971 Metropolitan			1971 Non-Metropolitan		
	Male	Female	Total	Male	Female	Total
15-24	20.0	7.9	13.9	28.1	-	14.8
25-34	11.5	7.5	9.5	-	4.9	2.3
35-44	17.8	6.0	12.0	28.4	5.6	18.0
45-54	19.9	13.8	16.8	41.9	5.8	24.8
55-64	27.3	10.2	18.5	20.5	7.6	14.4
65+	23.7	11.0	16.0	42.9	15.4	28.5
TOTAL	13.8	6.8	10.4	17.4	3.8	10.3

Age (Years)	1976 Metropolitan			1976 Non-Metropolitan		
	Male	Female	Total	Male	Female	Total
15-24	17.1	3.7	10.4	26.8	-	13.9
25-34	21.0	11.8	16.3	36.9	8.0	23.0
35-44	18.3	12.2	15.2	24.7	-	13.0
45-54	18.8	19.1	19.0	25.0	16.7	21.1
55-64	27.4	9.4	18.1	25.0	-	12.9
65+	35.7	9.7	20.0	23.0	-	10.6
TOTAL	15.8	8.0	11.8	19.8	3.0	11.6

Notes: * Rates per 100,000 population.
Metropolitan Region defined as Adelaide Statistical division.
Non-Metropolitan region defined as all other Statistical Divisions.

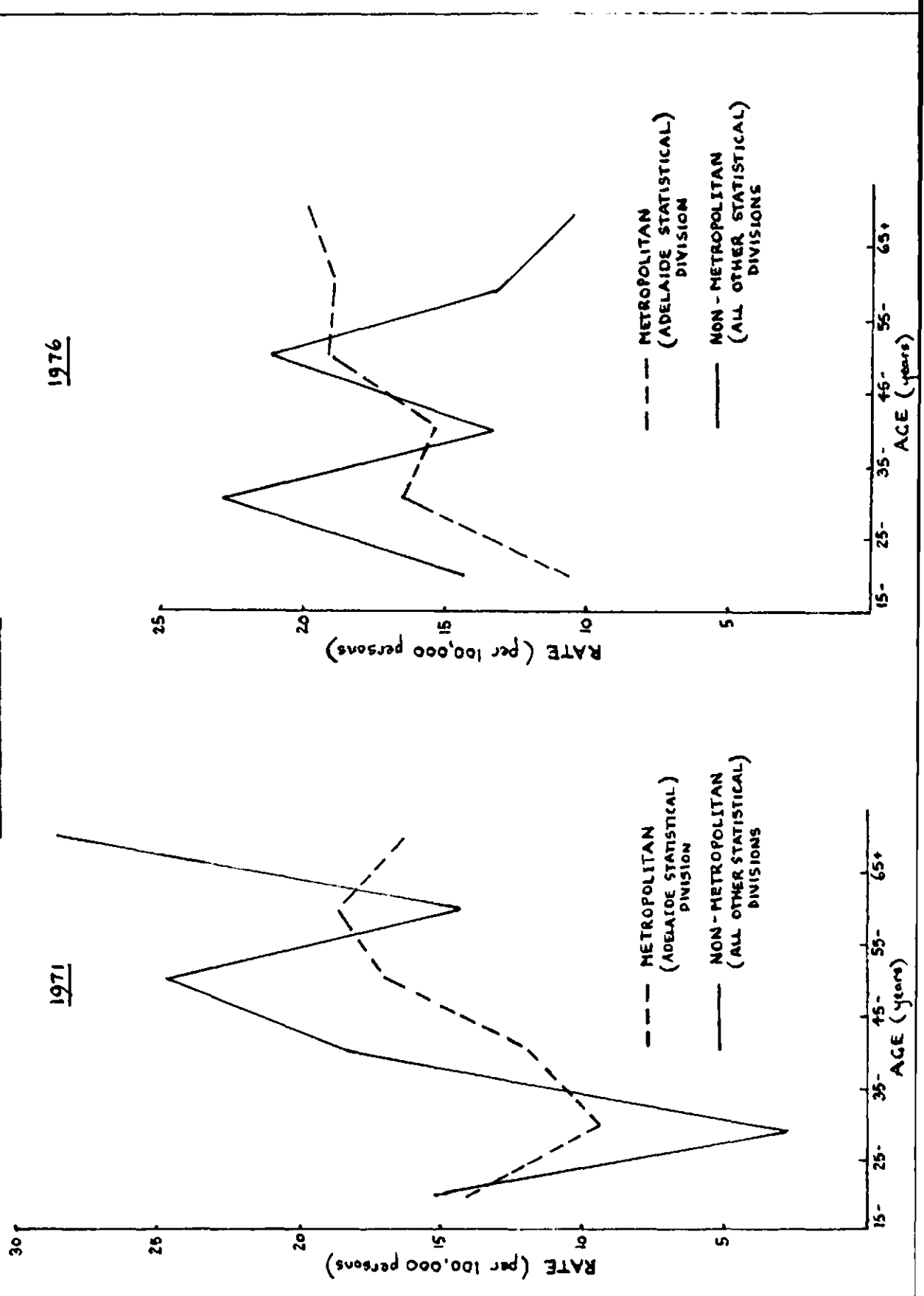
Source: Australia. Bureau of Statistics. Unpublished tabulations.

FIGURE 11

ACE SPECIFIC SUICIDE RATES

METROPOLITAN AND NON-METROPOLITAN REGIONS OF SOUTH AUSTRALIA

FOR 1971 AND 1976



Generally speaking the male suicide rates were higher than corresponding female rates within both the metropolitan and non-metropolitan regions, the notable exception being among the 45-54 years age group in Adelaide during 1976. However, the non-metropolitan male rates were in most instances higher than the corresponding metropolitan male rates while the reverse was usually the case with the female rates. Exceptions to the former were the 55-64 year age group in 1971 and the 55-64 and over 65 year age groups in 1976, while the exception to the latter was the over 65 year age group in 1971.

Hence while the available data is limited to two years it appears that in South Australia non-urban males have a higher suicide rate than do their urban counterparts and that this is the case with most age groups. By contrast, urban females have a higher suicide rate than non-urban females and again that this applies to most ages.

Suicide in Adelaide and Other Capital Cities.

Having ascertained the levels and rates of suicide in Adelaide the question arose of how suicide in Adelaide compared with suicide in the other capital cities of Australia. Accordingly, an analysis was made of the metropolitan (capital city statistical division) data for the year 1976. Sex specific and total suicide rates for each capital city are presented in Table 35.

TABLE 35

SEX SPECIFIC AND TOTAL SUICIDE RATES*

STATE CAPITAL CITIES** 1976

Capital City	Suicide Rate		
	Male	Female	TOTAL
Adelaide	15.8	7.9	11.8
Sydney	18.6	3.0	12.0
Melbourne	12.0	6.2	9.1
Brisbane	21.8	8.0	14.8
Perth	17.6	6.4	11.9
Hobart	21.3	8.5	14.8

Notes: * Rates per 100,000 persons as at Census, 30 June.
** Capital city statistical divisions.

Source: Australia. Bureau of Statistics. Unpublished tabulations.

In 1976 Adelaide had the second lowest rate (11.8) among the six capital cities, well below the highest rates of 14.8 for both Brisbane and Hobart. Adelaide's male rate (15.8) was also the second lowest but the female rate (7.9) was third highest and only slightly less than the highest rates which were experienced by Hobart and Brisbane (8.5 and 8.0 respectively). Compared to the two urban giants, Sydney and Melbourne, Adelaide in 1976 had a suicide rate which fell between the two. The male suicide rate in Adelaide was lower than Sydney's and higher than Melbourne's but the female rate was above those for both Sydney and Melbourne - in fact, it was more than double the female rate in Sydney.

Next the relationship of each capital city with the rest of the State was considered and the distribution of suicides in metropolitan and non-metropolitan regions of each State is given in Table 36.

TABLE 36

SEX SPECIFIC AND TOTAL PROPORTIONS
OF SUICIDES IN STATE CAPITAL CITIES*
1976

Capital City	% Suicides in Whole State		
	Males	Females	Total
Adelaide	66.7	87.8	72.6
Sydney	68.1	30.9	70.7
Melbourne	66.5	82.8	71.4
Brisbane	53.4	60.9	55.3
Perth	70.4	92.9	76.2
Hobart	54.8	46.7	52.2

Notes: * Capital City Statistical divisions

Source: Australia. Bureau of Statistics Unpublished tabulations.

Obviously, the numbers of suicides in each capital city exceeded those for the rest of each State put together. In four of the States around 70% of all suicides were committed in the capital but in Queensland and Tasmania the capital cities share of the suicides was a good deal less.

It can be seen that during 1976 some 72.6 per cent of South Australia's suicides were in the Adelaide metropolitan region, the capital accounting for 66.7 per cent of all male suicides and 87.8 per cent of all female suicides. Only in Western Australia did the capital city region have a higher proportion of total suicides, Perth accounting for 76.2 per cent of the suicides for that State. With two thirds of South Australia's male suicides, Adelaide was slightly below both Sydney and Perth

which accounted for 68.1 per cent and 70.4 per cent of male suicides in New South Wales and Western Australia respectively. However, the proportion of South Australia's female suicides in Adelaide (87.8 per cent) was higher than that for capital cities in all other States with the exception of Perth.

Suicide rates for 1976 by age and sex have also been obtained from data as yet unpublished by the Australian Bureau of Statistics and are presented in Figures 12, 13 and 14. These provide male and female age specific suicide rates and (total) age specific rates for each capital city.

(a) Males

Adelaide's male suicide rates tended to be lower than those for most other cities, especially Hobart and Brisbane. Although Adelaide had the second highest rate for the age group 65 years and over, the male rate for the 45-54 years age group was the second lowest.

(b) Female

Adelaide's female rate for those 25-34 years of age was the highest of the capital cities and the second highest for the 35-44 year group. On the other hand the rate for the females 55-64 years of age was the lowest of all capital cities.

FIGURE 12

MALE AGE-SPECIFIC SUICIDE RATES

STATE CAPITAL CITIES 1976

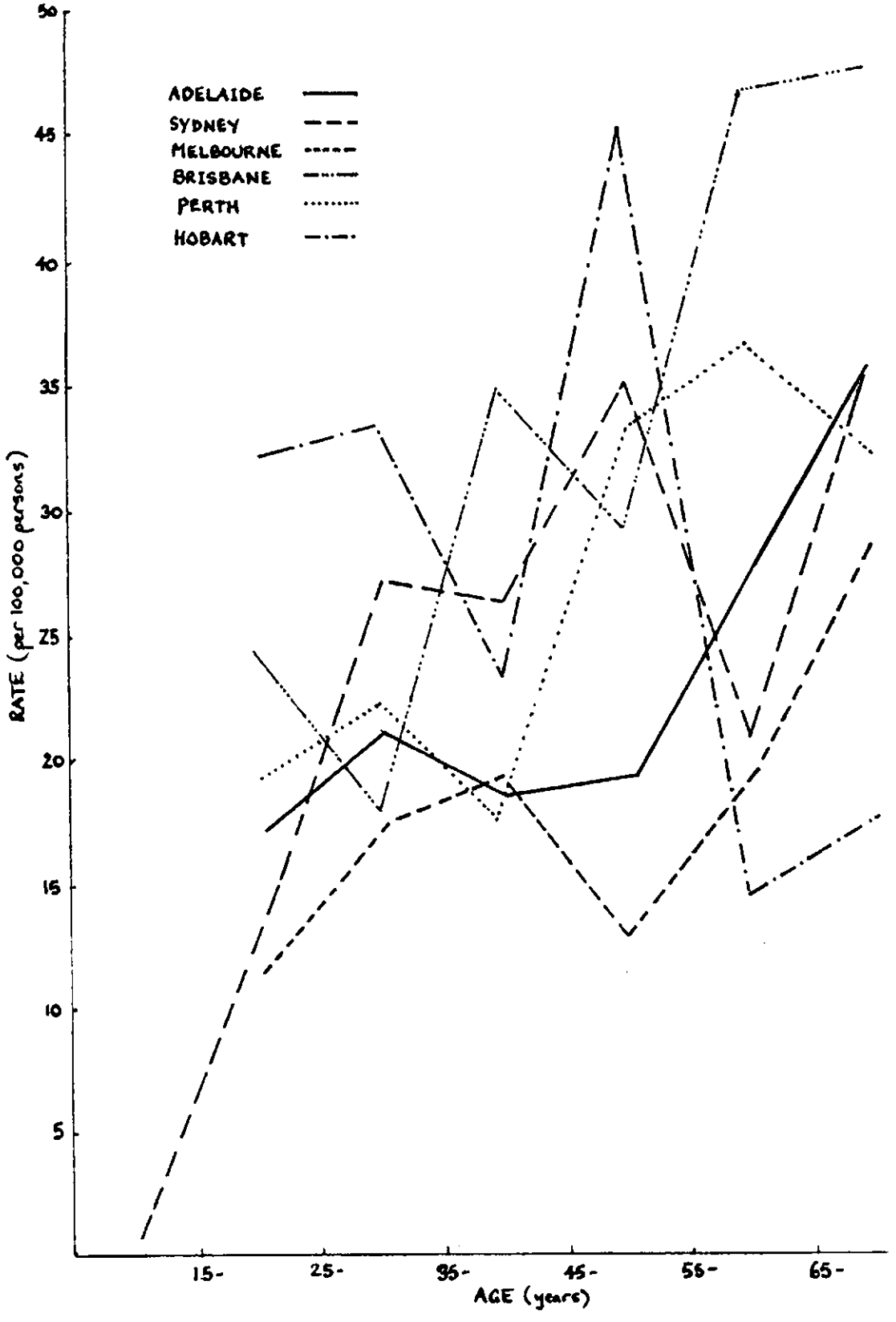


FIGURE 13

FEMALE AGE-SPECIFIC SUICIDE RATES

STATE CAPITAL CITIES 1976

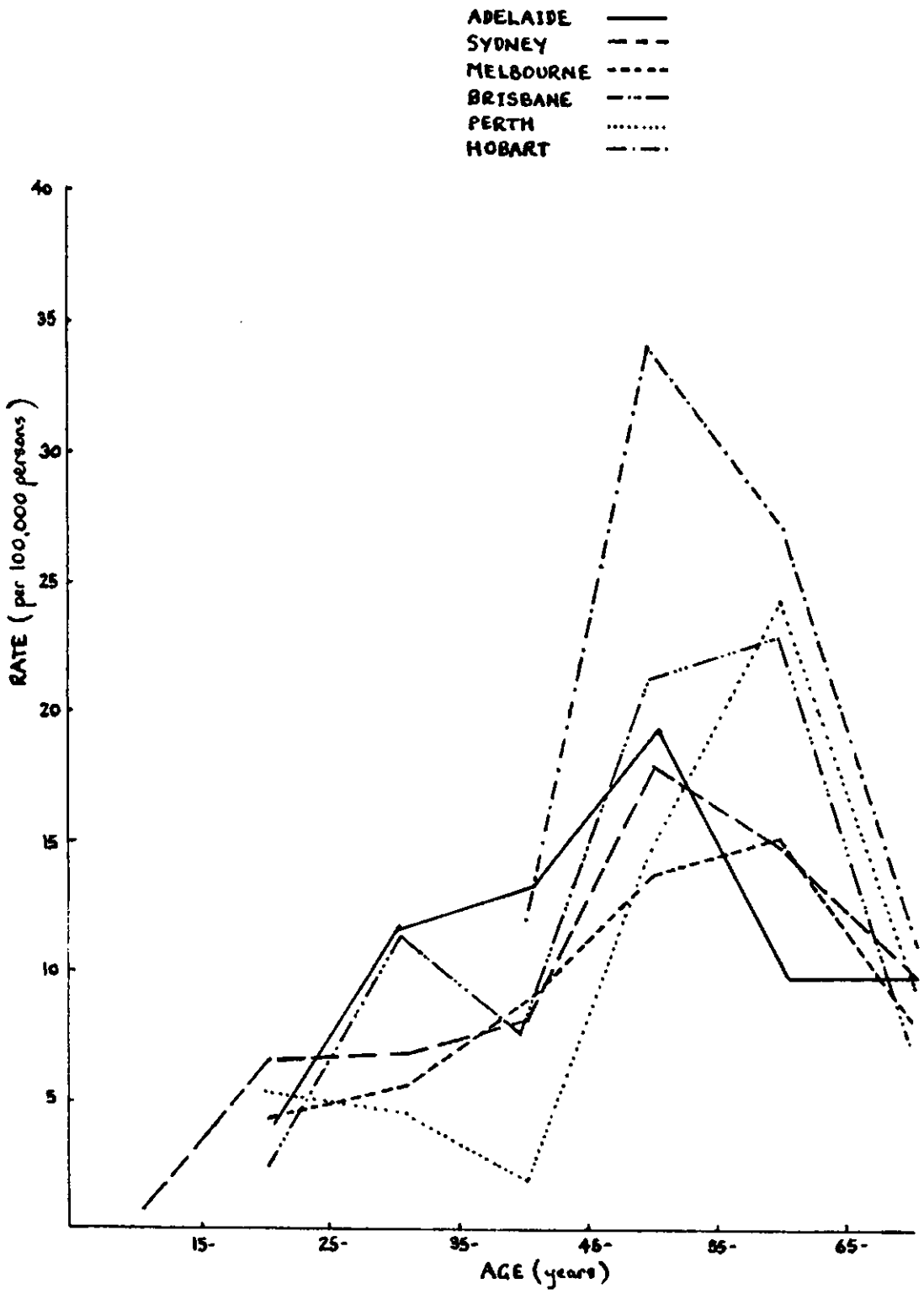
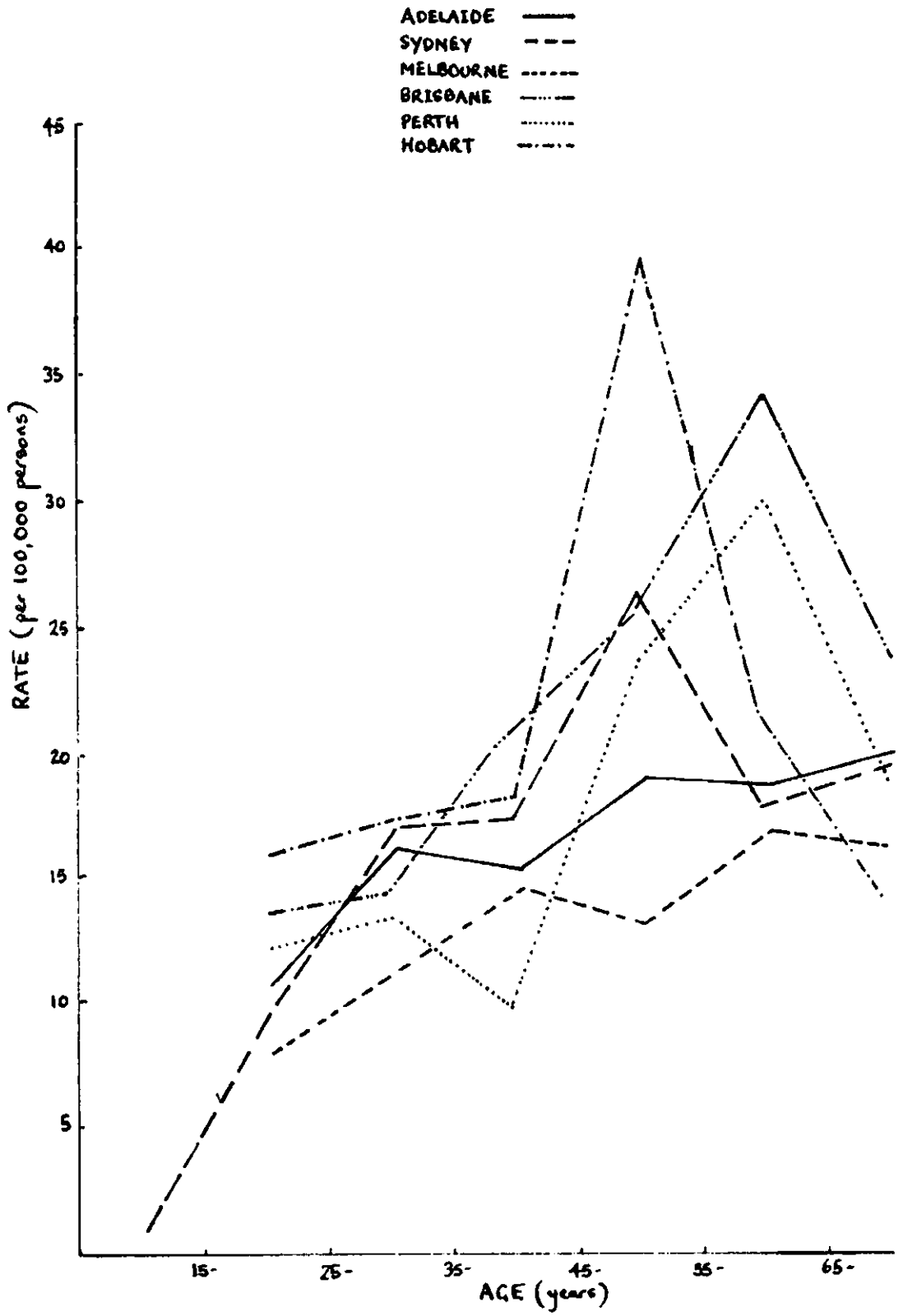


FIGURE 14

AGE SPECIFIC SUICIDE RATES

STATE CAPITAL CITIES 1976



Suicide Within Adelaide

The intra-urban patterns of suicide for Adelaide during the ten-year period 1966-1975, as described by the suicide statistics for principal local government areas (L.G.A.'s) within the Adelaide Statistical division, are discussed in this section.

Cause of death statistics are not usually available or published at the L.G.A. level but the Statistical Register of South Australia, as mentioned previously, has included statistics on selected causes of death for the more populated L.G.A's. Unfortunately, prior to 1966, suicide was not included in the tabulations as a separate cause of death category, and as this publication ceased in 1976, analysis of data is limited to the above ten-year period. The other major constraints to the analysis arise from the fact that only total numbers of deaths by suicide in each L.G.A. are given (as against the more useful breakdowns by age and/or sex) and data is not available for several outlying L.G.A's within the Adelaide statistical division (viz. Willunga, Meadows, Stirling, East Torrens and Munno Para). Despite these limitations the analysis undertaken probably constitutes the widest yet into intra-urban suicide rates in Australia in terms of the time-period for which data have been assembled.

For each of the twenty-four L.G.A.'s for which data was available annual suicide rates per 100,000 persons and per 1,000 deaths were computed and then averaged for the ten-year period under consideration. The former rates were based on mid-year population estimates and the latter rate was possible to compute as the tabulations employed also gave the total number of deaths in each L.G.A. for

each year. These rates are given in Table 37 which also includes the rank of each L.G.A. on both measures, and the spatial distributions are depicted in Maps 3 and 4.

The highest average annual suicide rates per 100,000 persons were experienced in the inner city L.G.A's of Adelaide, (37.6), Kensington and Norwood (24.6), and Prospect (19.7). Conversely the lowest scoring L.G.A's on this measure were the peripheral, semi-rural L.G.A's of Noarlunga (6.8), Salisbury (6.6) and Tea Tree Gully (6.5). The geographical pattern of suicide rates per 100,000 persons can be described in terms of decreasing suicides rates with increasing distance from the city centre. While there are exceptions to such a general pattern (e.g. comparatively high rates in Glenelg, Port Adelaide and Brighton and comparatively low rates in Walkerville and St. Peters) the broad relationship between suicide rates and distance from the city centre is unmistakable.

On the other hand, a radically different pattern is evident with the distribution of average annual suicide rates per 1,000 deaths. Hence the L.G.A's with the highest rates are Elizabeth (26.3), Noarlunga (23.5), Salisbury (23.0) and Tea Tree Gully (21.2) all of which are outer areas of the Adelaide statistical division. The lowest rates are found in such inner L.G.A's as St. Peters (9.4), Unley (8.9) and Hindmarsh (8.9) although it is noteworthy that Adelaide had the fifth highest rate (21.3). The overall pattern of the distribution of suicides per 1,000 deaths is not quite as regular as the population-based conventional suicide rate but the general trend towards suicide being a more significant cause of death with increasing distance from the city centre is certainly evident.

TABLE 37

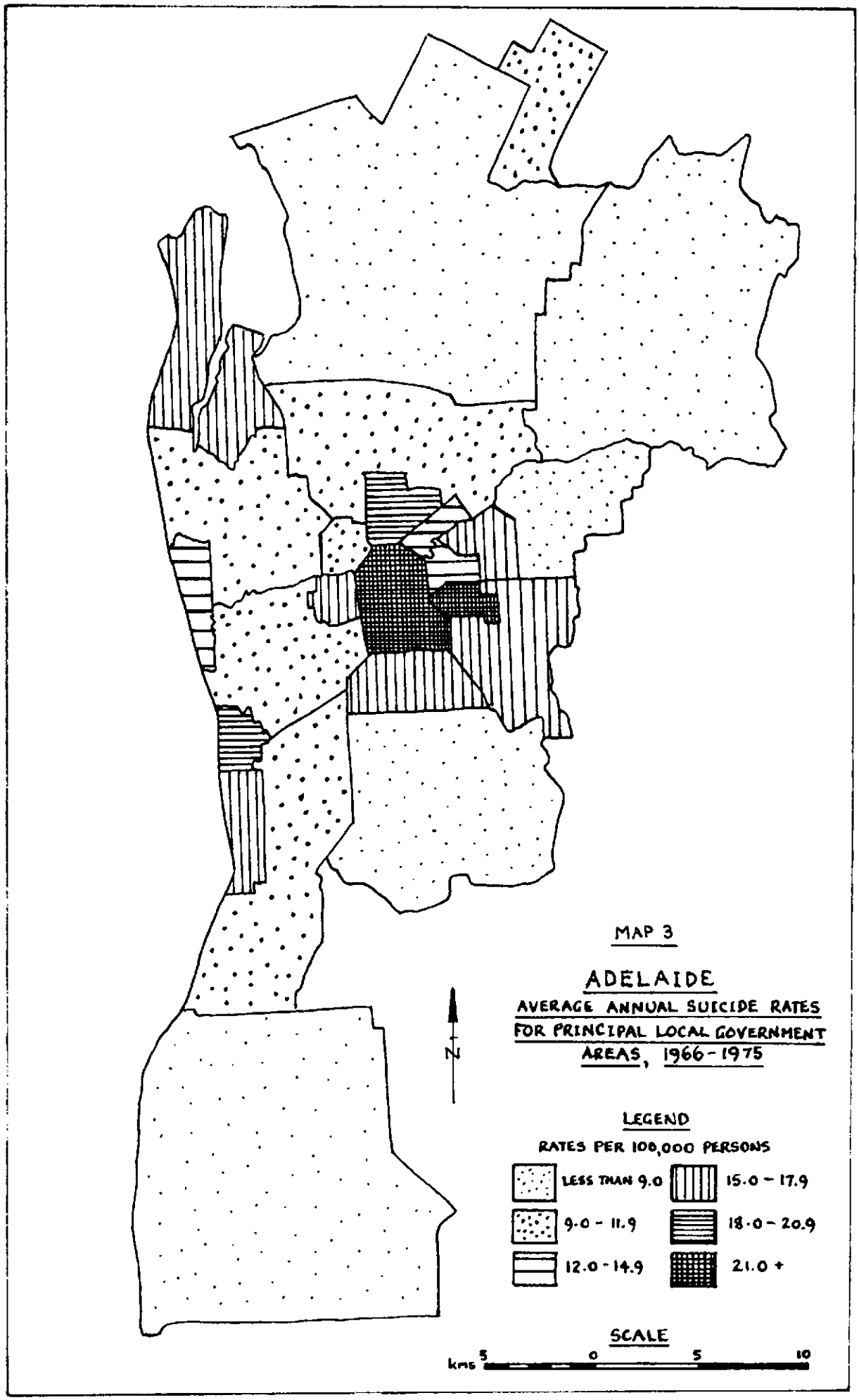
AVERAGE ANNUAL SUICIDE RATES AND RANKS FOR PRINCIPAL LOCAL GOVERNMENT AREAS WITHIN THE ADELAIDE STATISTICAL DIVISION*, 1966-1975.

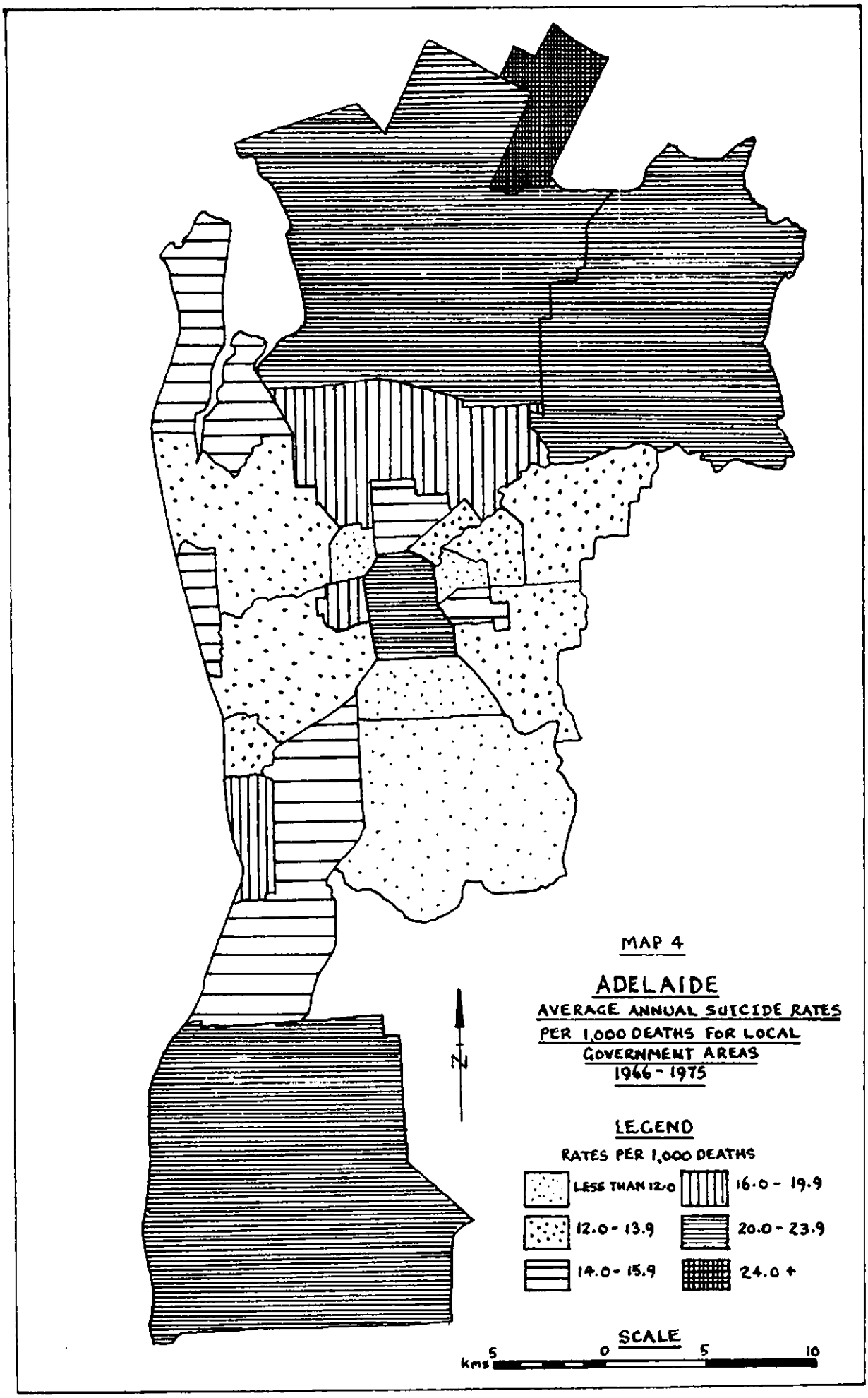
Local Government Area	Average Annual Suicide Rate per 100,000 persons 1966-1975	Rank	Average Annual Suicide Rate per 1,000 deaths 1966-1975	Rank
Adelaide	37.6	1	21.3	5
Brighton	15.6	7.5	16.9	7
Burnside	15.1	10	12.5	19
Campbelltown	8.9	20.5	13.7	14
Elizabeth	9.0	19	26.3	1
Enfield	11.3	16	17.1	6
Glenelg	18.6	4	13.6	15
Henley and Grange	12.3	13	14.0	13
Hindmarsh	11.8	14	8.9	23.5
Kensington and Norwood	24.6	2	15.6	10
Marion	10.2	18	15.8	9
Mitcham	8.9	20.5	10.4	21
Noarlunga	6.8	22	23.5	2
Payneham	15.6	7.5	12.8	18
Port Adelaide	16.2	6	14.3	11.5
Prospect	19.7	3	14.3	11.5
St. Peters	13.0	12	9.4	22
Salisbury	6.6	23	23.0	3
Tea Tree Gully	6.5	24	21.2	4
Thebarton	17.2	5	16.8	8
Unley	15.2	9	8.9	23.5
Walkerville	14.6	11	12.3	20
West Torrens	11.0	17	13.1	16
Woodville	11.7	15	13.0	17

Data not available for Willunga, Meadows, Stirling, East Torrens and Munno Para.

Notes: * Rates based on estimates of population as at 30 June and number of deaths of residents within local government areas.

Source: Australia. Bureau of Statistics (South Australia Office) Statistical Register of South Australia (Part 2-Demography) 1965-66 - 1975-76. Adelaide, A.B.S., 1966-1976.


MAP 3
ADELAIDE
AVERAGE ANNUAL SUICIDE RATES FOR PRINCIPAL LOCAL GOVERNMENT AREAS, 1966-1975
N
LEGEND
RATES PER 100,000 PERSONS
LESS THAN 9.0
9.0 - 11.9
12.0 - 14.9
15.0 - 17.9
18.0 - 20.9
21.0 +
SCALE
kms 5 0 5 10


MAP 4
ADELAIDE
AVERAGE ANNUAL SUICIDE RATES
PER 1,000 DEATHS FOR LOCAL
GOVERNMENT AREAS
1966 - 1975
N
LEGEND
RATES PER 1,000 DEATHS
LESS THAN 12.0
12.0 - 13.9
14.0 - 15.9
16.0 - 19.9
20.0 - 23.9
24.0 +
SCALE
kms 5 0 5 10

A more detailed study of the distribution of suicide within Adelaide, including the relationships between suicide rates and other socio-economic variables, is beyond the scope of the present paper. However, this simple analysis and description of suicide patterns highlights, above all else, the contrasting distributions of suicide rates per 100,000 persons on the one hand and suicide rates per 1,000 deaths on the other. The former tend to decrease, and the latter tend to increase, with distance from the city centre. In other words, while the inner city areas generally have more suicides per head of population than the middle and outer areas of the city, suicide as a cause of death is generally more significant in the outer areas, rather than middle or inner city areas, of Adelaide.

Summary of Findings.

(a) The average annual suicide rate in the Adelaide region during the period 1971-1975 was the second highest rate among all regions in South Australia being exceeded by the rate for the Far Northern Region. The average annual suicide rate per 1,000 deaths during this period was also highest in the Far Northern Region followed by the Northern region and the Adelaide metropolitan region.

(b) During the period 1971-1975 the average annual suicide rate for the Adelaide region was 11.4 compared to a rate of 9.3 for the rest of the State, the rates per 1,000 deaths being 13.7 and 11.7 respectively. Thus the "urban" suicide rate was higher than the "rural" suicide rate although as shown in (a) above, the suicide rate for Adelaide was not the highest among all regions of South Australia.

(c) In 1971 and 1976 the "rural" suicide rates among the 15-24 and 45-54 years age groups exceeded the corresponding "urban" rates and this was also the case with the 35-44 and over 64 years age groups in 1971 and the 25-34 years age group in 1976. During 1971 the "rural" suicide for the over 64 years group was almost double the "urban" rate indicating a higher vulnerability to suicide among the "rural" aged as compared to the elderly in the Adelaide metropolitan area.

(d) During both 1971 and 1976 the "rural" suicide rates for males were higher than the "urban" rates for most age groups, the reverse being the case with respect to female rates. "Rural" males thus appear more prone to suicide than "urban" males while "urban" females appear to be more vulnerable to suicide than their "rural" counterparts.

(e) In 1976 Adelaide experienced the second lowest suicide rate among the six State capital cities of Australia, well below the rates for Brisbane and Hobart but higher than the rate for Melbourne. While Adelaide's male suicide rate was the second lowest its female rate was the third highest among all capital cities, the latter being higher than for either Melbourne or Sydney. Almost three quarters of suicides in South Australia that year were committed by Adelaide residents, "urban" residents accounting for two thirds of all male suicides and almost 90 per cent of all female suicides.

(f) Within Adelaide, the highest average annual suicide rates for the period 1966-1975 were experienced in the inner city local government areas (L.G.A.'s) of Adelaide, Kensington and Norwood, and Prospect,and the lowest rates in the semi-rural, peripheral L.G.A.'s of Noarlunga, Salisbury and Tea Tree Gully. Conversely, the local government areas with the highest average annual suicide rates per 1,000 deaths were the outer ones of Elizabeth, Noarlunga and Salisbury while the lowest rates per 1,000 deaths were experienced in the inner city L.G.A's of St. Peters, Unley and Hindmarsh.

CHAPTER 7

SUICIDE AND SOCIAL INTEGRATION IN SOUTH AUSTRALIA.

Emile Durkheim in his monumental study of suicide, which was first published in 1897, stated his most general proposition:

> "Suicide varies inversely with the degree of integration of the social groups of which the individual forms a part."(1)

in addition to three more propositions:

1. "Suicide varies inversely with the degree of integration of religious society;
2. Suicide varies inversely with the degree of integration of domestic society;
3. Suicide varies inversely with the degree of integration of political society."(2)

Durkheim thus believed that suicide was a reflection of the state of social cohesion, but the inherent weakness of his theory is to be found in the various possible interpretations of the concept of social integration. Durkheim himself does not provide a measure of integration although he was able to demonstrate that if populations are divided into low and high integration categories on an intuitive, a priori basis, the suicide rates vary in accord with his general proposition. A shortcoming of the Durkheim theory of social integration is that it could always be applied ex post facto i.e. it could be argued that if there was a high rate of suicide this in itself would indicate a lack of social integration.

A full discussion of Durkheim's theory within a South Australian context is not possible in this study, but some of Durkheim's generalisations can be examined in the light of data on suicides in South Australia. Durkheim believed that city dwellers would tend to have a higher suicide rate than rural dwellers, males a higher rate than females, the unmarried a higher rate than the married, adults a higher rate than children, bachelors a higher rate than widows and divorcees a higher rate than non-divorcees. Each of these generalisations may be confirmed on the evidence of this study of South Australia. Or at least nothing so far discovered about South Australian suicide blatantly contradicts Durkheim. However, a more detailed investigation would be needed for a real vindication of Durkheim.

Some thirty years after the publication of Durkheims "Suicide", Halbwachs conducted an extensive critique of its findings.(3) He was critical of Durkheim's tendency to consider such social factors as family organisation and religious affiliation independently in their relation to suicide and argued that these factors should be considered in combination. Halbwachs considered that the most important social factors were those that isolated the individual from stable social relationships, these being characteristic of urban life. Halbwachs substituted the concept of "social isolation" for Durkheim's concept of social integration and showed that rural suicide rates tended to be lower than those in urban areas.

Once again this study of suicide in South Australia does not refute Halbwach although it does not fully confirm his ideas. In particular the high rate of

suicide in the Far Northern region could either support or refute his concept of social isolation. If the sparsety of population be a measure of social isolation he is confirmed. If the traditional "belongingness" of small community life be the measure then he is refuted.

Henry and Short[4] attempted to incorporate the social psychological theory of frustration-aggression in the Durkheimian model. They hypothesised that:

> "...the reactions of both suicide and homicide to the business cycle can be consistently interpreted as aggressive reactions to frustration generated by the flow of economic forces."(5)

On the evidence from their data that there is a negative correlation between the suicide rate and the business cycle, they modified Durkheim's theory that dislocation of the economic organisation correlated with a rise in the suicide rate. They also introduced the concept of "strength of external constraint" along with the proposition that:

> "....suicide varies negatively and homicide positively with the strength of external restraint over behaviour."(6)

However, as with previous researchers, they too failed to provide a measure for the "strength of external constraint".

The scope of the present study has not permitted any investigation of the Henry and Short theory as it may apply in South Australia. Time and circumstances limited the investigation of the trade cycle theory. More research is needed before any relationship between suicide, homicide and the strength of external restraint over behaviour can be even tentatively explored. However, data is provided above on the relationship between suicide, homicide and violence.

Gibbs and Martin[7] have reviewed the previous sociological research into suicide and found that other investigators had been:

> "...handicapped in their analysis by abstract concepts to which no empirical referents are assigned and for which no concrete measures can be devised."[8]

Accordingly, they endeavoured to operationalise Durkheim's theory by examining and analysing social integration in terms of the stability and durability of social relationships. They sought to improve Durkheim's theory by introducing the concept of "status integration" which they considered to be more readily operationalisable for the purposes of empirical testing. Gibbs and Martin's basic theorem was that:

> "The suicide rate of a population varies inversely with the degree of status integration in that population."[9]

Noting that people occupy many statuses they state that if the roles attached to these statuses do not conflict with one another then the statuses are integrated but if they do conflict with one another (i.e. they are not integrated) then the individual is more likely to commit suicide. They produced a vast number of correlations using various integration measures in support of hypotheses derived from their theory. These tests of the theory employed data at the international, national, regional and local levels with the correlation coefficients being evaluated in terms of their direction and magnitude.

In testing their status integration theory internationally, Gibbs and Martin rely heavily on one integration measure, the integration of labour force status with sex, although they also use occupational integration, marital integration and a composite measure embracing all these three different dimensions of status integration. They were thus able to operationalise their status integration concept and test their theory on the basis of empirical evidence. As this was not always the case with previous researchers it was decided to explore their research with reference to suicide in South Australia.

Gibbs and Martin's principal international test of their theory involved computing the correlation coefficient between average annual suicide rates and measures of the integration of labour force status with sex, circa 1950, (based on the proportion of males and females aged 15+ years who were economically active

i.e. members of the labour force, and not economically active i.e. outside the labour force) for the thirty two nations for which data on both variables were available. They computed a correlation coefficient of -.59 between these two measures which supported their hypothesis that among countries an inverse relationship will hold between suicide rates and measures of the integration of labour force status with sex. Countries with high suicide rates tended to have low scores for the the integration of labour force status with sex and vice versa.

Their measure of status integration used in this test thus appeared to be meaningful in explaining variations in suicide rate between the 32 countries they used for their purpose. Their approach and method was applied to South Australia.

Gibbs and Martin had included Australia in their list of countries so that the South Australian data is a subset of the national aggregate statistics. Despite this apparent overlap it was decided to retain the Australian statistics used by Gibbs and Martin rather than altering them to give "Australian except South Australian" figures. Obviously it could be argued therefore that the present test of Gibbs and Martin was unnecessary since they had used Australian data (including that for South Australia). Nevertheless there appeared merit for the Gibbs and Martin theory to isolate South Australia and treat it as a separate country.

For comparability it was necessary to use data for the same time period as did Gibbs and Martin (i.e. circa 1945-1949). Fortunately the 1947 census for Australia include data on labour force participation by sex and annual suicide rates for South Australia are available for the period 1945-1949.

Table 38 gives average annual suicide rates and measures of the integration of labour force status with sex for the countries included in the Gibbs and Martin analysis - plus corresponding figures for South Australia.(10) The latter's average annual suicide rate for the period 1945-1949 was 8.0 per 100,000 persons and this has the rank order of 19 among the thirty three territories under consideration. However, the value of the measure of the integration of labourforce status with sex for South Australia (1.44) has a rank order of 8.5 among these territories. The correlation coefficient between the two measures for the thirty three territories was found to be -.59 i.e. the same value found by Gibbs and Martin for the thirty two countries included in their study. In other words, the inclusion of statistics for South Australia in the data set they used, had no effect on the strength of the relationship between the two variables.

However, it can be seen that South Australia's suicide rate is below the median suicide rate for the total list of countries while the integration score is above the median integration score for all countries. South Australia can thus be classified as having a low suicide rate and a high level of labour force integration with sex and it therefore fits the inverse relationship pattern anticipated by Gibbs and Martin. Other countries with low suicide rates and high measures of the integration of labour force status with sex which they identified were Israel, South Africa, Norway, Ceylon, Chile, Venezuela, Greece, El Salvador, Costa Rica, Bolivia, Guatemala and Mexico. Countries which did not conform to the hypothesised relationship (i.e. those with high scores for both measures or low scores for both measures) were found to be the Netherlands, Canada, Yugoslavia, Ireland, Hungary, Cuba, Portugal and Australia.

TABLE 38

AVERAGE ANNUAL SUICIDE RATES AND THE INTEGRATION OF LABOURFORCE STATUS WITH SEX - SELECTED COUNTRIES AND SOUTH AUSTRALIA. Circa 1950

	Year of Suicide Rates	Average Suicide	Anuual Rate	Rank	Year of Labour force Data	Measure of the integr-ation of l/force status with sex	Rank
Denmark	1948-52	23.9		1	1950	1.29	27
Austria	1949-53	23.4		2	1951	1.24	32
Switzerland	1948-52	22.4		3	1950	1.35	19
Hungary	1955	20.6		4	1949	1.37	14.5
West Germany	1948-52	17.9		5.5	1950	1.25	30
Japan	1948-52	17.9		5.5	1950	1.22	33
Finland	1948-52	16.4		7.5	1950	1.28	28
Cuba	1948-49	16.4		7.5	1953	1.54	5
Sweden	1948-49	15.6		9	1950	1.34	23
Belguim	1946-48	14.7		10	1947	1.32	26
France	1945-47	12.4		11	1946	1.25	30
U.S.A.	1948-52	10.9		12	1950	1.25	30
England/Wales	1949-53	10.4		13	1951	1.33	23
New Zealand	1944-46	10.3		14	1945	1.34	23
Portugal	1948-51	10.1		15	1950	1.44	8.5
Australia	1946-48	9.7		16	1947	1.40	10
South Africa	1944-48	8.8		17	1946	1.39	11.5
Israel	1947-49	8.6		18	1948	1.39	11.5
South Australia	1945-49	8.0		19	1947	1.44	8.5
Canada	1949-53	7.4		20	1951	1.35	19
Norway	1945-47	7.2		21	1946	1.37	14.5
Netherlands	1946-48	7.0		22	1947	1.35	19
Ceylon	1944-47	5.9		23	1946	1.38	13
Yugoslavia	1950-54	5.0		24	1953	1.33	24.5
Venezuela	1950-51	4.7		25	1950	1.52	6
Chile	1950-51	4.4		26	1952	1.39	11.5
El Salvador	1950	4.1		27	1950	1.60	3
Greece	1955	3.6		28	1950	1.49	7
Costa Rica	1950-52	2.5		29	1950	1.62	2
Ireland	1949-53	2.5		30.5	1951	1.34	23
Bolivia	1947	2.5		30.5	1950	1.36	16.5
Guatemala	1948-49,52	1.5		32	1950	1.66	1
Mexico	1952,54	1.0		33	1950	1.55	4

Source: Gibbs and Martin (1964) : p.124
Statistical Register of South Australia 1945-1949 Adelaide, Government Printer, 1946-1950

These findings prompted the authors to undertake a tentative, exploratory test of the Gibbs and Martin theory within Australia - State by State. Gibbs and Martin tested their theory at the intra-national level using data from the United States, England and Wales, Belguim, Italy, India and New Zealand, to generate a diversity of integration measures. The generation of many of these integration measures for States in Australia is beyond the scope of the present study, but it was decided to use the same integration measure (i.e. integration of labour force status with sex) as used previously in this discussion to see if, among the Australian States, there is an inverse relationship between this integration measure and suicide rates.

Accordingly, the integration of labourforce status with sex in each State was computed from 1976 census data and average annual suicide rates for the triennium 1975-1977 were also computed for each State. These data are presented in Table 39.

It can be seen that South Australia experienced the third highest average annual suicide rate and the fifth highest measure of the integration of labourforce status with sex. A product moment correlation was computed for both measures and was found to have a value of -.33. While this result is not significant at the .05 level it is in the anticipated direction and has a by no means negligible magnitude.

TABLE 39

AVERAGE ANNUAL SUICIDE RATES AND THE INTEGRATION OF LABOURFORCE STATUS WITH SEX - AUSTRALIAN STATES

Circa 1975.

	Average Annual Suicide Rate 1975-1977	Rank	Measure of the Integration of Labourforce Status with Sex 1976	Rank
South Australia	11.23	3	1.182	5
New South Wales	11.33	2	1.178	7
Victoria	10.27	6	1.180	6
Queensland	12.73	1	1.174	8
Western Australia	9.83	8	1.188	3
Tasmania	10.43	5	1.184	4
Northern Territory	11.17	4	1.224	2
Australian Capital Territory	10.20	7	1.250	1

Source: Australia. Bureau of Statistics. Causes of Death 1975-1977, A.B.S Canberra, 1976-1978. Australia. Bureau of Statistics. 1976 Census of Population and Housing, A.B.S Canberra, 1979

Furthermore, by categorizing each State according to whether it has a high or low suicide rate (i.e. above or below the median suicide rate for all States) and a high or low integration score (i.e. above or below the median integration score for all States) we find that six of the eight States have a high score on one measure and a low score on the other. Only the remaining two States (Victoria and the Northern Territory) fail to fit the anticipated pattern of the Gibbs and Martin theory. This categorisation is presented in Figure 15.

FIGURE 15

AUSTRALIAN STATES ABOVE AND BELOW THE MEDIAN* WITH RESPECT TO SUICIDE RATES AND MEASURES OF THE INTEGRATION OF LABOURFORCE STATUS WITH SEX, circa 1975

	Low Integration of Labourforce Status with Sex.	High Integration of Labourforce Status with Sex
High Suicide Rate	South Australia New South Wales Queensland Tasmania	Northern Territory
Low Suicide Rate	Victoria	Western Australia Australian Capital Territory

Median

* Median suicide rate : 10.80

Median integration measure : 1.183

South Australia, New South Wales, Queensland and Tasmania all are characterised by high suicide rates and low levels of integration while Western Australia and the Australian Capital Territory have low suicide rates and high levels of integration. Victoria has low scores for both measures although the value of its integration measure is just below the median. The Northern Territory is the one State that violates the pattern to an appreciable degree in that its suicide rate is somewhat higher than the median and the value of its integration measure is very much higher than the median.

This preliminary, though admittedly extremely limited, testing of the status integration theory for the respective States will be of value for the international testing of Gibbs and Martin in the years to come - or for the future refinements of the technique for measuring status integration. Obviously much more detailed and comprehensive testing is required before it can be claimed that the theory explains variations in suicide rates in Australia. It is acknowledged that the integration measure employed takes into account only sex and labour force statuses and thus ignores the other dimensions of status integration. Indeed, as Gibbs and Martin point out, the measure used may mask the actual prevalence of sex - labour force integration because marital status and parental status are ignored. On the other hand it may be that the use of alternative integration measures will produce less meaningful results than have been found in the above exploratory test of this theory. To quote Gibbs and Martin:

> "Obviously, much remains to be done before a final evaluation can be made of the theory's ability to account for variations in suicide rates. In the meantime other theories and other applications also deserve attention". (11)

NOTES ON CHAPTER 7

(1) Durkheim, E. Suicide - A Study in Sociology (translated by J.A. Spaulding), New York : Free Press, 1951 : p.209.

(2) Ibid. p.208

(3) Halbwachs, M. Les Causes du Suicide, Paris, Alcan, 1930.

(4) Henry, A.F. and Short, J.F. Suicide and Homicide - New York : Free Press, 1954.

(5) Ibid. pp. 14-15

(6) Ibid. p.17

(7) Gibbs, J.P. and Martin, W.T. Status Integration and Suicide - A Sociological Study, Eugene, Oregon, University of Oregon Books, 1964.

(8) Ibid. p.12

(9) Ibid. p.27

(10) For the formula used to calculate the integration of labour force and status with sex see Gibbs and Martin, op. cit. p.122

(11) Gibbs and Martin, op. cit. : p.225

CHAPTER 8

SUICIDE IN SOUTH AUSTRALIA DURING 1978 - AN ANALYSIS OF ALL INDIVIDUAL CASES.

Most studies of suicide deal either with statistics or with clinical material derived from cases. In this study we seek to combine both and to this end all available official information on the cases for 1978 was made available to the authors by the Attorney-General of South Australia. There were of course appropriate safeguards for confidentiality and these are respected in any account of the individual cases here.

In studying these cases for South Australia it was possible to get more information than had been available for the cases in Western Australia. For example, there was data on occupation, major activity and ethnicity which had not been obtainable in Western Australia. As for the particular reasons for suicide, the additional data available from South Australia brought complications as well as enlightenment. More knowledge meant less certainty.

A. The Data

Files relating to all deaths involving coroner's verdicts are kept by this Attorney-Generals Department and in the case of suicides the following documents may be retained:

(a) burial certificate;

(b) coroners' report;

(c) statement(s) made by police officers investigating the circumstances of death;

(d) statement(s) of ambulance officers called to the place of occurrence;

(e) statement(s) made to police by friends, relatives or associates of the deceased;

(f) statement(s) of medical practitioners pronouncing death;

(g) statement(s) of persons identifying the deceased;

(h) statement(s) of persons witnessing the suicidal act;

(i) report(s) of the government analyst;

(j) any other relevant documents (e.g. missing persons report, police report, autopsy findings, copies of suicide note(s)).

Not all these documents were available in every case. Some of them may not have been obtainable and in some cases were not necessary for the official inquiry. Therefore not all the files were as complete as the above list might imply. Files differed according to the circumstances of the case.

There were 141 files of suicides which were committed in South Australia during 1978, but 155 cases of suicide were actually registered in South Australia that year, these including 12 cases were death actually occurred in 1977, a further case where death occurred in 1976 and a single case where death occurred in 1973 but the deceased's body was not found until five years later.

The 141 cases with which this study is therefore concerned involved persons with a great diversity of backgrounds, personal characteristics and reasons for ending their lives. The youngest person who committed suicide was twelve years old, the eldest eighty seven years old. They included pensioners, truck drivers, farmers, doctors, students, shop assistants, clerks and some unemployed. Some lived in the inner suburbs of Adelaide, others in mining towns and still others in remote rural areas. A wide variety of methods were employed by them to take their lives : gassing, hanging,

shooting, burning, drug overdoses, jumping in front of trains, electrocution, drowning, stabbing and suffocation using plastic bags. Some left suicide notes, (occasionally in their native languages) but even these did not always explain their reasons for suicide. The available information indicates that most had not previously attempted to take their lives nor had they either directly or indirectly suggested to others that this was their intention.

There were two cases of homicide followed by suicide, one involving a husband who shot his wife then himself and the other leading to the shooting of two persons quite unrelated to the suicide. In addition, there was one instance of double homicide followed by suicide where the husband shot his wife and son before overdosing. Another suicide by shooting occurred following a lengthy siege at the deceased's residence. One individual apparently set fire to his house before shooting himself and another before killing herself wrote poems on death and suicide in a diary. In most cases suicide occurred when the individual was alone but in a few cases the suicidal act was performed in a public place and witnessed by several bystanders.

From these files the following particulars were recorded. In a few cases however, the particular category of information was not in the file.

(a) date of occurrence of suicidal act and date of death;

(b) sex, age, marital status, occupation and place of birth of the deceased;

(c) place of residence of the deceased and place of occurrence of the suicidal act;

(d) method employed to commit suicide;

(e) particulars of previous suicide attempts made by the deceased;

(f) particulars of suggestion or indication to commit suicide made by the deceased;

(g) the circumstances surrounding deceased prior to death;

(h) any other information pertaining to the deceased's background, social situation or motivation for committing suicide.

B. Age, Sex, Marital Status, Occupation and Ethnicity.

To arrive at a true appreciation of the personal characteristics of those who committed suicide it was necessary to know the extent to which the characteristics where distributed within the population as a whole.

Unfortunately, precise age and sex specific data for the total population of South Australia was not available for 1978 at the time of this study. However, marital status and the occupations of the population were available in the national census conducted in 1976. Given that the most recent population estimates available to date are for 1977 and that these only categorise the population according to age and sex, it was decided to use 1976 census statistics as the base for the computation of suicide rates with respect to the 1978 cases.

(a) Sex

The 1978 cases of suicide involved 109 males and 32 females, i.e. 77.3 per cent male and 22.7 per cent female. For 1978 South Australia's male suicide rate was 17.6 per 100,000 persons, the female rate 5.1 and the total rate 11.3. The male rate was thus more than three times the magnitude

of the female rate, as was the ratio of the number of male to female suicides.

(b) Age

Table 40 presents age specific numbers, percentages and rates of suicide for South Australia during 1978. For convenience in tabulating age specific data the single case of suicide involving a person aged less than fifteen years has been included in the less than 25 years age group but rates have been computed on the basis of the population aged 15-24 years.

TABLE 40

AGE SPECIFIC NUMBERS, PERCENTAGES AND RATES* OF SUICIDE FOR SOUTH AUSTRALIA 1978

Age (years)	Number of Suicides	% of Total Suicides	Suicide Rate
< 25	19	13.5	8.6
25-34	30	21.3	16.1
35-44	26	18.4	19.0
45-54	22	15.6	15.4
55-64	23	16.3	20.2
65 +	21	14.9	18.5

Notes : * Rates per 100,000 persons

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

In South Australia during 1978 suicide was most prevalent among the 25-34 years (21.3 per cent), 35-44 years (18.4 per cent) and 55-64 years (16.3 per cent) age groups, but it can also be seen that no particular age group accounted for a very high or alternatively very low proportion of total suicides. However, the 55-64 years age group experienced the highest suicide rate (20.2) followed by the 35-44 years group (19.0) and the over 65 years group (18.5). The suicide rate for the under 24 years age group (8.6) was by far the lowest of all age groups.[1]

Age and sex specific numbers, percentages and rates of suicide are given in Table 41.

For all age groups the male suicide rate was higher than the corresponding female rate. This difference was particularly pronounced for groups under 35 years of age.

When one looks at the distribution of cases by sex within these rates it emerges that male suicides were most numerous among the 25-34 year olds (22.9 per cent) and female suicides greatest among the 35-44 year olds (25.0). Some 55.0 per cent of all male suicides were under 45 years of age and 46.9 per cent of female suicides were under 45. Suicide was numerically least prevalent among those males 65 years and over but the smallest number of female suicides was in the group under 25 years.

However, if one considers not only the number of suicides in 1978 but the rate of these as against the total numbers of such age groups in the South Australian population the picture is changed. Then the highest suicide rate for males occurs in the older group, 65 years and over (32.1). This pattern of a larger proportion of older people committing suicide is repeated in the 55-64 years (32.0)

TABLE 41

AGE AND SEX SPECIFIC NUMBERS, PERCENTAGES AND RATES* OF SUICIDE FOR SOUTH AUSTRALIA 1978

Age (years)	Males			Females		
	Number of Suicides	% of Total Suicides	Suicide Rate	Number of Suicides	% of Total Suicides	Suicide Rate
< 25	17	15.6	15.3	2	6.3	1.8
25-34	25	22.9	23.5	5	15.6	5.4
35-44	18	16.5	25.9	8	25.0	11.9
45-54	16	14.7	21.9	6	18.8	8.6
55-64	18	16.5	32.0	5	15.6	8.7
65 +	15	13.7	32.1	6	18.8	9.0

Notes : * Rate per 100,000 persons

Source : Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

and 35-44 years (25.9) age groups. But this does not hold with females. Taking the South Australian female population as a whole the age group with the highest rate of suicide is that between 35 and 44 years of age (11.9) - followed by those 65 and over age group (9.0). For both sexes the under 25 years group had easily the lowest suicide rate.

Although those aged less than 25 years had the fewest suicides and the lowest suicide rate in 1978 it is worth noting that this group has had an increasing number of suicides and a generally increasing suicide rate during the past ten years. In 1968 only 8 persons under 25 years committed suicide in South Australia, the suicide rate being 4.1 per 100,000 persons. By 1977 the number of suicides had increased to 31 and the suicide rate to 13.5 i.e. more than a threefold increase in the incidence of suicide in less than a decade. While the number of suicides and the suicide rate for those under 25 years in 1978 (19 and 8.6 respectively) were both noticeably lower than during 1977, the 1978 figures are still more than double those for 1968. Again it must be appreciated that the 1978 figures are for suicides which occurred during that year while those for preceding years are the official statistics of registered suicides. Furthermore, as mentioned previously, the rates for 1978 were computed on the basis of 1976 census statistics (as the 1978 population estimates were not available at the time of writing and the 1977 estimates are broken down only by age and sex) whereas the rates for preceding years were based on population estimates for the respective years.

(c) Marital Status

Marital status was not always as easy to ascertain as age or sex. It was not automatically registered but could usually be determined from associates, friends or

relatives. However, in 18 of the total 141 cases (12 males and 6 females) there was no clear indication of marital status. These cases usually involved elderly persons, frequently resident in hospitals or other institutions, where the available statements were made by staff members of these institutions rather than by friends or relatives. In addition there were 9 cases (6 males and 3 females) where the deceased was living in a de-facto relationship. As the census does not employ non registered cohabitation as a separate category it was decided to allocate such doubtful cases to either the single or married categories depending on whether the de-facto relationship had continued for less than four years or four or more years respectively.(2)

In all other cases it was possible to ascertain the marital status of the person at the time of death. Table 42 gives marital status specific numbers, percentages and rates of suicide for 1978.

TABLE 42

MARITAL STATUS SPECIFIC NUMBERS, PERCENTAGE AND RATES* OF SUICIDE FOR SOUTH AUSTRALIA

1978

Marital Status	Number of Suicides	% of Total Suicides	Suicide Rate
Single **	35	24.8	15.9
Married	63	44.7	10.7
Divorced	10	7.1	49.5
Separated	11	7.8	51.0
Widowed	4	2.8	6.5
Unknown	18	12.8	-

Notes : * Rate per 100,000 persons
** Rate based on population aged 15+ years not married

Source: Department of the Attorney General of South Australia, Adelaide, 1978

Once again it is necessary to consider not only the absolute figures but the rates proportionate to number of persons in marital status groups in the total population of South Australia. In absolute figures, suicides by married persons were the most numerous during 1978, followed in order by those single and those whose status was unknown. The separated, divorced and finally the widowed were not so numerous but collectively they followed the group of single people in significance. Now looking at these figures as proportions of total population the picture is generally reversed. The highest rates per 100,000 of population, were for the separated (51.0) and divorced (49.5) groups, with the single and married groups having much lower rates. The exception is the widowed who had not only the lowest total number of suicides, but also the lowest suicide rate in the population. However, some of the 18 unknowns could have been widowed. If so this would have affected the pattern quite dramatically.

A full breakdown of the number of suicides by age, sex and marital status is given in Table 43. This table shows that among males suicides by single persons in the under 24 years and 25-34 years age groups were the most numerous, while there were also significant numbers of suicides among married males aged 45-54 and 55-64 years. For females the highest number of suicides was experienced among those married and aged 35-44 years followed by married females in the 45-54, 55-64 and 65-74 years age groups.

TABLE 43

AGE, SEX AND MARITAL STATUS SPECIFIC NUMBERS OF SUICIDES

FOR SOUTH AUSTRALIA, 1978

Age (years)	MALES					FEMALES				
	Single	Married	Divorced Widowed Separated	Unknown	TOTAL	Single	Married	Divorced Widowed Separated	Unknown	TOTAL
< 25	14	3	-	-	17	2	-	-	-	2
25-34	12	6	7	-	25	2	2	1	-	5
35-44	3	9	5	1	18	-	5	1	2	8
45-54	-	11	3	2	16	1	3	1	1	6
55-64	-	11	4	3	18	-	3	-	2	5
65-74	1	4	1	1	7	-	3	2	1	6
75 +	-	3	-	5	8	-	-	-	-	-
TOTAL	30	47	20	12	109	5	16	5	6	32

Source: Records of the Department of the Attorney General of South Australia Adelaide, 1978.

(d) Occupation and Major Activity

It was also possible to classify the cases according to categories of occupation and usual major activity. Table 44 presents the numbers and rates of suicide by sex and occupation. These figures refer only to those persons who committed suicide and were employed in the labourforce as defined by the Australian Bureau of Statistics. Some 71 persons of the 141 who killed themselves (50.4 per cent) were employed in the labourforce at the time of their death, this total including 65 males (59.6 per cent of males) but only 6 females (18.8 per cent of females).

It can be seen that among the employed males the greatest number of suicides were committed by those in the production/process/labouring occupations (29), followed by the professional and technical (7), transport and communication (6) and service (6) occupational categories. The highest rates of suicide among employed males were for those in the mining (79.4), service (42.6), transport and communication (25.8) and professional and technical (20.3) occupation categories.

Among the total employed population the highest suicide rates were experienced by persons employed in the mining (76.6), transport and communication (22.3), service (17.9) and production/process/labouring (16.9) occupational categories. These rates must be treated with considerable caution, however, as the absolute numbers in some of the occupational categories (e.g. mining, administrative and executive, and clerical) are very small.

What is particularly noteworthy is that the rate of suicide among employed males (18.7) was more than six times the rate of suicide among employed females (3.0), the rate for all employed persons being 13.0.

TABLE 44

NUMBERS AND RATE* OF SUICIDE BY SEX AND OCCUPATION SOUTH AUSTRALIA

1978

Occupation	Number of Suicide			Suicide Rate		
	Males	Females	Total	Males	Females	Total
Professional, technical etc.	7	2	9	20.3	6.0	13.3
Administrative, Executive etc.	4	-	4	14.0	-	12.0
Clerical workers	4	-	4	14.2	-	4.8
Sales workers	4	1	5	19.5	4.4	11.6
Farmers, Fisherman etc.	4	1	5	11.7	6.2	10.3
Miners etc.	1	-	1	79.4	-	76.6
Transport, communication etc.	6	-	6	25.8	-	22.3
Production, Process workers, and Labourers	29	-	29	19.2	-	16.9
Service workers	6	2	8	42.6	6.5	17.9
Total Unemployed	65	6	71	18.7	3.0	13.0

Notes: * Rate per 100,000 persons

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

In addition to the 71 persons who were employed in the labourforce and committed suicide there were 13 persons (11 males and 2 females) who were unemployed and 56 persons (32 males and 24 females) aged 15 years and over and not in the labourforce.

Table 45 gives the number and rates of suicide by sex for those employed in the labourforce, unemployed and not in the labourforce and aged 15 years or more.

The suicide rate among the unemployed (66.5) was more than five fold the magnitude of the rate among those employed (13.0) and was four fold the rate of persons outside the labourforce and aged 15 years or more (16.3). It can also be seen that the suicide rate among unemployed males (103.7) was more than five time higher than the rate for employed males (18.7) and almost three times higher than the rate for males outside the labourforce (34.9). The suicide rate among unemployed females (22.4) was also much higher than the rates for employed females (3.0) and females not in the labourforce (9.4). Furthermore the rate of suicide among both unemployed males and females were each several times higher than the rates for all males and females aged 15 year or over (24.0 and 6.9 respectively).

As mentioned above only one half of the 1978 cases involved persons who were employed in the labourforce. The other cases involved persons who were either unemployed or outside the labourforce (e.g. pensioners, students, females with the occupation of "home duties" and residents of institutions. To further explore patterns of suicide among the various groups it was decided to categorise the cases according to the usual major activity of the deceased.

TABLE 45

NUMBERS AND RATES[1] OF SUICIDE BY SEX FOR PERSONS EMPLOYED, UNEMPLOYED AND NOT IN THE LABOURFORCE SOUTH AUSTRALIA 1978.

	MALES	FEMALES	TOTAL
Employed			
No. of Suicides	65	6	71
Suicide Rate	18.7	3.0	13.0
Unemployed			
No. of Suicides	11	2	13
Suicide Rate	103.7	22.4	66.5
Not in the Labourforce (15+ years)			
No. of Suicides	32	24	57
Suicide Rate	34.9	9.4	16.3
Total (15+ years)			
No. of Suicides	108[2]	32	140[2]
Suicide Rate	24.0	6.9	15.3

Notes: 1. Rates per 100,000 persons
2. Excludes one case of suicide by person aged less than 15 years.

Source: Records of the Department of the Attorney General of South Australia, 1978.

Numbers and rates of suicide by sex and usual major activity are given in Table 46. Here it was not possible to avoid including the unemployed in the category labelled "usually working" as the relevant census categories do not include a separate categroy of "unemployed". Thus the 84 persons classified as "usually working" include the 71 who were employed in the labourforce in addition to the 13 who were unemployed. There were only two suicides committed by school children and a further two by full-time

TABLE 46

NUMBERS AND RATES* OF SUICIDE BY SEX AND USUAL MAJOR ACTIVITY

SOUTH AUSTRALIA, 1978

Usual Major Activity	Number of Suicide			Suicide Rate		
	Males	Females	Total	Males	Females	Total
Usually Working	76	8	84	21.8	4.2	15.6
Child at school	2	-	2	1.7	-	0.9
Full time student	2	-	2	7.2	-	3.6
Other	29	24	53	47.7	10.7	18.5

Notes : * Rates per 100,000 persons.

Source : Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

students, all of whom were males. The 29 males in the "other" category of usual major activity were all pensioners (most of whom were elderly although some were residents of institutions or living at home and receiving pension benefits other than that for the aged), while the 24 females in this category included 19 whose usually major activity was "home duties" and 5 pensioners.

It can be seen that the suicide rate for males who were usually working (21.8) was more than five-fold the female rate (4.2) and the rate for males who were in the "other" category (i.e. those who were not usually working or students) was more than four-fold the corresponding female rate. Also noteworthy is the fact that the suicide rate among persons in the "other" category (18.5) was slightly higher than the rate for those "usually working" (15.6). Finally it is significant that both males and females who were neither usually working or students had rates of suicide more than double the rates of their counterparts whose major activity was "usually working."

(e) Ethnicity

While it was possible to determine the age, sex, marital status, occupation and usual major activity of most, if not all, individuals in this study it was not possible in the vast majority of cases to ascertain their place of birth, and in even fewer cases their nationality. In only ten cases (7.1 per cent) was it possible to determine the deceased's country of birth. These comprised three cases of German-born persons, three of Italian born persons and one each of a person born in Greece, Yugoslavia, Lithuania and Great Britain.

These figures give rates of 19.5 for the German-born population of South Australia, 9.4 for the Italian-born, 6.8 for the Greek-born, 11.1 for the Yugoslavian-born and 0.6 for the British-born (there being no statistics as to the number of Lithuanian-born persons in South Australia). While the suicide rate for the German-born population was much higher than the rate for South Australia, rates for all other countries are either slightly lower or very much lower than the South Australian rate.

It is acknowledged, of course, that the cases studied probably involved persons born in a wide variety of countries and with various nationalities but that these ethnic attributes were frequently not included in the files consulted.

Summary of Findings

(a) 77 per cent of the 1978 cases of suicide involved males and 23 per cent females, the respective rates per 100,000 population being 17.6 and 5.1.

(b) Suicide was numerically greatest among the 25-34 year olds (21 per cent of all cases), 35-44 year olds (18 per cent) and the 55-64 year olds (16 per cent). However, when it came to rates per 100,000 the 55-64 year group had the highest rate (20.2) followed by the 35-44 years (19.0) and behind these came those of 65 years and over (18.5). Thus taking the population as a whole the suicides occur most frequently in the later years of life but in the year under consideration there were numerically more cases between 25 and 44 years of age.

(c) Taking the total figure and rates in (b) above and dividing them by sex it was found that male suicides were most numerous among people 25-34 years of age (23 per cent) and female suicides were most numerous among women 35-44 years of age (25 per cent). As for the rates per 100,000 those 65 and over had the highest rate (32.1). The highest female rates per 100,000 were for the 35-44 year olds (11.9)

and for those 65 years and over (9.0). For both sexes the group under 25 years of age had the lowest suicide rate.

(d) The absolute figures for the different marital status groups varied to such an extent that it seemed wiser to concentrate only on the rates per 100,000 of the population. In this respect separated persons experienced the highest suicide rate (51.0) followed by divorced persons (49.5). Though these two marital status groups occounted for only 15 per cent of all suicides it will seen that this small number was a large proportion of the total number of separated and divorced persons in the community. One quarter of all 1978 suicides involved single persons, but if the large number of single persons over 15 years of age in the population be taken into account then the rate for this group becomes 15.9. Married persons accounted for almost half the suicides but again there are many married people in the total population so that the rate for this group was only 10.7. Relatively speaking the low rate of 6.5 for widows and widowers is quite surprising.

(e) Approximately half the suicides involved persons who were either unemployed or not members of the labourforce (e.g. students, pensioners, women with the occupation of "house duties"). Less than 20 per cent of the females were employed in the labourforce compared to almost 60 per cent of the males. The suicide rate among the employed males (18.7) was more than six fold the rate among the employed females (3.0).

(f) The suicide rate among the unemployed (66.5) was more than five-fold the rate among those employed in the labourforce (13.0) and was four-fold the rate among persons outside the labourforce and aged 15 years or more (16.3). The sex-specific rates for the unemployed were also much higher than either the rates for those employed in the labourforce or for those outside the labourforce. Among unemployed males the suicide rate was a remarkably high 103.7. This would seem to show a high correlation of suicide and unemployment. It is important however, to bear in mind that

these rates are based on no more than 13 cases of unemployed i.e. 11 males and 2 females Our conclusion should therefore be regarded as suggestive only.

C. Methods Employed

It was mentioned previously that a wide range of methods were employed by those persons who committed suicide during 1978. Table 47 presents numbers, percentages and rates of suicide by method.

TABLE 47

NUMBERS, PERCENTAGES AND RATES* OF SUICIDE BY METHOD EMPLOYED - SOUTH AUSTRALIA 1978

Method Employed	Number of Suicides	% of Total Suicides	Suicide Rate
Poisoning (solids or liquid)	40	28.4	3.2
Poisoning (domestic gas)	1	0.7	0.1
Poisoning (other gases)	10	7.1	0.8
Hanging, Strangulation, Suffocation	28	19.9	2.2
Cutting and Piercing Instruments	1	0.7	0.1
Firearms and Explosives	48	34.0	3.9
Submersion (drowning)	7	5.0	0.6
Burning	3	2.1	0.2
Electrocution	1	0.7	0.1
Jumping in front of Trains	2	1.4	0.2

Notes : * Rates per 100,000 persons

Source : Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

The above categorisation does not conform to that of the current edition of the International Classification of Diseases, Injuries and Causes of Death (I.C.D.) which is used in official statistical publications, as it has been modified to highlight the situation in South Australia for the particular year under consideration. The category of suicide by "jumping from high place" has been excluded as there were no cases in which this method was used, and the categories of "burning", "electrocution" and "jumping in front of train" have been included as separate ones in this table whereas they would be included in the "other and unspecified means" of the I.C.D.

A wide range of solid or liquid poisons were used including pentobarbitone, malethion (weed killer), sodium pentothal, doxepin, tryptanol, amphetamine, morphine, sodium cyanide, benzodiazepine, imipramine palfium, phosdrin, and sodium azide. The ten cases where gas, other than domestic gas was used, all involved carbon monoxide while the twenty eight cases in the hanging, strangulation and suffocation category included twenty seven instances of hanging (using a diverse range of materials) and a single case of suffocation using plastic bags. The single case of suicide using cuttingand piercing instruments involved slashing the arteries of the left arm with an unknown object. All of the forty eight cases in the firearms and explosives category used the former, there being forty three instances of shooting to the neck or head, and five of shooting to the chest or stomach.

Some seven persons committed suicide by drowning, three in the ocean, a further three in rivers and one in a rainwater tank, while of the three cases of burning there were two instances where petrol was used and another involving an unknown liquid. The single case of electrocution involved wiring both wrists to an electrical transformer.(3)

Suicide by shooting was the most frequently used method and consequently had the highest rate,[4] then there was solid or liquid poisoning and hanging, strangulation or suffocation. These three methods accounted for over 80 per cent of all suicides. But what this table does not show is the variation in methods employed among males and females. Table 48 presents numbers and percentages of suicides by sex and methods employed to highlight these differences.

TABLE 48

NUMBERS AND PERCENTAGES OF SUICIDES BY SEX AND METHOD EMPLOYED - SOUTH AUSTRALIA 1978.

	Males		Females	
Method Employed	Number	%	Number	%
Poisoning (solid or Liquid)	25	22.9	15	46.9
Poisoning (domestic gas)	-	-	1	3.1
Poisoning (other gases)	8	7.3	2	6.3
Hanging, Strangulation and Suffocation	18	16.5	10	31.3
Cutting and Piercing Instruments	1	0.9	-	-
Firearms and Explosvies	46	42.2	2	6.3
Submersion (drowning)	6	4.6	1	3.1
Other	5	4.6	1	3.1

Source : Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

Shooting was the favoured means of committing suicide among males (42.2 per cent) followed by solid and liquid poisoning (22.9 per cent) and hanging (16.5 per cent). However, among females, solid or liquid poisoning (46.9 per cent) and hanging (31.3 per cent) were the most popular.

The number of suicides by age and method employed is presented in Table 49. It will be seen that an interesting distinction can be made between those above and below 55 years of age. Three quarters of the cases in which solid or liquid poisoning was the method chosen involved persons below 55 years of age while almost half the persons who hanged themselves were aged 55 years or more. The majority of carbon monoxide poisonings involved persons aged less then 55 years and this group also accounted for over half the cases where suicide was committed by the use of firearms. Generally speaking then, solid or liquid poisoning, carbon monoxide poisoning and shooting were favoured by the younger age groups while hanging, and to a lesser extent shooting, were frequently employed by the elderly.

Summary of Findings

(a) A wide range of methods were used to commit suicide including rather unusual methods such as jumping in front of trains, burning and electrocution.

(b) Over one third of suicides involved firearms, over one quarter solid or liquid poisoning and one fifth hanging, strangulation and suffocation, the rates for these methods being 3.9, 3.2 and 2.2 respectively. Carbon monoxide poisoning was used in 7 per cent of the suicides and drowning a further 5 per cent, the rates being 0.8 and 0.6 respectively.

TABLE 49

NUMBER OF SUICIDES BY AGE AND METHOD EMPLOYED, SOUTH AUSTRALIA

1978

Method Employed	AGE (Years)							
	< 25	25-34	35-44	45-54	55-64	65-74	75+	TOTAL
Poisoning (solid or liquid)	6	9	8	8	4	4	1	40
Poisoning (domestic gas)	-	-	-	-	-	1	-	1
Poisoning (other gases)	1	4	3	1	1	-	-	10
Hanging, Strangulation and Suffocation	3	2	6	4	7	2	4	28
Cutting and Piercing Instruments	-	-	-	-	1	-	-	1
Firearms and Explosives	9	13	6	6	9	4	1	48
Submersion (drowning)	-	-	3	1	1	-	2	7
Other	-	2	-	2	-	2	-	6
TOTAL	19	30	26	22	23	13	8	141

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

(c) Among males, shooting was the method employed in 42 per cent of cases with solid or liquid poisoning and hanging accounting for 23 per cent and 17 per cent of male suicides respectively. However, among females the most favoured methods were solid or liquid poisoning (47 per cent) and hanging (31 per cent) with firearms involved in only 6 per cent of cases.

(d) About three quarters of the suicides where solid or liquid poisoning was used were committed by persons aged less than 55 years and the majority of suicides by carbon monoxide poisoning and shooting involved persons aged less than 45 years. Almost half the suicides by hangings were committed by persons over 55 years of age. Thus while poisoning and shooting were methods favoured by the young and middle age groups, hanging was particularly favoured by the elderly.

D. Location of Suicides

Analysing the location and spatial distribution of the 1978 suicide cases in this study present some difficulties but such analysis is desirable as it is related to the distinctions so often made between urban and rural patterns of suicide. It is also information necessary to trace the geographical mobility of those who commit suicide and the effect of this on the methods of registration and inquiry.

The major difficulties arose from the occasional differences between (a) the place of residence of the deceased;
(b) the place where the act of suicide occurred;
(c) the place where the person actually died; and
(d) the place of investigation into, and the place of registration of, the death.

While in many instances the first three of these are the same and the death was subsequently investigated and

registered in the same general locality, there were numerous exceptions.

A preliminary examination of the cases for 1978 reveals, for example, that there were instances where the deceased resided in one town or suburb, committed the suicidal act in another and finally died (often in hospital) in yet another place. In other cases the deceased resided and committed the suicidal act in the same locality but died elsewhere: and there were instances where the person died in an isolated rural locality but normally resided in an urban centre.

In the following brief analysis particular attention is devoted to the place of residence of those who committed suicide and the place where the suicidal act occurred, the latter usually being identical to the place of death. Exceptions would occur in most of the cases of drowning, in some of the solid or liquid poisonings (where the individual was rushed to hospital and died either there or en-route) and in a comparatively small number of cases employing other methods.

For purposes of comparison, the place of residence and place of occurrence were categorised as "metropolitan" (Adelaide and environs), "other urban" (centres of at least 200 persons per square kilometre) and "rural" (all other areas); the last two taken together comprised the category often referred to as "non metropolitan".

Beginning with the place of residence of the deceased, a pattern is provided by Table 50.

TABLE 50

COMPARISONS OF SUICIDES BY PLACE OF RESIDENCE, SOUTH AUSTRALIA

1978

		Metropolitan		Other Urban		Rural		TOTAL	
		Number (N = 108)	%	Number (N = 19)	%	Number (N = 13)	%	Number (N = 140)	%
Sex :	Male	85	78.7	10	9.3	13	12.0	108	100.0
	Female	23	71.9	9	28.1	-	-	32	100.0
Age :	< 35	41	83.7	5	10.2	3	6.1	49	100.0
	35-54	33	70.2	9	19.1	5	10.6	47	100.0
	55 +	34	77.3	5	11.4	5	11.4	44	100.0
Marital Status :									
	Single	26	74.3	5	14.3	4	11.4	35	100.0
	Married	47	74.6	9	14.3	7	11.1	63	100.0
	Widowed, Divorced Separated	20	83.3	2	8.3	2	8.3	24	100.0
	Unknown	15	83.3	3	16.7	-	-	18	100.0
Method Employed :									
Poisoning (solid or liquid)		32	80.0	6	15.0	2	5.0	40	100.0
Poisoning (all gases)		9	81.8	-	-	2	18.2	11	100.0
Hanging, Strangulation and Suffocation		22	78.6	5	17.9	1	3.6	28	100.0
Firearms and Explosives		32	66.7	8	16.7	8	16.7	48	100.0
Other		13	100.0	-	-	-	-	13	100.0

Source : Records of the Department of the Attorney General of South Australia, Adelaide 1978.

Of the 140 cases involving South Australian residents 108 (i.e. 77 per cent) lived in Adelaide or its environs, a further 19 (14 per cent) were residents of other urban centres and 13 (9 per cent) lived in rural areas. 79 per cent of the males who took their own lives were Adelaide residents as compared with 72 per cent of females, the other 28 per cent of females were all residents of other urban centres. The proportion of suicides among those under 35 years of age who lived in Adelaide (84 per cent) was higher than the proportions for the groups 35-54 years and 55 years and over (70 per cent and 77 per cent respectively). There were only three instances of younger persons in rural areas committing suicide. However, one fifth of those aged 35 to 54 years who committed suicide lived in urban centres other than Adelaide.

Almost three quarters of the single and married persons who committed suicide in 1978 were Adelaide residents, as were over four fifths of those who were widowed, divorced or separated. Approximately four fifths of the suicides which employed solid or liquid poisoning, gassing or hanging involved Adelaide residents, but only two thirds of those who shot themselves lived in Adelaide.

It was possible to obtain rates for sex and age and these (divided between metropolitan and non-metropolitan) are provided in Table 51.

TABLE 51

AGE AND SEX SPECIFIC NUMBERS AND RATES* OF SUICIDE

METROPOLITAN AND NON-METROPOLITAN REGIONS,

SOUTH AUSTRALIA, 1978

		Metropolitan		Non-Metropolitan	
		Number (N = 108)	Rate	Number (N = 32)	Rate
Sex :	Male	85	19.2	23	13.0
	Female	23	5.0	9	5.4
Age :	< 35	41	13.8	8	7.3
	35-54	33	16.2	14	18.3
	55 +	34	20.2	10	16.7

Notes: * Rates per 100,000 persons. Rates for -25 years age group based on population aged 15-34 years.

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

The metropolitan suicide rate was 12.0 per 100,000 persons. This may be compared with the non-metropolitan rate of 9.3. However, there was an interesting difference when these rates were divided by sex. Whereas the male rate was noticeably higher in the metropolitan area, the female rate was marginally higher in the non-metropolitan area.

The metropolitan rate per 100,000 for those under 35 years of age was almost double the non-metropolitan rate. However, this predominance of the metropolitan rate does not hold throughout the non-metropolitan area which had a higher rate for the suicides 35-54 years of age. Then with advancing years the metropolitan area takes over again.

This prevailing dominance of the metropolitan area is a pattern repeated when one considers the place of residence of those who committed suicide.

There were cases of persons living in rural areas who committed suicide in the smaller urban areas outside the metropolitan region and there was a single case where a resident of a smaller urban area went to a rural area to commit suicide. However, all but two of the Adelaide residents who committed suicide did so within Adelaide and both of these exceptions still avoided the rural areas: they committed suicide in another urban centre. The one case of a non-South Australian resident who committed suicide was in an urban centre outside Adelaide. Hence 106 (75 per cent) of the 141 cases were suicides which occurred in Adelaide and its environs, 23 (16 per cent) occurred in other urban centres and only 12 (9 per cent) in rural areas.

It was considered worthwhile to examine for the metropolitan cases the differences between the place of residence and place of the suicidal act. As indicated, there were 108 cases of suicide involving Adelaide residents, including two cases where the deceased committed suicide outside Adelaide. Of the 108 cases 20 (19 per cent) were residents of Adelaide who committed suicide in a suburb different from the one where he or she lived. Most of these individuals shot themselves, or poisoned themselves with carbon monoxide, after travelling away from their place of residence. Conversely, most of the solid or liquid poisonings took place at the residential address of the deceased and this was also the case with many hangings and some shootings.

As also mentioned previously most suicides occurred when the individual was alone either in his or her place of residence or some isolated venue away from their homes. This would be something to be expected. A person thinking of killing himself would usually seek privacy and a lack of interference with his action. There were however, a couple of burnings which occurred in public, one instance of a person publicly jumping from a bridge and consequently drowning, two others of persons jumping in front of trains and a case where suicide occurred at the deceased's residence but only after a lengthy siege. These were dramatic exceptions. Usually the person intending to take his or her life withdrew to a place of seclusion or quietly died, often by poisoning, during the night.

Summary of Findings

(a) Among the 1978 cases of suicide, 77 per cent involved metropolitan residents, 14 per cent residents of other urban areas and 9 per cent residents of rural areas. Almost four-fifths of males and almost three quarters of females were metropolitan residents and there were no suicides involving rural females.

(b) Over 80 per cent of those aged less than 35 years were metropolitan residents compared to only 70 per cent of those aged 35-54 years and 88 per cent aged 55 years and over. Three quarters of those who were single or married were resident in the metropolitan area while metropolitan residents accounted for over four-fifths of those who were widowed, divorced or separated and commit suicide. There were higher proportions of suicides involving single and married persons, as compared to widowed, divorced or separated persons, in both other urban and rural areas.

(c) Approximately four-fifths of the suicides in which solid or liquid poisoning, gas or hanging were the methods used, involved metropolitan residents. This may be compared to only two-thirds of those using firearms being metropolitan residents.

(d) The metropolitan suicide rate (12.0) was higher than the non-metropolitan rate (9.3), the male metropolitan rate being one and one half times the magnitude of the non-metropolitan rate and the female non-metropolitan being slightly higher than the metropolitan rate. The metropolitan rate for the over 55 years age group (20.2) was the highest age-specific rate and the non-metropolitan rate for the under 35 years age group (7.3) was the lowest. For the 35-54 year age group the non-metropolitan rate (18.3) exceeded the metropolitan rate (16.2).

E. Suicide Notes

In forty eight (34 per cent) of all the 1978 cases, the deceased left behind one or more suicide notes. While copies of these were usually included in the files consulted there was one suicide note written in a foreign language with no translation, one case where a note had been written but was not available and a further case where only one of three notes was included in the files.

To seek possible differences between those leaving notes and those not leaving notes the personal characteristics of the two groups were compared. But firstly it was necessary to identify the characteristics of those who left notes. Table 52 gives the numbers and percentage distributions of these suicides who left notes according to the sex, age and marital status of the deceased and the method employed.

The main features of those who left notes when they committed suicide were that they were usually male, married, under 35 years of age and they shot themselves. The details are as follows:-

. Over four fifths of the suicides with notes involved males;

TABLE 52

CHARACTERISTICS OF SUICIDES WITH NOTES, SOUTH AUSTRALIA, 1978

		Number	%			Number	%
Sex :	Male	39	81.3	Age :	< 35	22	45.8
	Female	9	18.7		35-54	14	29.2
	Total	48	100.0		55 +	12	25.0
					Total	48	100.0

Marital Status			Method Employed		
Single	13	27.1	Poisoning (solid or liquid)	15	31.3
Married	19	39.6	Poisoning (all gases)	6	12.5
Widowed, Divorced, Separated	11	22.9	Hanging, Strangulation Suffocation	4	8.3
Unknown	5	10.4	Firearms and Explosives	21	43.8
			Other	2	4.2
Total	48	100.0	Total	48	100.0

Source : Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

- almost one half of those who left notes were aged less than 35 years;
- approximately 40 per cent of those who wrote notes were married, 27 per cent were single and 23 per cent widowed, divorced or separated;
- some 44 per cent of those persons who left notes shot themselves;
- 31 per cent died by solid or liquid poisoning; and
- 13 per cent died by gas poisoning.

Secondly, the characteristics of suicides who did not leave notes was contrasted with the information obtained for the note leavers. Table 53 provides such a comparison. This table takes the total suicide population and divides by those who did and did not leave notes. This table in general confirms the conclusions summarised above.

More than one third of male suicides left suicide notes compared with 28 per cent of all female suicides. Some 45 per cent of all suicides 35 years or less left notes as compared with less than 30 per cent of those in the 35-54 and 55 years and over age groups. More married than single suicides left notes. However if all those who committed suicide are taken together it emerges that the widowed, divorced or separated (44 per cent) were more inclined to leave suicide notes. Over one-half of the individuals who gassed themselves left notes as did 44 per cent of those who employed firearms to kill themselves. While 38 per cent of those who died by solid or liquid poisoning left suicide notes only 14 per cent of those who hanged themselves or used other methods were disposed to do so.

TABLE 53

COMPARISONS OF SUICIDES WITH NOTES AND WITHOUT NOTES

SOUTH AUSTRALIA 1978

	With Notes		Without Notes		Total	
	Number (N=48)	%	Number (N=93)	%	Number (N=141)	%
Sex						
Male	39	35.8	70	64.2	109	100.0
Female	9	28.1	23	71.9	32	100.0
Age						
< 35	22	44.9	27	55.1	49	100.0
35-54	14	29.2	34	70.8	48	100.0
55 +	12	27.3	32	72.7	44	100.0
Marital Status						
Single	13	37.1	22	62.9	35	100.0
Married	19	30.2	44	69.8	63	100.0
Widowed, Divorced, Separated	11	44.0	14	56.0	25	100.0
Unknown	5	27.8	13	72.2	18	100.0
Method Employed						
Poisoning (solid or liquid)	15	37.5	25	62.5	40	100.0
Poisoning (all gases)	6	54.5	5	45.5	11	100.0
Hanging, Strangulation and Suffocation	4	14.3	24	85.7	28	100.0
Firearms and Explosives	21	43.8	27	56.2	48	100.0
Other	2	14.3	12	85.7	14	100.0

Source: Records of the Department of the Attorney General of South Australia, Adelaide 1978.

In thirty seven of the forty eight cases (77 per cent) a single suicide note was written, while there were eight cases (17 per cent) where two notes were left and three cases (6 per cent) where three notes were written by the deceased.

A third of all suicide notes were written to unspecified persons and one-fifth to friends or associates. There were ten notes written to spouses, a further ten to parents, and six to the children of those who killed themselves. Some notes were lengthy and explained in great detail the reasons for suicide while others were so brief as to be without meaning. Occasionally they gave instructions as to the disposal of property or assets while in other instances they outlined the burial wishes of the deceased. While some notes seemed to reflect emotional or mental disturbance, others provided apparently quite rational explanations of the deceased's predicament and lucidly explained why suicide was being chosen as a solution to the perceived or actual problems. Obviously the authors were unable to proceed beyond a layman's assessment of meanings.

Summary of Findings

(a) In 34 per cent of all the 1978 cases the deceased left behind a suicide note or notes. Of those leaving notes over four-fifths were males and almost one-half were aged less than 35 years.

(b) 40 per cent of those who left notes were married, 27 per cent were single and 23 per cent were widowed, separated or divorced.

(c) 44 per cent of those who left notes shot themselves, 31 per cent died by solid or liquid poisoning and 13 per cent by gas poisoning.

(d) Over one third of all males left notes compared to 28 per cent of females. Persons aged less than 35 years were more inclined to leave notes than those aged 35 years and over while a high proportion of widowed, divorced or separated persons, as compared to either single or married persons, left notes. Persons who committed suicide by gassing or shooting were more inclined to leave notes than those using other methods.

(e) More suicide notes were directed to friends or associates of the deceased or to unspecified persons than were directed to either the deceased's parents, spouse or children.

F. Previous Attempts at Suicide and Suicidal Threats

(a) Previous Attempts

During the extraction of information from the abovementioned files every effort was made to ascertain whether the deceased had previously attempted to commit suicide. Such an attempt should not be confused with suggestions or indications of committing suicide which are treated later. The main sources of information on previous suicidal attempts were the statements of friends, relatives or associates and, in some cases, medical records and/or statements of medical practitioners who had treated the deceased. Occasionally a suicide note left by the deceased himself or herself referred to previous attempts.

It is acknowledged that the available information on previous suicidal attempts is probably incomplete in that relatives or friends of the deceased may not have been able, or willing, to provide such details. However, this is a deficiency which applies to a great many factors in suicide where case histories are rarely complete.

Consideration of previous suicide attempts is important both to more fully understand their meanings and because a reduction in their incidence may have an effect upon the incidence of completed suicides. Obviously a comparative study of those who attempt but fail at suicide and those who successfully complete suicide (either with or without previous attempts) is beyond the scope of the present study. Further research into attempted suicide is necessary to understand the extent to which suicidal attempts are made with the true intention of dying or are used by individuals to gain attention and/or sympathy, or as a gesture.

It was found on the basis of the available information that only thirty three (23 per cent) of all the cases involved persons who had made previous attempts on their lives. The characteristics of these individuals and the methods they employed in their completed suicides are given in Table 54.

Almost three quarters of these who had made previous attempts were males and almost two thirds were aged 35-54 years. Slightly more than one half were married, 18 per cent were widowed, divorced or separated and only 15 per cent were single. One-third finally committed suicide by solid or liquid poisoning, 27 per cent by shooting and 18 per cent by hanging.

A comparison between those suicides where the individual had made a previous attempt or attempts and those with no prior history of attempted suicide is made in Table 55.

TABLE 54

CHARACTERISTICS OF SUICIDES WITH PREVIOUS ATTEMPTS, SOUTH AUSTRALIA 1978

Sex	Number	%
Male	24	72.7
Female	9	27.3
Total	33	100.0

Age	Number	%
< 35	7	21.2
35-54	21	63.6
55 +	5	15.2
Total	33	100.0

Marital Status		
Single	5	15.2
Married	17	51.5
Widowed, Divorced, Separated	6	18.2
Unknown	5	15.2
Total	33	100.0

Method Employed		
Poisoning (solids or liquid)	11	33.3
Poisoning (all gases)	2	6.1
Hanging, Strangulation, suffocation	6	18.2
Firearms & Explosive	9	27.3
Other	5	15.2
Total	33	100.0

Source : Records of the Department of the Attorney General, South Australia, Adelaide, 1978.

TABLE 55

COMPARISONS OF SUICIDES WITH PREVIOUS ATTEMPTS AND WITHOUT PREVIOUS ATTEMPTS, SOUTH AUSTRALIA, 1978

	With Previous Attempts		Without Previous Attempts		Total	
	Number (N = 33)	%	Number (N = 108)	%	Number (N = 141)	%
Sex : Male	24	22.0	85	78.0	109	100.0
Female	9	28.1	23	71.9	32	100.0
Age: < 35	7	14.3	42	85.7	49	100.0
35-54	21	43.8	27	56.2	48	100.0
55 +	5	11.4	39	88.6	44	100.0
Marital Status						
Single	5	14.3	30	85.7	35	100.0
Married	17	27.0	46	73.0	63	100.0
Widowed, Divorced, Separated	6	24.0	19	76.0	25	100.0
Unknown	5	27.8	13	72.2	18	100.0
Method Employed						
Poisoning (solids or liquids)	11	27.5	29	72.5	40	100.0
Poisoning (all gases)	2	18.2	9	81.8	11	100.0
Hanging, strangulation, suffocation	6	21.4	22	78.6	28	100.0
Firearms and Explosives	9	18.8	39	81.2	48	100.0
Other	5	35.7	9	64.3	14	100.0

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

This table shows that 22 per cent of males and 28 per cent of females who committed suicide had made previous attempts and that while 44 per cent of those aged 35-44 years had tried to commit suicide previously, this had occurred in only 14 per cent of those aged less than 35 years and 11 per cent of those aged 55 or more years. While about one quarter of married and widowed, separated or divorced persons had prior histories of attempted suicide, only 14 per cent of single persons were so characterised. Single persons were in general less likely to have made previous attempts at suicide but it was not clear whether this meant that such persons were more skilful at their first attempt.

Some 27 per cent of those who died by solid or liquid poisoning had tried suicide previously and this was the case with 21 per cent of those who died by hanging, 19 per cent of those who died by shooting and 18 per cent of those who died by gas poisoning. Thus for the more common methods it can be seen that between about 20 and 30 per cent of persons using each method had attempted suicide previously. However, over one-third of those who used other methods had a history of attempted suicide.

In twenty (61 per cent) of the above thirty three cases the deceased had made only one previous attempt at suicide. Five cases (15 per cent) involved individuals who had made two previous attempts and in the remaining eight cases (24 per cent) three or more attempts had been made by the deceased.

What is particularly interesting is that in nineteen (58 per cent) of the thirty three cases the method employed in the completed suicide was different to that used in the previous attempt or attempts. There were five other instances where this could have been the case but unfortunately the method(s) employed in the previous attempts at suicide were not stated. Ten cases were identified where the individual had attempted suicide on one or more occasions by solid or liquid poisoning, failed, and then committed suicide using some other method.

Some individuals tried a variety of techniques before finally killing themselves. One attempted suicide on several occasions by electrocution and when driving his car before eventually hanging himself. Another attempted suicide by domestic gas poisoning followed by liquid poisoning, and having failed both times, hanged himself. Then there was the person who used gas and cutting instruments unsuccessfully before completing suicide with the use of a firearm.

In only eight cases (24 per cent) of those with previous attempts was the method employed in the completed suicide the same as that used in the previous attempt or attempts. Most of these involved the use of solid or liquid poisoning but even then the same agents were not necessarily used. One person finally killed himself by taking poison after at least six previous poisonings and another after three previous attempts. Another individual tried three times to hang himself, succeeding in his last attempt.

Some twenty (61 per cent) of those persons who had previously attempted suicide were being treated, or had been recently treated, by doctors, psychiatrists or other members of the medical profession for mental and/or physical problems. Several were inmates of psychiatric institutions, others had experienced recent hospitalisation following unsuccessful suicidal attempts or for treatment of alcohol or drug addiction/ dependency problems.

Finally, it is interesting to note that twelve (36 per cent) of those persons with a history of attempted suicide wrote a suicide note. That is, in one-in-four of the cases of suicides with notes, the individual had attempted suicide previously. There was one case identified where suicide notes had been written prior to an attempt but not before the completed suicide but this may not have been unique.

Before concluding this discussion it should be noted that the abovementioned suicide attempts did not always occur shortly before the act of completed suicide. While most attempts were made in the days, weeks and months prior to death there are several cases where the last, and sometimes the only, previous attempt was made years before the successful suicide, and others where it was not possible to ascertain when the previous attempt(s) occurred. In one case the only previous attempt occurred fifteen years previously, in another three years and in several others two years before the completed suicide. Conversely, there were other cases where an attempt was made less than a week prior to the completed suicide, including one where an attempt was made on the day before suicide was achieved.

(b) Suicidal Threats

The files investigated also contained information not only on suicidal attempts but also suicidal threats, the main sources of this data being statements made by friends, relatives or associates of the deceased.

These suicidal threats, whether made directly or obliquely, are of interest in that they frequently constitute signals for help which may or may not be heeded by others. In any study of suicide it is felt that the incidence and nature of suicidal threats cannot be ignored and that more attention should be devoted to studying these distress signals.

Sometimes the individual made quite unequivocal statements to others that he or she intended to take his or her life, and on occasions the time, method and reason were also given. While some cases involved only a single recorded instance of intention to commit suicide, and this often very soon before the completed suicide, others concerned individuals who had made numerous threats of self destruction over many years. On occasions these were accompanied by threats to kill or harm others, particularly family members. Of course, there were many cases where suicide came as a complete surprise to those knowing the deceased, there having been no indication as to his or her intentions. Naturally the precise significance of suicidal threats is difficult to evaluate and few investigators are able to conduct the exhaustive inquiries necessary to determine the extent to which an intention of suicide was actually formed.

Nevertheless, there were forty four (31 per cent) cases identified where at least one suicidal threat was made by the individual concerned. Some are particularly noteworthy including the case where the deceased, suffering from acute pain, talked with his son about getting a lethal injection from his doctor shortly before shooting himself. In another case a man committed suicide by carbon monoxide poisoning after suggesting to his wife on numerous occasions that they both suicide in this fashion when they became old. Another case concerned an alcoholic who regularly made threats to shoot himself to his work mates, particularly after periods of heavy drinking, while in one instance the deceased not only made suicidal threats to his parents but showed another member of his family the suicide note he had written. In a couple of cases the intention to commit suicide was made to family members over the telephone shortly before the suicidal act.

In fifteen cases (11 per cent) of all those for 1978, the persons who committed suicide not only made suicidal threats but also wrote suicide notes.

Summary of Findings

(a) Less than one quarter of the 1978 cases involved persons who had made previous suicide attempts. Almost three-quarters of these were males and almost two-thirds were aged 35-54 years.

(b) Slightly more than half of those who had made previous attempts were married and less than a fifth were either single or widowed, divorced or separated.

(c) A slightly higher proportion of females (28 per cent) as compared to males (22 per cent) who committed suicide had made a previous attempt or attempts. Almost one half of those aged 35-53 years had tried suicide previously compared to only 14 per cent of those aged less than 35 years and 11 per cent aged 55 years or more.

(d) Only 14 per cent of single persons had a history of attempted suicide compared to about 25 per cent of those in other marital status categories.

(e) Almost two-thirds of those persons with a history of attempted suicide had made only one previous attempt and only one-quarter had made three or more attempts.

(f) In over one-half ofthe cases involving persons who had previously attempted suicide the method employed in the completed suicide differed to that used in the previous attempt or attempts. Some indidivuals tried several different methods prior to the completed suicide.

(g) Almost two-thirds of those persons with a history of attempted suicide were being treated, or had been treated shortly before their death, by members of the medical profession for mental and/or physical problems.

(h) Almost one third of the 1978 cases involved persons who made at least one suicidal threat prior to taking their lives. In 11 per cent of all cases the deceased both made a suicidal threat or threats and left behind a suicide note or notes.

G. Reasons for Suicide

(a) Identification of Reasons for Suicide

The cases for South Australia were so well documented in comparison to the case material which the authors were able to obtain for Western Australia, that the analysis,in terms of reasons, presented not a few problems. Less information about a case had often suggested only one reason for the suicide but a fuller picture of all the circumstances frequently meant that two, three or more reasons could have been equally regarded as the basis for the suicide decision.

In the first instance it was decided to identify all the reasons for suicide after an initial perusal of the relevant parts of all the files. Some nineteen reasons were so identified and are listed below:

1. Neurosis.
2. Psychosis.
3. Death of spouse.
4 Death of person other than spouse.
5. Pain.
6. Incompetence.
7. Unemployment or loss of employment.
8. Problems with school or work.
9. Financial problems.
10. Drug abuse, dependency or addiction.
11. Alcohol abuse, dependency or addiction.
12. Commission of a crime and/or criminal apprehension.
13. Sexual problems.
14. Separation or feared separation from spouse.
15. Separation or feared separation from person other than spouse.
16. Interpersonal disputes with family members.
17. Interpersonal disputes with persons other than family members.
18. Fear of institutionalisation.
19. Depression.

It is acknowledged that this list was subjectively constructed and that not all these categories are mutually exclusive. While every effort was made to compile a list with reasonably discrete categories it was impossible, given the quantity and quality of the available information, to identify a list where every reason was mutually exclusive of every other. As the number of cases is not large it was also necessary to keep the number of categories reasonably small (say no more than twenty five) to avoid having an excessive number of categories with only one or two cases relevant to each.

The above list, however, includes all the reasons for all cases with the exception of the few instances where there was no given or suggested reason. That is, in every case where a reason or reasons for suicide was recorded, that reason or those reasons could be categorised on the basis of the above list. Using this categorisation a matrix was drawn up, this matrix comprising 2679 cells (19 reasons x 141 cases). In each case the presence or absence of each reason was determined, the distribution of cases according to the number of reasons being given in Table 56.

TABLE 56

NUMBER AND PERCENTAGE DISTRIBUTION OF SUICIDES BY THE NUMBER OF REASONS. SOUTH AUSTRALIA, 1978

Number of Reasons	Number of Suicides	% of Total Suicides
0	11	7.8
1	34	24.1
2	54	38.3
3	31	22.0
More than 3	11	7.8
Total	141	100.0

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

In eleven cases (7.8 per cent) it was not possible to identify any reason at all, while in a further eleven cases four or more reasons were identified. Hence the majority of cases were classified as having one, two or three of the above reasons.

At this stage it is appropriate to clarify at least some of the categories of reasons for suicide given in the above list. It must be borne in mind that the identification of a given reason in a particular case could only be made on the basis of the available information, the sources and nature of this information varying from cases to case. For example, information on the physical and mental health of the deceased. As mentioned previously some files included reports of members of the medical profession while in other cases information on the deceased's health was only available from relatives or friends. The possible differences between cases in the quality and quantity of this information can thus be appreciated.

With respect to relationships between the deceased and other persons and the deceased's work and domestic situations the main sources of information were statements made by relatives, friends and associates of the deceased and report(s) of the police, the latter based in part on the former. The scope and depth of this information varied considerably according to these persons' relationships with, and knowledge of, the deceased and their willingness to supply personal particulars. In some cases several persons provided similar sorts of information which enabled the construction of a composite picture of the circumstances prior to the death of the individual concerned. In other

instances, one person alone provided these details which, while probably being quite accurate, may or may not have been comprehensive enough to identify the reasons for the suicide occurring.

Then there were the cases, particularly involving elderly or handicapped persons living alone or in institutions, where no friends or relatives of the deceased could be located and subsequently information on the deceased's past was perhaps more limited. All these factors are crucially important in endeavouring to ascertain the relevant reason or reasons for suicide in each particular case.

The above list includes neurosis and psychosis among the reasons for suicide. Their existence or otherwise was determined on the basis of information contained in psychiatric reports or supplied to police by psychiatrists and included in the investigating officers report. It was thus comparatively easy to identify those cases where neurosis or psychosis was a contributing reason, or the sole reason, for the suicide occurring, but this was not always the case with the more common state of depression.

In many cases, depression was given by friends or relatives of the deceased as a reason for suicide and the cause of the depressive state and its duration and severity were described in some detail. These cases include the following:

- A married male aged 23 years who became very depressed two weeks prior to his death due to an argument with a fellow employee over his (the deceased's) promotion. Following this argument the deceased was ostracised by his workmates and required medical treatment for his depression. When the medication failed to improve his condition he shot himself.

- A widowed male of 36 years whose wife died from cancer several months before his death. Prior to his wife's death he had been happy and in good health but be subsequently became very morose and nervous. After mentioning to his relatives on several occasions his intention to suicide because of his grief, he shot himself in the head.

- A woman aged 53 years who had suffered from a chronic enzyme deficiency and subsequent depression for most of her life. Prior to her death she became deeply depressed about her prolonged ill-health, began to loose weight and felt extremely lethargic. She finally took her life with an overdose of barbituates.

These represent cases of depression arising from being ostracised by peers, bereavement and poor health respectively, with some indication as to the duration and severity of the depressive state. But in other cases such as following the nature of the depression is far less evident.

- A male of 26 years who, according to friends, seemed a "little depressed" on the day he killed himself. The cause of the depression was not indicated or suggested.

- A married female aged 28 years who disappeared from her home shortly before her death, leaving behind personal papers and money. The missing person's report stated she was depressed and had been involved in domestic arguments but no further details were provided elsewhere in the file.

- A woman of 64 years who, according to the police report, suffered from epilepsy and had been depressed and according to an associate had complained of a heart condition. Whether her depression was related to her ill-health remains unclear, as does the duration and severity of the depressed state she experienced.

In cases such as these, depression was identified as a reason for suicide even though the information pertaining to the depressive state was, to say the least, sketchy.

Bereavement over the death of either a spouse or some other person was a readily identifiable reason for suicide, but there is obviously an overlap between these causes and depression. Where the individual was depressed and bereaving the death of another both causes were accepted as contributing to that particular suicide.

Some suicides were identified as being due, at least in part, to incompetence, these sometimes but not always being characterised by the deceased suffering pain. Examples of cases where incompetence was identified as a reason for suicide include the following:

- A 71 year old woman, resident in a nursing home, who suffered from pain and sleeplessness and was unable to even sit comfortably. In her suicide note she stated that she did not wish to live any longer as she was no longer able to help herself.

- A married woman of 47 years who was unable to drive a car and lift objects because of pain in the back, neck and arms. Despite physiotherapy her condition failed to improve whereupon she became very withdrawn and depressed about her incapacity and subsequently gassed herself with carbon monoxide.

- A married man aged 63 years who suffered a stroke four years before his death. He had previously enjoyed good health but the stroke left him partially paralysed. He became depressed and disorientated and finally drowned himself because of his feeling of incompetence.

Unemployment or loss of employment was identified as a reason for suicide in some cases. Two typical examples were:

- A married man, 58 years old, who was laid off from his farm labouring job after many years in that position. Despite his obtaining casual employment he became very concerned about the uncertainity of work and shot himself in the head.

- A 47 year old married man who became unemployed after many years in the one job, and killed himself with a drug overdose. While unemployed he became very withdrawn and wrote in his suicide note that he didn't have the strength to start again.

Other persons committed suicide because they faced problems with either their work or schooling and still others because of financial problems. Two examples of the latter include:

- A married man, 35 years old, who became depressed following his indebtness, a slump in the business he owned and discussions about his financial situation with his accountant and bank manager. When the medication for his depression failed to help he hanged himself.

- Another married man aged 56 years whose company was under a government investigation. According to his suicide note he felt there was not much more he coulddo but kill himself, this he succeeded in doing with the use of a rifle.

Suicides due to some degree to alcohol or drug abuse were not difficult to identify as most of the files of these cases included police and/or medical practitioners' statements or reports providing details of the alcohol or drug problem experienced by the deceased. Cases where suicide was considered to be caused by alcohol or drug abuse included the following:

- A single man aged 35 years who was described by several friends as a "heavy drinker" and as having "no other interest than drink". Police records indicated he had a history of drink-driving offences and he had been receiving medical treatment over many years for a liver complaint arising from his excessive drinking. He shot himself after making numerous threats to his workmates, these usually being made after heavy drinking sessions.

- A married woman, 59 years old, who had an alcoholic problem for many years and also suffered from nervous disorders, depression and asthma. She resented efforts by her husband to overcome her drinking problem and died following her injection of phosdrin and her consumption of an extremely large quantity of acohol.

- A 36 year old male with a historv of druq abuse who had attempted suicide on several occasions by overdosing. Possibly as a result of his drug problem he became depressed and run-down, and had no financial resources. He finally killed himself with an overdose of propoxyphene.

The commission of a crime, and in some cases apprehension following the offence, figures as a reason for suicide in several instances. These cases included those involving homicide followed by suicide as well as others where the deceased had become distressed after being apprehended for much less serious crimes such as shoplifting or motoring offences.

In some cases a sexual problem was clearly a reason for committing suicide although it is highly probable that some suicides occurred because of sex-related problems which were not identifiable from the available information. Two typical cases where it was considered that suicide occurred because of a sexual problem facing the individual were:

- A single male aged 21 years who was one of several men who had entered into a relationship with a particular woman. She claimed that she was pregnant to the deceased whereupon he became very worried and finally gassed himself to death.

- A single male, 39 years old, who had a homosexual relationship for some months and became very depressed over his partner's wish to end the relationship. He killed himself with a drug overdose,his suicide note explaining that he felt he had made a mess of his life.

There were numerous cases of suicide due to marital breakups or the feared separation from a spouse and a few others where the deceased was distressed about being separated from a person other than his or her spouse. Examples of the latter are:

- A married man aged 33 years who shot himself in a state of frenzy because of his anxiety over the possibility of his daughter leaving home. His wife was bedridden with a serious illness and his eldest child had already left home which undoubtedly contributed to his determination that his daughter should not be separated from him.

- A divorced woman, 45 years old, who became extremely upset when her lodger was hospitalised. Despite medical treatment her depression and agitation at being away from her lodger continued as did her concern with his ill-health. She threatened suicide on a number of occasions and eventually drowned herself.

There were the cases where interpersonal disputes contributed to a suicide occurring, most of these disputes being with family members. Sometimes interpersonal disputes were coupled by the deceased fearing separation from his or her spouse and/or children or some of the other reasons listed. In a small number of cases the individual committed suicide because of the fear of being institutionalised which was considered as being a separate reason to the fear of separation from family members or other persons.

Finally, it is appropriate to provide some examples of cases where the available information did not permit the identification of any reason for the suicide happening.

- A man aged 55 years living in a de-facto relationship who shot himself in his car. His sister-in-law stated that he always enjoyed good health, had not suffered from depression and did not have any financial worries. She was unable to offer any reason why he should commit suicide.

- A younger single male, 21 years old, who also shot himself in his car. According to his younger sister he was in good health and showed no signs of worry or anxiety shortly before his death.

- A man of 55 years who committed suicide by slashing the arteries of his left arm. A friend who lived in the hotel where the deceased was employed stated that a week before his death the deceased had left work early as he was feeling ill. This friend subsequently found the body but no suggestion as to the reason for his death was offered by him or, in the absence of other statements, any other person.

- A married man aged 58 years who hanged himself in a shed at the rear of his house. According to his wife the only unusual occurrence prior to his death was their son having a minor motor vehicle accident which made the deceased "slightly upset".

- A woman, 49 years old, who committed suicide by an overdose of barbiturates. It seems that she had also overdosed the day before her death. She was engaged to a man whom she had known for some years and left a somewhat incoherent suicide note to a friend which indicated no reason for her taking her life.

- A divorced man aged 40 years who drowned himself while visiting South Australia. His former wife last saw him several months prior to his death and provided no suggestions as to the reason for his suicide.

- A young single man of 17 years who hanged himself in his garage. His body was found by his father who gave no information as to why his son would want to take his life.

- A married man aged 51 years who died by cyanide poisoning. No information as to the reason for his suicide was available in the relevant file.

- A single male, 28 years old, who hanged himself. One of his friends stated that a few days before his death the deceased had been ill with influenza but did not seem depressed "or anything out of the ordinary."

It can be seen from the cases cited above that in many instances there was comparatively little difficulty in identifying the reason or reasons for suicide, while sometimes limited information made it much more difficult, if not impossible, to do so. The files from which information was extracted are compiled for administrative purposes to

determine the cause of an unnatural death. To a certain extent the reasons are irrelevant although they may help in excluding alternative causes of death (e.g. homicide or accidental) where they establish an intention to take one's life. Thus the authors were obliged to make their own interpretation of the reasons for suicide on the basis of the available facts. The subjectivity inherent in such interpretations was compounded in that it was not possible to generate mutually exclusive categories of reasons for suicide.

(b) Reasons for Suicide by Sex and Age

Table 57 presents, for each reason, the number of cases where that reason was identified and this number of cases as an percentage of all cases.

It can be seen that the most frequently identified reason among all cases was depression, this being found in 64.5 per cent of cases. The next most frequently identified reason was pain (17.8 per cent) followed by interpersonal disputes with family members (15.6 per cent), separation or feared separation from spouse (14.2 per cent), neurosis (13.5 per cent), alcohol abuse, dependency or addiction (10.6 per cent) financial problems (9.9 per cent) and incompetence (9.9 per cent). There were only a handful of cases where such reasons as psychosis, death of spouse, separation or feared separation from person other than spouse and interpersonal disputes with persons other than family members were identified as contributing towards the suicide.

TABLE 57

BREAKDOWN OF REASONS FOR SUICIDE (DETAILED LIST) BY SEX, SOUTH AUSTRALIA, 1978

Reason	Number of Suicides*			% Total Suicides		
	Male	Female	Total	Male	Female	Total
Neurosis	13	6	19	11.9	18.8	13.5
Psychosis	2	-	2	1.8	-	1.4
Death of Spouse	2	2	4	1.8	6.3	2.8
Death of person other than Spouse	7	3	10	6.4	9.4	7.1
Pain	18	7	25	16.5	21.9	17.7
Incompetence	7	7	14	6.4	21.9	9.9
Unemployment or loss of Employment	4	2	6	3.7	6.3	4.3
Problems with School or Work	10	2	12	9.2	6.3	8.5
Financial problems	13	1	14	11.9	3.1	9.9
Drug abuse, dependency or Addiction	5	2	7	4.6	6.3	5.0
Alcohol abuse, dependency or Addiction	13	2	15	11.9	6.3	10.6
Commission of a crime and/or criminal apprehension	11	1	12	10.1	3.1	8.5
Sexual problems	9	-	9	8.3	-	6.4
Separation or feared separation from spouse	16	4	20	14.7	12.5	14.2
Separation or feared separation from person other than spouse	3	1	4	2.8	3.1	2.8
Interpersonal disputes with family members	18	4	22	16.5	12.5	15.6
Interpersonal disputes with persons other than family members	5		5	4.6	-	3.5
Fear of institutionalization	6		6	5.5	-	4.3
Depression	67	24	91	61.5	75.0	64.5

Notes: * Number of suicides identified as having the given reasons.

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

The figures in this table also reveal that death of spouse as a reason was identified in fewer cases than death of another family member or other person, unemployment in fewer cases than either work/school related problems and financial worries, drug abuse in few cases than alcohol abuse and interpersonal disputes outside the family in fewer cases than such disputes within the family. The first of these findings warrants some further comment.

It may seem surprising that there were fewer cases of suicide arising from the death of a spouse than those due to some degree from the death of some other person. This may be explained in that only four of the 1978 cases involved widowed persons although many of the persons with unknown marital status were elderly and may well have been widowed during their lives. What is significant is in each of these four cases the death of the spouse was a contributing reason towards the suicide occurring. On the other hand there were ten cases where the death of a person other than the spouse was a contributing reason, these other persons usually being family members rather than non-family members.

The above breakdown of reasons for suicide also highlights the differences between the proportion of male suicides and the proportion of female suicides identified as having particular reasons. For example, the proportion of male suicides due, at least in part, to financial problems was threefold the magnitude of the proportion of female suicides where this reason was evident, while the proportion of female suicides where incompetence was a reason was more than threefold the magnitude of the proportion of male suicides (6.4 per cent) with this reason. A higher

proportion of males committed suicide because of psychosis, problems with school or work, alcohol abuse, dependency or addiction, commission of a crime and/or criminal apprehension, sexual problems, and separation or feared separation from spouse. Conversely a higher proportion of females was found to have committed suicide because of neurosis, death of spouse, death of person other than spouse, pain, unemployment or loss of employment, drug abuse, dependency or addiction, separation or feared separation from person other than spouse and depression, in addition to incompetence.

Some of these findings must be treated cautiously as the numbers of cases identified as having certain reasons are small. It is also noteworthy that there were no female suicides identified as being due to psychosis, sexual problems, interpersonal disputes with non family members and fear of institutionalisation.

Among the male suicides the most frequently identified reasons were depression (61.5 per cent), interpersonal disputes with family members (16.5 per cent), pain (16.5 per cent), separation or feared separation from spouse (14.7 per cent) and neurosis, financial problems and alcohol abuse (all 11.9 per cent). The most frequently identified reasons among the female suicides were depression (75.0 per cent), pain (21.9 per cent), incompetence (21.9 per cent) neurosis (18.8 per cent), separation or feared separation from spouse (12.5 per cent) and interpersonal disputes with family members (12.5 per cent).

A breakdown of reasons by age, in addition to that for reasons by sex, was also obtained, age and sex being the two demographic variables which were recorded in all cases. This breakdown presents, for each separate

reason, the percentage distribution by age of those cases identified as having that reason and thus enables the assessment of the propensity of persons in certain age groups to commit suicide for certain reasons. Table 58 indicates the age groups with the highest proportion of suicides for each reason, a table giving a full breakdown of reasons by age being far too large to present here.

It can be seen that the younger age groups have the highest proportion of suicides where school/work problems, drug abuse, interpersonal disputes outside the family, sexual problems and separation or feared from spouse or others were identified as reasons. The aged had the highest proportions of suicides with the reasons death of spouse or other person, neurosis, pain, incompetence, fear of institutionalisation and depression. The proportion of suicides due to unemployment, alcohol abuse, financial problems, interpersonal disputes within the family, psychosis and commission of a crime were highest among the middle age groups.

It is particularly significant that over 70 per cent of suicides involving those aged 65 years or over were due to some degree to depression and almost 60 per cent to pain. Almost 30 per cent of suicides among the 35-44 years age group were the result of interpersonal disputes with family members and almost one quarter were caused, at least in part, by alcohol abuse. Over one quarter of those aged 25-34 years killed themselves because of separation or feared separation from spouse while a similar proportion of suicides among the under 25 years age group involved the deceased experiencing sexual problems.

TABLE 58

REASONS FOR SUICIDE SHOWING AGE GROUPS WITH THE HIGHEST PROPORTION OF SUICIDES FOR EACH REASON

(Detailed List)

SOUTH AUSTRALIA, 1978

<25	25-34	35-44	45-54	55-64	65+
Problems with School or Work (21.1%)	Separation or feared separation from Spouse (27.6%)	Unemployement or loss of employment (14.8%)	Psychosis (9.1%)	Neurosis (21.7%)	Death of Spouse (9.5%)
Drug abuse, dependency or addiction (10.5%)	Separation or feared separation from person other than spouse (6.7%)	Financial Problems (14.8%)	Commission of a crime and/or criminal apprehension (18.2%)	Death of person other than spouse (13.0%)	Pain (57.1%)
Sexual problems (26.3%)		Alcohol abuse, dependency or addiction (22.2%)			Incompetence (28.6%)
Interpersonal disputes with persons other than family members (21.1%)		Interpersonal disputes with family members (29.6%)			Fear of Institutionalisation (9.5%)
					Depression (71.4%)

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978,

(c) Further Analysis of Reasons for Suicide

One of the major problems with the preceding analysis is the obvious difficulty in making interpretations where the number of categories of reasons is so large. The categorisation employed previously highlights the diversity of reasons for suicide among the cases examined, but it is apparent that some categories could be combined without appreciable loss of meaning. Accordingly, it was decided to reduce the (initial) list of nineteen reasons to a shorter one by clustering related categories together The initial and abbreviated lists of reasons for suicide are presented below.

REASONS FOR SUICIDE

INITIAL LIST	ABBREVIATED LIST
Neurosis Psychosis	Psychiatric diagnosis
Death of Spouse Death of person other than Spouse	Bereavement
Pain Incompetence	Physical Illness
Unemployment or loss of employment Problems with school or work Financial Problems	Education Employment, Financial Problems
Drug abuse, dependency or addiction Alcohol abuse, dependency or addiction	Alcohol and Drug Abuse.
Separation or feared separation from spouse Separation or feared separation from person other than spouse	Separation or Feared separation.

Interpersonal disputes with family members. Interpersonal disputes with persons other than family members	Interpersonal disputes
Depression	Depression
Sexual Problems	Sexual problems
Fear of Institutionalisation	Institutionalisation
Commission of crime and/or criminal apprehension	Crime

The last four categories in the initial list have been retained as four separate categories in the abbreviated list as it was considered inappropriate at this stage to cluster them into any broader category or categories. However, the remaining fifteen categories in the initial list have now been grouped into the first seven categories of the abbreviated list, thus reducing nineteen initial categories into eleven abbreviated ones.

Some clarification of the impact of the use of the abbreviated list on the identification of reasons for suicide is warranted at this stage. This is best illustrated by way of examples. The physical illness category in the abbreviated list comprises the pain and incompetence categories in the initial list of reasons for suicide. In the latter categorisation there were 25 cases where pain was identified and 14 cases where incompetence was identified as contributing towards suicide. However, there were only 33

cases where pain and/or incompetence were identified as in some cases both were evident. Hence the number of cases of suicide due to physical illness was less than the number of cases due to pain and incompetence when added together. A similar situation arose with respect to the category of education, employment and financial problems in the abbreviated list. On the basis of the initial categorisation of reasons there were 6 cases of suicide due to unemployment or loss of employment, 12 due to problems at school or work and 14 due to financial problems. The total number of suicides due to education, employment and financial problems, the relevant category in the abbreviated list, was only 30 as there were two cases where more than one of the three reasons in the initial categorisation were identified.

On the other hand there were no cases of suicide due to both death of a spouse and death of a person other than a spouse. Thus the number of cases identified as being due to bereavement corresponds to the number due to death of spouse combined with the number due to death of a person other than a spouse. It is interesting to note also that there were no cases of suicide involving both alcohol and drug abuse and no cases involving both interpersonal disputes within the family and interpersonal disputes with persons other than family members.

Some examples of cases where psychiatric diagnoses were identified as a reason for suicide include the following:

. A elderly man of 64 years who was resident in a rehabilitation centre for the mentally handicapped. He was treated for a severe mental condition for twelve months prior to his death, the treatment involving hospitalisation, but eventually hanged himself during a fit of depression.

. A married man aged 67 years who received psychiatric treatment for depression for two months before his death. He discharged himself from hospital shortly before he committed suicide by shooting himself in the heart.

Bereavement figures prominently as a reason for suicide in such cases as the following:

. A single male aged 31 years who became depressed following his father's death several months previously. His depression was worsened when he lost his job and he subsequently told his mother he wanted to die and wished he was dead. He killed himself with a shotgun wound to the head.

. A young single woman, 20 years old, who committed suicide by a drug overdose following her boyfriends death. She made no suicidal threats to her friends but left them a note saying all she wanted was her boyfriend and that she could never have him again.

. A widowed female of 66 years who became withdrawn and depressed after her husbands death and who found it difficult to discuss her problems with others. After making an indirect suicidal threat to her sister she hanged herself the following day.

Cases where physical illness was obviously a contributing reason for suicide including these:

. A married woman of 61 years suffering from a back complaint and prior to that pain in the arms. She received specialist treatment and was given medication but took her life with a barbituate overdose.

- Another elderly married woman aged 67 years who had experienced an accident five years before her death which damaged her left arm and resulted in the loss of sight in her left eye. She suffered from eye infections following the accident and became very depressed to the extent that she poisoned herself with barbituates.

- A man, 74 years old, who suffered from neuralgia and hypertension for several weeks before his death. He experienced difficulty in eating and lost a considerable amount of weight despite medical treatment. Before he was due to receive specialist treatment he shot himself in the head.

The fear of institutionalisation was a reason for suicide in some cases like the following:

- An elderly male, 81 years old, who was very depressed about having to enter hospital for treatment and consequently took a drug overdose shortly before he was due for admission.

- A divorced man aged 60 years who had been hospitalised for treatment of war injuries and, after being discharged was summonsed to attend court on a shoplifting charge. Afraid that he would be sent to jail on being convicted of the charge he shot himself in the head.

Table 59 presents, for each reason in the abbreviated list, the number of cases where that reason was identified and this number of cases as a percentage of all cases. Again figures for male, female and total suicides are provided.

TABLE 59

BREAKDOWN OF REASONS FOR SUICIDE (ABBREVIATED LIST)
BY SEX, SOUTH AUSTRALIA
1978

Reason	Number of Suicides*			% Total Suicides		
	Male	Female	Total	Male	Female	Total
Psychiatric diagnosis	15	6	21	13.7	18.8	14.9
Bereavement	9	5	14	8.2	15.7	9.9
Physical Illness	22	11	33	20.2	34.4	23.4
Education, Employment and financial problems	25	5	30	22.9	15.6	21.3
Alcohol and drug abuse	18	4	22	16.5	12.6	15.6
Separation or feared separation	19	5	24	17.5	15.6	17.0
Interpersonal disputes	23	4	27	21.1	12.5	19.1
Depression	67	24	91	61.5	75.0	64.5
Sexual Problems	9	-	9	8.3	-	6.4
Institutionalisation	6	-	6	5.5	-	4.3
Crime	11	1	12	10.1	3.1	8.5

Notes: * Number of suicides identified as having the given reasons

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

On the basis of the abbreviated categorisation of means we now find that after depression, physical illness was the most frequently identified reason for suicide in all cases examined (23.4 per cent) followed by education, employment and financial problems (21.3 per cent), interpersonal disputes (19.1 per cent) and separation or feared separation (17.0 per cent).

Amongst the male suicides the most frequent reasons for suicide were depression (61.5 per cent), education, employment and financial problems (22.9 per cent), interpersonal disputes (21.1 per cent) and physical illness (20.2 per cent), while the most commonly identified reasons for suicide by females were depression (75.0 per cent), physical illness (34.4 per cent), psychiatric diagnosis (18.8 per cent) and bereavement (15.7 per cent).

It can also be seen that the proportion of male suicides where interpersonal disputes was identified as a reason was almost twice as high as the proportion of female suicides with that reason, and that education, employment and financial problems, alcohol and drug abuse and separation or feared separation were also identified more frequently in the male, as compared to the female, suicides. On the other hand the proportions of female suicides where bereavement and physical illness were considered reasons were much higher than the magnitude of the corresponding proportions of male suicides.

A breakdown of the abbreviated list of reasons by age was also obtained, as was done with respect to the detailed list, and Table 60 depicts the age groups with the highest proportion of suicides for each reason. This table highlights the significance of sexual problems, interpersonal disputes and separation or feared separation as reasons for suicide among the younger age groups; education, employment and financial problems, drug and alcohol abuse and crime among the middle aged; and psychiatric conditions, bereavement, physical illness, institutionalisation and depression among the aged.

TABLE 60

REASONS FOR SUICIDE SHOWING AGE GROUPS WITH THE HIGHEST PROPORTION OF SUICIDES FOR EACH REASON

(Abbreviated List)

SOUTH AUSTRALIA, 1978.

<25	25-34	35-44	45-54	55-64	65+
Sexual Problems (26.3%)	Separation or feared Separation (34.3%)	Education, Employment and Financial problems (30.7%)	Crime (18.2%)	Psychiatric Diagnosis (21.7%)	Physical Illness (71.4%)
Interpersonal disputes (36.9%)		Drugs and Alcohol abuse (22.2%)		Bereavement (17.3%)	Institutionalisation (9.5%)
					Depression (71.4%)

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

It is noteworthy that over 70 per cent of the suicides among the 65 years and over age group were due to physical illness and a similar proportion to depression. Almost one-third of suicides committed by those aged 35-44 years arose because of education, employment or financial problems and over one-third of suicides involving persons aged less than 25 years were caused to some degree by interpersonal disputes.

It should be remembered that the figures in this table do not give a complete picture of differences between a particular reason across age groups as they apply only to that age group with the highest proportion of suicides due to each reason. Sometimes the differences in proportions across age groups for a given reason were considerable and sometimes the differences were less marked.

For example, depression was identified in at least half the suicides in each age group, and in the 45-54 and 55-64 year age groups the proportions of suicides attributable to depression were only marginally lower than the proportion for the 65 years and over group which scored highest. In other words, depression was a significant reason in suicides committed amongst persons in all age groups but was most significant amongst the elderly. Bereavement was most significant among the 55-64 years age group although the proportion of suicides in the 35-44 years age group due to this reason was only slightly lower than the proportion of suicides by members of the former group. Education, employment and financial problems were most pronounced among the 35-44 years age group but contributed towards only a slightly lower proportion of suicides in the under 25 years

and 45-54 years age groups. On the other hand, the proportion of suicides in the under 25 years age group where sexual problems were identified as a reason was more than double the magnitude of the proportion for the 35-44 years age group which had the second highest incidence of suicide due to this particular reason.

(d) Regrouping of Reasons under Major Headings

Having clustered the initial categorisation of nineteen reasons into an abbreviated list of eleven reasons, and having analysed both with respect to age and sex, the authors regrouped these under the major headings of physical, mental, economic and social reasons for suicide as these appeared to be applicable.

This necessarily involved some reduction in the detail of the abbreviated categorisation of reasons but seemed a justifiable way of providing perspective.

The categories of reasons for suicide in the abbreviated list were clustered according to whether they wer related to the mental, physical, economic or social well-being of the individual.

REASONS FOR SUICIDE (Abbreviated List) REGROUPED INTO FOUR CATEGORIES.

Reasons for Suicide (Abbreviated List)	Major Categories
Psychiatric diagnosis	Mental Well-Being
Depression	
Physical Illness	Physical Well-Being
Drug and Alcohol Abuse	
Education, Employment and Financial Problems	Economic Well-Being
Bereavement	Social Well-Being
Separation	
Interpersonal Disputes	
Sexual Problems	
Crime	
Institutionalisation	

Obviously the above clustering of the abbreviated list of eleven reasons into only four major categories has numerous shortcomings arising from the subjectivity of any such clustering - as well as a number of other factors. For example, it could be argued that drug and alcohol abuse may have a negative impact on the mental, economic and social well-being of the individual as well as, if not more so than, his or her physical well-being. It may well be that the institutionalisation of a person may have a negative impact on the mental, physical and economic well-being of that individual to the same degree, or a greater degree, than his or her social well-being.

On the other hand, reducing the initial list of nineteen reasons to an abbreviated list of eleven reasons and then clustering the latter into four major categories of reasons for suicide (i.e. the absence of mental, economic, social and physical well being of the individual) has some analytic convenience without an over-distortion of the information already provided in detail for the individual cases. It is emphasized that the analysis of reasons for suicide in this study has had to be exploratory but its purpose is to prompt others to identify and assess the reasons for suicide using more sophisticated techniques.

Table 61 presents the breakdown of major categories of reasons by sex. Again it must be appreciated that the number of suicides considered to be caused by detrimental aspects of the individual's mental well-being, for example, comprises the number of cases where psychiatric diagnosis and/or depression were identifiable. The number of cases where negative aspects of the individual's physical well-being were identified as contributing to suicide consists of the number of cases where physical illness and/or drug and alcohol abuse were considered by the authors on the evidence in the file to be major precipitants of suicide. The economic and social categories were treated in the same way.

It can be seen that mental well-being was the most frequently identified major category, being evident in 68.8 per cent of all cases. It must be remembered that the significance of mental well-being will not necessarily be the same for all age groups of males and females. This is dealt with below.

TABLE 61

BREAKDOWN OF MAJOR CATEGORIES OF REASONS FOR SUICIDE BY SEX, SOUTH AUSTRALIA, 1978

Major Categories	Number of Suicides			% Total Suicides		
	Male	Female	Total	Male	Female	Total
Mental Well-being	71	26	97	65.1	81.3	68.8
Physical Well-being	36	14	50	33.0	43.8	34.5
Economic Well-being	25	5	30	22.9	15.7	21.2
Social Well-being	53	10	63	48.6	31.3	44.7

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

The next most significant major category was social well-being (44.7 per cent), then physical well-being (34.5 per cent) and economic well-being (21.2 per cent).

Over eighty per cent of the female suicides and just under two thirds of the male suicides were due, to some extent, to the deceased having poor mental well-being. This means that whatever other categories were operative the mental well being was the most general. This is not very surprising since all other categories would be likely to be accompanied by a deterioration of mental health. Among females physical well-being was the second most frequently identified major category (43.8 per cent) but for males social well-being (48.6 per cent) was the next most significant major category after mental well-being. Economic well-being was identified less frequently than any of the other major categories in both the male and female suicides but was slightly more significant among the former.

Thus while mental well-being was the most significant major category and economic well-being the least significant major category, in both the male and female suicides, there was a higher proportion of female suicides due to mental well-being and a higher proportion of male suicides due to economic well-being. A higher proportion of females, as compared to males, committed suicide because of their having detrimental physical well-being while the opposite was the case with respect to social well-being.

Table 62 gives a full breakdown of the major categories by age. The figures represent the relative frequency with which each of the major groupings occurs in each age group. Because a single case may have been identified as having reasons in more than one of the major groupings it is clear that the column totals will exceed 100 per cent.

It can be seen that mental well-being was the most frequently identified of the major groupings in all age groups except the group aged under 25 years. Among those aged 35-44, 45-54, 55-64 and over 65 years, mental well-being was identified in over 70 per cent of the cases. Physical well-being was most evident in the older age groups (47.8 per cent of the suicides among those aged 55-64 years and 71.4 per cent among those aged 65 years and over) but was significantly less important among the young.

TABLE 62

PERCENTAGE OF SUICIDES IN EACH AGE GROUP FOR EACH MAJOR CATEGORY, SOUTH AUSTRALIA. 1978.

Major Category	AGE (Years)					
	< 25	25-34	35-44	45-54	55-64	65+
Mental Well Being	57.9	60.0	73.1	77.3	73.9	71.4
Physical Well Being	15.8	23.3	34.6	22.7	47.8	71.4
Economic Well Being	26.4	23.3	30.7	27.2	13.0	4.8
Social Well Being	73.7	43.3	61.5	36.4	30.4	23.8

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

Economic well being in most age groups was less important than either mental or physical well being and was most frequently identified in suicides committed by those aged 35-44 (30.7 per cent), 45-54 (27.2 per cent) and under 25 years (26.4 per cent). Unlike physical well being it was identified in only a small proportion of suicides among the aged. The importance of social well being tends to decrease with increasing age, this major grouping being identified in 73.7 per cent of suicides among those aged less than 25 years and 61.5 per cent of suicides in the 35-44 years age group but only 23.8 per cent of cases involving persons aged 65 years or more. It is also worthy to note that unlike other age groups, the under 25 years group had a higher proportion of suicides resulting from aspects of social well-being than elements of mental well-being.

In brief it can be seen that mental well-being is a major category in over half the suicides in each age group and is particularly important among suicides by those aged 35-64 years. Physical well-being tends to increase in importance with increasing age while social well being tends to decrease in importance with increasing age. Economic well being is particularly important in suicides committed by the young and those in the 35-54 years age bracket but much less significant in suicides among the elderly. These findings are highlighted in Figure 16 which graphically presents the data in the previous table.

Another aspect of this analysis worthy of brief consideration is the distribution of the major groupings across the age groups. Table 63 gives the percentage distribution of each major factor by age. That is, the figures represent, for each major grouping, the relative grequency of that grouping between the various age categories.

TABLE 63

PERCENTAGE DISTRIBUTION OF MAJOR CATEGORIES OF REASONS IN SUICIDE BY AGE. SOUTH AUSTRALIA, 1978.

Major Categories	Age (Years)						
	< 25	25-34	35-44	45-54	55-64	65+	Total
Mental Well-Being	11.3	18.6	19.6	17.5	17.5	15.5	100.0
Physical Well-Being	6.0	14.0	18.0	10.0	22.0	30.0	100.0
Economic Well-Being	16.7	23.3	26.7	20.0	10.0	3.3	100.0
Social Well-Being	22.2	20.6	25.4	12.7	11.1	7.9	100.0

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978.

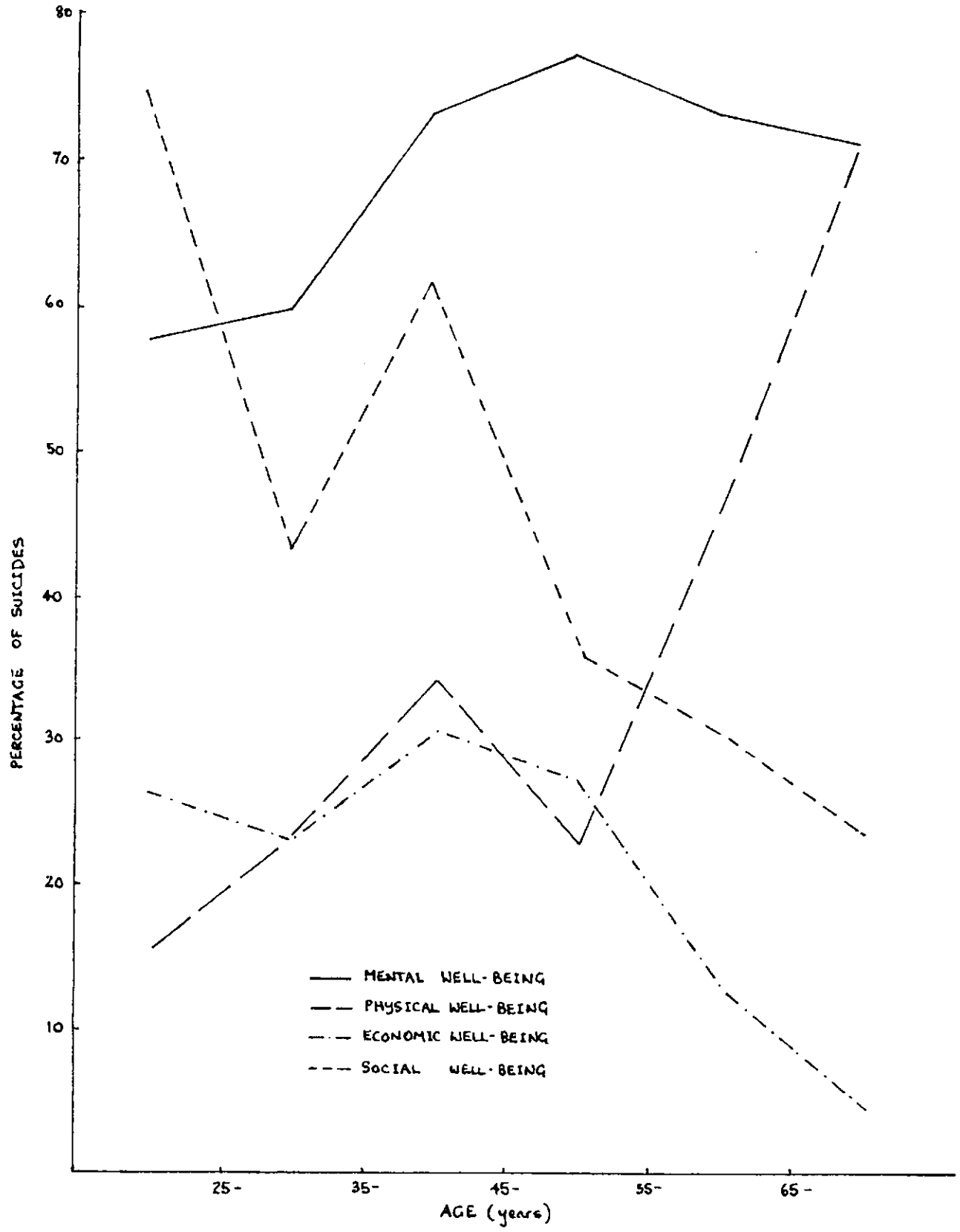


FIGURE 16

MAJOR FACTORS IN SUICIDE :

PERCENTAGE OF SUICIDES IN EACH AGE GROUP FOR EACH MAJOR FACTOR

SOUTH AUSTRALIA, 1978

Not surprisingly the lack of physical well being becomes a more important instigator of suicide with advancing age. It is relatively unimportant for persons under 25. Perhaps less to be expected is the evidence that mental ill health is a precipitant of suicide in the middle ranges of the life cycle but much less important in youth and is apparently beginning to be a less important factor after 64 years of age. Again to be expected is the predominance of economic circumstances for people 25-54 but this should be read in conjunction with the relatively high degree of importance accorded to social well being by all age groups up to 44.

In many ways this table is a sad but perhaps accurate reflection of the changes of attitude to life during the progression from youth to old age.

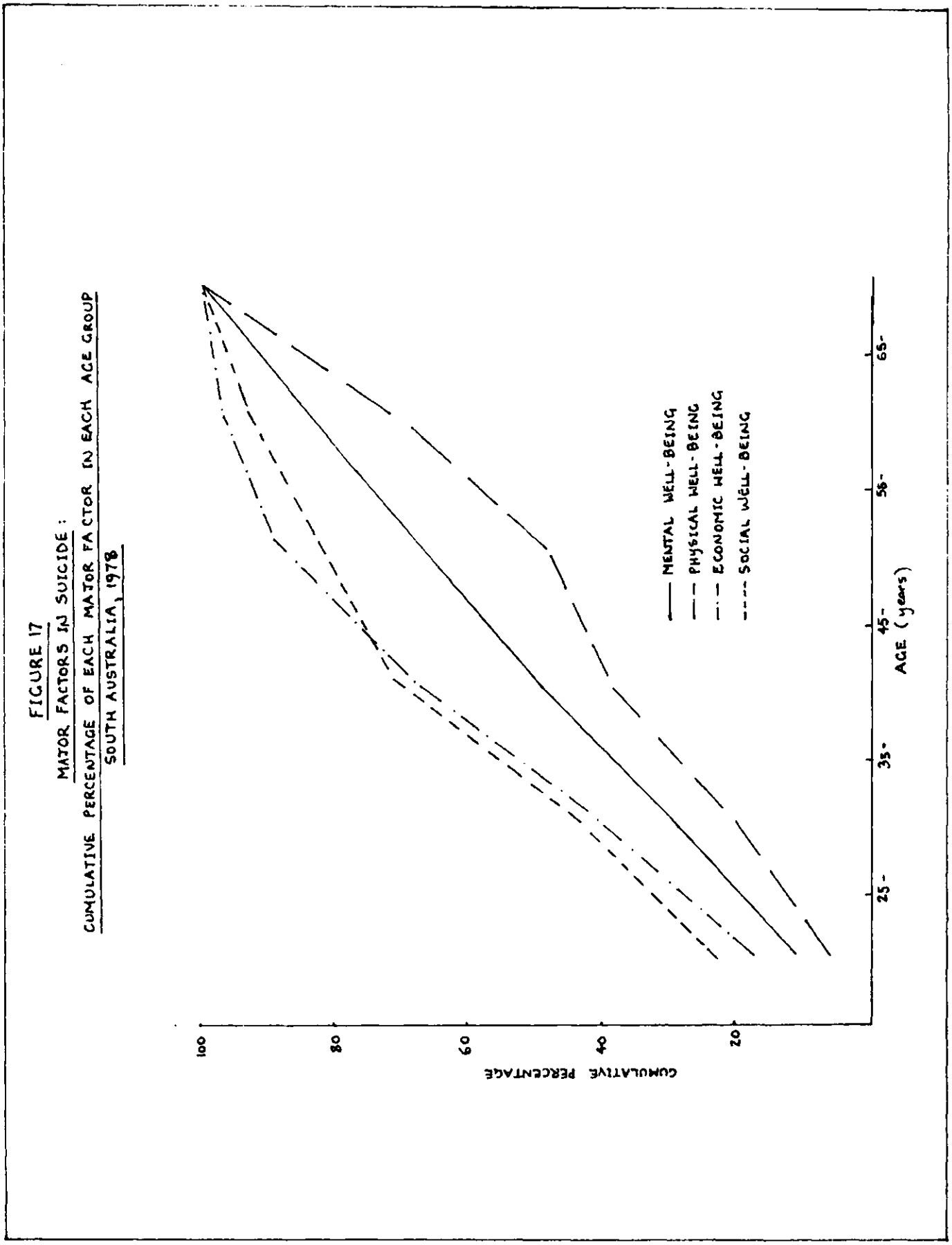
The singificance of the major groupings across the age spectrum is presented graphically in Figure 17 which gives the cumulative percentages of the distribution in Table 63. While this figure reproduces the data in this table to some extent it is really showing the cumulative "spread" of the major groupings across the ages. It can be seen that mental well-being is fairly evenly spread between the respective age groups, the cumulative frequency of this grouping rising steadily with age. Physical well-being was particularly prevalent among the aged and hence the curve for this major grouping rises steeply across the older age groups. Economic and social well-being are more concentrated among the young and middle-aged and hence the curves for these groupings tend to flatten out across the older age groups.

FIGURE 17

MAJOR FACTORS IN SUICIDE :

CUMULATIVE PERCENTAGE OF EACH MAJOR FACTOR IN EACH AGE GROUP

SOUTH AUSTRALIA, 1978



The above discussion has endeavoured to present a comprehensive picture of reasons for suicide in the South Australian cases studied. This necessitated the determination of a detailed classification of reasons capable of accommodating all reasons for all cases. In many cases more than one reason was identifiable as contributing to suicide and as it was not possible to give weights to these different reasons it was necessary to treat them equally. The clustering of the initial categories into an abbreviated list of reasons and the further clustering of the latter into major factors were done to aid the identification of trends and patterns in reasons for suicide between the sexes and between age groups and to reduce the mass of relevant data to a data set of manageable proportions. While the method employed is neither sophisticated nor without its faults it is felt that the findings can be useful.

Summary of Findings

(a) A wide range of reasons for committing suicide was identified for the 1978 cases. In 8 per cent of cases it was not possible to identify any reason or reasons for the suicide occurring while in a further 8 per cent of cases four or more reasons were identified.

(b) Among the detailed list of reasons the most frequently identified were depression (65 per cent), pain (18 per cent), interpersonal disputes with family members (16 per cent) and separation or feared separation from spouse (14 per cent).

(c) Death of a spouse was a less common reason for suicide than death of other family members or persons outside the family, unemployment was a reason in fewer cases than either work/school related problems and financial worries and drug abuse was a less frequently identified reason than alcohol abuse.

(d) The distribution of reasons for suicide differed markedly as between the sexes. The proportion of male suicides due, at least in part, to financial problems was three times the proportion of female suicides while the proportion of female suicides where incompetence was a reason was more than threefold the proportion of male suicides. A higher proportion of male committed suicide because of such factors as
(a) school.work problems,
(b) alcohol abuse and
(c) sexual problems.
A higher proportion of females committed suicide because of
(a) neurosis,
(b) death of spouse or other persons,
(c) pain,
(d) unemployment or loss of employment and
(e) drug abuse.

(e) Persons in the younger age groups tended to commit suicide because of school/work problems, drug abuse, interpersonal disputes with non-family members and sexual problems while the elderly tended to do so because of the death of spouse or other person, neurosis, pain, incompetence, fear of institutionalisation and depression.

(f) Among the abbreviated list of reasons the most frequently identified were depression (65 per cent), physical illness (23 per cent), education, employment and financial problems (21 per cent), interpersonal disputes (19 per cent) and separation or feared separation (17 per cent).

(g) The major groupings of reasons for suicide were identified as mental well-being (69 per cent), social well-being (45 per cent), physical well-being (35 per cent) and economic well-being (21 per cent).

(h) Mental well-being was a major grouping in over 80 per cent of female suicides but in only 65 per cent of male suicides while social well-being was identified as a major grouping in almost half of the male suicides but less than a third of the female suicides.

(i) Physical well-being was identified in a higher proportion of female suicides than male suicides while the reverse was the case with economic well-being.

(j) Mental well-being was particularly evident in suicides by persons aged 45-64 years and physical well-being among those aged 55-64 and 65 years andover. Economic well-being was identified most frequently in the younger and middle age groups and social well-being in the under 25 years and 35-44 years age groups. Physical well-being tended to increase in importance, and social well-being tended to decrease in importance, with increasing age.

NOTES ON CHAPTER 8

(1) While in South Australia in 1978 the under 25 years of age group accounted for 13.5 per cent of all suicides, the proportion for Western Australia during the same year was 24.0 per cent, almost double the proportion for South Australia. In 1977 the latest year for which national age specific data is available, 16.2 per cent of all suicides in Australia were committed by persons under 25 years of age.

(2) An identical system for classifying de facto relationships in terms of conventional marital status categories was also used in the Western Australian study.

(3) The Western Australian study revealed only three suicides involving unusual methods. One case of suicide by electrocution and another by two by suffocation using plastic bags were identified, but there were no instances of burning, or jumping in front of trains. On the other hand two persons in Western Australia suicided by jumping from buildings and there were no cases employing this method in South Australia.

(4) The South Australian Government has recently authorised the installation of a computerised firearms control system at Central Police Headquarters. This system is being developed in accordance with new firearms legislation expected to be introduced later this year.

CHAPTER 9

UNUSUAL CASES OF SUICIDE IN SOUTH AUSTRALIA DURING RECENT YEARS.

The following discussion is concerned with describing some of the more unusual suicides which have occurred in South Australia during the past seven years or so. Where appropriate, reference is made to those cases for 1978 which have unusual characteristics. Those cases considered below have been selected on the basis of the personal characteristics of the deceased, the method employed or the circumstances surrounding the death of the individual concerned. One of the main objectives of this discussion is to highlight the diversity of persons who kill themselves, the range of techniques adopted and the variety of circumstances which lead people to kill themselves.

Young Suicides

Since mid-1972 there have been no fewer than nine suicides in South Australia involving persons aged fifteen years or less, two of which occurred in 1978. Though the numbers of young suicides in South Australia, and indeed Australia, are not great it is of some concern that young people of fourteen, thirteen or even twelve years of age take their own lives.

All except one involved males and the methods employed were principally solid or liquid poisoning and shooting. Most of those young people were students although

a few had completed their schooling. The reasons for their committing suicide varied but problems at school or with schoolwork, difficulties with interpersonal relationships and comparatively minor brushes with the law were all identified. In at least one case it appears that the young person probably did not intend to take his own life but rather was more concerned with only injuring himself.

There was a case of a thirteen year old male who shot himself after being scolded by an adult for riding the adult's motor cycle without permission and subsequently damaging it. A youth of fourteen shot himself after being apprehended for breaking into a car and, prior to that, being cautioned over a minor criminal offence. A fifteen year old school student poisoned himself for no apparent reason but may have been experiencing difficulties in coping with school work and problems with fellow students. And recently there was the case of a fifteen year old boy who burned himself to death using methylated spirits in a paddock.

It is also important to note that in virtually all these cases of suicide there was no previous history of attempted suicide and usually no suggestion as to suicidal intent. The death of these young people was almost invariably a complete shock to relatives and friends who were at a loss to explain why they had taken their lives.

Unusual Methods

The foregoing analysis of the 1978 cases reveals that a small number of suicides were committed using rather unusual methods. The three instances of burning, the one involving electrocution and the two cases where death

was caused by persons jumping in front of trains can all be considered as unusual suicides.

Initially there was some surprise that three of the 1978 cases involved burning as this method is seemingly uncommon in Australia.

However, no less than twelve other cases of burning in South Australia have been identified since mid-1972. They involved people with a diversity of personal attributes although many were receiving psychiatric treatment or confined to a psychiatric institution at the time of their death. Some burned themselves with petrol while others used kerosene, methylated spirits or oil. None of these suicides were of the altruistic type where the individual performs a public self-immolation for a particular cause; most occurred when the individual was alone.

In one instance a man was suffering from acute depression and hypertension which worsened when his wife died. Initially he tried to kill himself with self-inflicted "wounds to the skull" with an axe but finally he succeeded in burning himself. It appears that a day or two prior to his death, this man had heard of a case in Melbourne where a man had set fire to a woman and had commented to a neighbour that "it wouldn't be a bad way to go".

A young woman with a history of drug usage burnt herself to death while a member of a small but well known religious group. While the reasons for her death are not clear, she was depressed after a friend had died from a drug overdose.

Then there was the case of an elderly woman who filled the bottom of her bathtub with a mixture of water and petrol and then set herself alight. She had suffered a nervous breakdown three months previously and complained of acute physical pain prior to her death.

There have been at least two recent cases of self-electrocution in addition to the one during 1978, each of which involved persons receiving psychiatric treatment. Four cases of persons jumping or laying in front of trains have also been identified other than the two which occurred in 1978. It is interesting that three of these six cases involved elderly people suffering from various painful complaints.

Other unusual methods which have been used to commit suicide include self destruction with explosives such as gelignite, the swallowing of razor blades, deliberate motor vehicle crashes and jumping in front of motor vehicles. What these illustrate is that the person determined to kill himself will find a way and has a considerable range of methods from which to choose.

Homicide and Suicide

It has been noted previously that there were three cases of homicide-suicide in South Australia during 1978. During 1974 there were two such cases. The first occurred when a man shot himself after shooting his wife and daughter and attempting to murder his son. The second case involved a man who shot his wife, three children and himself. In 1975 there was a case where a man murdered his wife before hanging himself. The following year there were two further cases of homicide-suicide both involving men who shot their wives then themselves.

What is important to note is that, of the eight recent cases of homicide-suicide, all but one of the persons involved in a particular case were members of the same family. Furthermore, all persons in these cases died by the use of firearms - with the notable exceptions of (a) the man who took an overdose following the shooting of his wife and younger son and;

(b) the case of homicide followed by self-hanging.

Suicide Leading to Suicide

In two cases, one in 1976 and one in 1978, the suicide of one person contributed to the subsequent suicide of another. One involved a young man who became constantly depressed following the suicide of a very close friend four months earlier. After many suicidal threats, but prior to psychiatric treatment which had been arranged for him, he shot himself. Whether he was upset at the loss of a friend or he blamed himself for not preventing his friend's suicide is not known.

The other case involved a young man whose girlfriend was murdered by her estranged husband who then killed himself. He became distraught at this sudden turn of events and killed himself shortly after the homicide-suicide occurred. Cases of one suicide leading to another suicide are not unknown in South Australia but are, as is to be expected, comparatively rare. Much more common are the instances of suicide arising from bereavement over another's death (natural or accidental).

CHAPTER 10

SUICIDE IN SOUTH AUSTRALIA AND WESTERN AUSTRALIA DURING 1978 - A COMPARATIVE ANALYSIS.

A study of suicide in Western Australia has previously been conducted by the authors. This study was largely based on the cases of suicide in that state which occurred during 1978 for which information was extracted from files maintained by the Crown Law Department. The following section briefly compares the findings of the study with these of the present investigation of suicide cases in South Australia during 1978.

Personal Characteristics

Table 64 presents comparisons between the socio-demographic characteristics of those individuals who committed suicide in each state during 1978. Numbers, percentages and rates of suicide in both states are given by sex, age and marital status. Rates are based on data from the 1976 census for the same reasons as outlined in the previous section dealing with the cases for South Australia,as well as for purposes of standardisation between the two states. Furthermore, those individuals in Western Australia living in de-facto relationships have been, where appropriate, classified as either single or married on the same basis as outlined previously. The approximate Western Australian suicide rate for 1978 of 8.7 was well below that South Australian rate of 11.3, these rates, as noted earlier, being based on the date of death rather than the traditional date of registration. While in South Australia it was possible to also categorise suicides according to occupation and usual major activity,

this was not always possible, and not attempted, for the Western Australian cases.

As shown, the distribution of suicides by sex in both States were essentially similar but the age distribution differed markedly with Western Australia having higher proportions of suicides in the under 25, 35-44 and 45-54 year age groups and South Australia having higher proportions among the 55-64 and 65 years and over groups.

Taking the rates for the males and females, South Australia came out higher although the ratio of male to female suicides was almost identical. In Western Australia the suicide rates for the under 25 years and 45-54 years age groups were higher than those for South Australia and both these groups accounted for higher proportions of suicides in Western Australia than in South Australia.

It should be noted that the South Australian suicide rate for the 25-34 year olds was almost double that of Western Australia's (16.1 and 8.7 respectively) while the rate for the 55-64 year olds in South Australia was more than double that of Western Australia (20.2 and 8.0 respectively).

In both proportions and rates married people in South Australia were more likely to commit suicide than in Western Australia where it was the single, divorced, widowed or separated who were more vulnerable.

TABLE 64

COMPARISONS BETWEEN SOCIO DEMOGRAPHIC CHARACTERISTICS OF SUICIDES

SOUTH AUSTRALIA AND WESTERN AUSTRALIA

1978

		South Australia			Western Australia		
		Number (N = 141)	%	Rate*	Number (N = 100)	%	Rate*
Sex :	Male	109	77.3	17.6	78	78.0	13.4
	Female	32	22.7	5.1	22	22.0	3.9
Age :	< 25	19	13.5	8.6	24	24.0	11.7
	25-34	30	21.3	16.1	16	16.0	8.7
	35-44	26	18.4	19.0	21	21.0	15.9
	45-54	22	15.6	15.4	21	21.0	18.0
	55-64	23	16.3	20.2	7	7.0	8.0
	65+	21	14.9	18.5	11	11.0	12.1
Marital Status :							
	Single	35	24.8	15.9	34	34.0	16.2
	Married	63	44.7	10.7	35	35.0	6.8
	Divorced, Widowed or Separated	25	17.7	23.1	25	25.0	27.5
	Unknown	18	12.8	-	6	6.0	-

Sources : Records of the Department of the Attorney General of South Australia, Adelaide 1978
Clifford and Marjoram (1979) : pp. 26-31.

Methods Employed

A comparison of methods employed in suicide in both states during 1978 is given in Table 65.

TABLE 65

COMPARISONS BETWEEN METHODS EMPLOYED IN SUICIDE

SOUTH AUSTRALIA AND WESTERN AUSTRALIA

1978

Method	South Australia			Western Australia		
	Number (N = 141)	%	Rate	Number (N = 100)	%	Rate
Poisoning (solids or liquids)	40	28.4	3.2	29	29.0	2.5
Poisoning (all gases)	11	7.8	0.9	25	25.0	2.2
Hanging, Strangulation and suffocation	28	19.9	2.2	15	15.0	1.3
Cutting and Piercing Instruments	1	0.7	0.1	3	3.0	0.3
Firearms and Explosives	48	34.0	3.9	22	22.0	1.9
Submersion (drowning)	7	5.0	0.6	3	3.0	0.3
Jumping from high places	-	-	-	2	2.0	0.2
Other	6	4.3	0.5	1	1.0	0.1

Sources: Records of the Department of the Attorney General of South Australia, Adelaide, 1978
Clifford and Marjoram (1979) : pp. 34-41.

What is important here is that in no less than 63.4 per cent of all the South Australian cases of suicide, either firearms or poisons (liquid or solid) were used. This percentage in Western Australia was "only" 51. If the carbon monoxide poisoning be added then the South Australian percentage is increased to 71.2 per cent, but interesting enough the Western Australian percentage is higher. i.e. 76.0 per cent. It is the disproportion which is not quite so evident in Western Australia where carbon monoxide poisoning was more popular - rising to a figure quite near that for other poisons and above that for firearms. Although Western Australian cases were 76 per cent poisonings (all types) and firearms the distribution between these methods was more even; and shooting and poisonings (liquid and solid) did not stand out quite so much. Moreover the 34.0 per cent of cases in which firearms were used in South Australia contrasts fairly sharply with the 22.0 per cent in Western Australia.

The latest Australian figures (for 1977) as shown by Table 11 in Chapter Four indicate that nationally 27.2 per cent of the suicides in that year used solid or liquid poison and 26.8 per cent used firearms. It is clear therefore that these methods of committing suicide in South and Western Australia do not diverge very much from the national picture - except perhaps that firearms are more frequently used in South Australia.

In both States solid or liquid poisoning accounted for a similar proportion of total suicides though the South Australian rate for this method (3.2) was higher than that in Western Australia (2.5). Hanging was more often favoured in South Australia than in Western Australia.

Conversely, hanging was slightly more favoured in South Australia with a rate in that state of 2.2 compared to Western Australia's 1.3. Suicide by firearms and explosives also accounted for a higher proportion of suicides in South Australia than in Western Australia and the rate in the former for this particular method (3.9) was much higher than the Western Austalia rate of 1.9.

Suicide Notes, Previous Attempts at Suicide and Suicidal Threats.

Table 66 summarizes the incidence of suicide notes among the South Australian and Western Australian cases for 1978.

TABLE 66

COMPARISONS OF SUICIDES WITH NOTES AND WITHOUT NOTES - SOUTH AUSTRALIA AND WESTERN AUSTRALIA 1978.

	South Australia				Western Australia			
	With Notes		Without Notes		With Notes		Without Notes	
	Number	%	Number	%	Number	%	Number	%
Males	39	35.8	70	64.2	24	30.8	54	69.2
Females	9	28.1	23	71.9	8	36.4	14	63.6
Total	48	34.0	93	66.0	32	32.0	68	68.0

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978. Clifford and Marjoram (1979) p.67.

It is interesting that in 32 (32 per cent) of the Western Australian cases suicide notes were left compared to 48 (34 per cent) of the South Australian cases. The incidence of suicide notes according to the sex of the deceased is also quite similar in both states with 36 per cent of South Australian and 31 per cent of Western Australian males leaving notes and 28 per cent of females in South Australia writing suicide notes compared to 36 per cent of those in Western Australia.

The incidence of previous suicidal attempts in the 1978 cases for both states is presented in Table 67.

TABLE 67

COMPARISONS OF SUICIDES WITH PREVIOUS ATTEMPTS AND WITHOUT PREVIOUS ATTEMPTS - SOUTH AUSTRALIA AND WESTERN AUSTRALIA 1978.

	South Australia				Western Australia			
	With Previous Attempts		Without Previous Attempts		With Previous Attempts		Without Previous Attempts	
	No.	%	No.	%	No.	%	No.	%
Males	24	22.0	85	78.0	12	15.4	66	84.6
Females	9	28.1	23	71.9	10	45.5	12	54.5
Total	33	23.4	108	76.6	22	22.0	78	78.0

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978
Clifford and Marjoram (1979) : pp 41-42.

In both States slightly less than one quarter of suicides involved persons who had previously attempted suicide on at least one occasion. However, a slightly higher proportion of South Australian males as to compared to males in Western Australia, had previously attempted suicide, while in Western Australia a considerably higher proportion of females had previously attempted suicide compared to females who committed suicide in South Australia. It must be remembered, however, that the nature of the documentation of suicides from both States strongly suggests that there was more information on attempted suicides in the South Australian cases than in those for Western Australia. Only four (18 per cent) of those individuals in Western Australia with a history of attempted suicide wrote a suicide note before killing themselves compared to twelve (36 per cent) in South Australia.

Unfortunately, it was not possible to explore the incidence of suicidal threats in the Western Australian cases.

Location of Suicides

Table 68 compares the location of suicides in South Australian and Western Australia based on the place of residence of the deceased.

Of the total cases in South Australia, 108 (76.6 per cent) involved metropolitan residents, 19 (13.5 per cent residents of other urban areas and 13 (9.2 per cent) residents of rural areas. Of the total cases in Western Australia 70 (70 per cent) were metropolitan residents, 22 (22 per cent) residents of other urban centres and 7 (7 per cent) residents of rural areas.

TABLE 68

COMPARISONS OF LOCATION OF SUICIDES - SOUTH AUSTRALIA AND WESTERN AUSTRALIA 1978

Place of Residence	South Australia				Western Australia			
	Males		Females		Males		Females	
	No.	%	No.	%	No.	%	No.	%
Metropolitan	85	78.0	23	71.9	55	70.5	15	68.2
Other Urban	10	9.2	9	28.1	18	23.1	4	18.2
Rural	13	11.9	-	-	4	5.1	3	13.6
Other	1	0.9	-	-	1	1.3	-	-
Total	109	100.0	32	100.0	78	100.0	22	100.0

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978. Clifford and Marjoram (1979) : pp. 32-33

There was a much higher proportion of male suicides in other urban centres in Western Australia than there were in South Australia, but in the latter the proportion of female suicides in these localities was noticeably higher than in Western Australia.

A comparison of sex specific numbers and rates of suicide in the metropolitan and non-metropolitan regions of both States is given in Table 69.

TABLE 69

SEX-SPECIFIC NUMBERS AND RATES OF SUICIDE FOR METROPOLITAN AND NON METROPOLITAN REGIONS SOUTH AUSTRALIA AND WESTERN AUSTRALIA

1978

	South Australia				Western Australia			
	Metropolitan		Non-Metropolitan		Metropolitan		Non Metropolitan	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Males	85	19.2	23	13.0	55	13.8	22	12.1
Female	23	5.0	9	5.4	15	3.7	7	4.5
Total	108	12.0	32	9.3	70	8.7	29	8.6

Source: Records of the Department of the Attorney General of South Australia, Adelaide, 1978
Clifford and Marjoram (1979) : pp 32-33.

Significant in Table 69 is the difference between Adelaide and Perth (12.0 for Adelaide and 8.7 for Perth) as compared with the general similarity of the rates for the rural areas of both States. This contrast between the urban and rural areas is less pronounced when males and females are taken separately but it is still there. The variation is greater in the cities than in the country. Does this difference imply that the major ecological influence is to be found in differences between the towns rather than the rural areas?

Reasons for Suicide

In both the Western Australian study and the present study many different reasons for suicide were identified. Mental illness, old age coupled with pain and separation (or feared separation) from spouse were the most prominent reasons in Western Australia; depression, pain, interpersonal disputes with family members and separation (or feared separation) from spouse were most prominent in the South Australian cases.

While in the present study it was possible to correlate reasons for suicide with the age and sex of the deceased this analysis was not undertaken for the Western Australian cases, partly because of the large number of cases where one or more reasons were not identifiable. Nevertheless in the analysis of Western Australian data it was found that pain, incompetence and loss of spouse were generally reasons for committing suicide among the aged, the present study revealing a strong relationship between old age and these reasons. Other causes (or contributing causes) of suicide in both States were drug or alcohol abuse, interpersonal disputes and sexual problems, (particularly among the young). There was also depression coupled with physical illness.

Summary of Findings

(a) There were 100 cases of suicide in Western Australia in 1978 and 141 in South Australia. South Australia has a larger population but even taking this into account the incidence of suicide in South Australia exceeded that of Western Australia. However, the ratios of male to female suicides were virtually identical in the two States.

(b) Proportionate to total population the South Australian rates for both males and females exceeded the Western Australian rates.

(c) Moreover this pattern of higher rates in South Australia applies within most age groups. In fact of the six age groups used in this study only the suicide rates for the under 25's and those between 45 and 54 were greater in Western Australia.

(d) There was a more even distribution of suicides throughout the age groups in South Australia than in Western Australia. In Western Australia about one half of all persons who committed suicide in 1978 were either under 25 or above 55.

(e) In both States the suicide rate among single persons was similar.

(f) As regards the other civil status groups, South Australia had the higher rate for married persons and Western Australia the higher rate for the combined group of the divorced, widowed or separated.

(g) As to methods of suicide there were differences and similarities. Whereas solid and liquid poisoning was used in a similar proportion of suicides in both States carbon monoxide poisoning was far more prevalent in Western Australia and the proportion of shooting cases was higher in South Australia.

(h) In about one third of cases in both States the deceased left a suicide note. A higher proportion of males in South Australia and a higher proportion of females in Western Australia left notes behind.

(i) Almost one quarter of the suicides in both States involved persons who had made a previous suicide attempt. This included a higher proportion of males in South Australia and a much higher proportion of females in Western Australia.

(j) Reflecting the higher rates of suicide in South Australia, both the metropolitan and non-metropolitan rates were higher in that State and this remained the pattern even when male and female suicides were separately considered by geographical location.

CHAPTER 11

DISCUSSION

This is the first study of suicide in South Australia, as far as can be ascertained from archives and bibliographies. That is to say that it is the first attempt to seek the meaning of the bare figures which are communicated by the South Australian Registrar of Births, Deaths and Marriages to the Australian Bureau of Statistics every year. It is probable that it is also the most complete study of suicide in an Australian State. This, however, is to describe its scope rather than to comment on its quality as a study. It is, as explained elsewhere, only one part of a much wider and deeper research project intended to provide patterns and explanations of suicide on a national and international scale.

This investigation follows a similar, in-depth, study by the same authors of suicide in the neighbouring State of Western Australia[1]. These two Australian investigations go rather further than most suicide studies in that they combine case material with aggregate statistics. Most of the previous work published, psychological or sociological, has been confined to one or the other. Where case studies have been used with figures, they have been selective and illustrative but not usually complete accounts of all cases registered during a given period.

When the Western Australia study, (including all 1978 cases) was discussed it was stated to be:

> "Unwise to generalise....from such a limited number of cases, the information about which is necessarily incomplete."(2)

While this is still true - even when the South Australian cases are added to those for Western Australia - it is clear that, with the widening reach of the enquiries and the deepening of case knowledge, there is now rather more justification for at least tentative conclusions, leaving these open, of course, for modification by any future comparison with other States.

Of great importance for the general evaluation of individual cases, is the fact that the files in South Australia, in the form made available to the authors, were a great deal more informative than those from Western Australia. It was possible therefore to examine the first impressions from Western Australia against a background of amplified case material. As for the reasons for individual suicides the additional data in the 1978 cases from South Australia made it possible to do a factor analysis in order to deal more systematically with the variety of possible motives in a given case. However, here, as in every other area of human behaviour, a greater knowledge and understanding of all the circumstances generates less rather than more certainty. For this reason, definite statements about suicide motivation are reserved, with the one exception that there is additional support in this study for the idea that suicide is a function of expectations.

General Patterns and Trends of Suicide in South Australia.

South Australia should be reassured that, if in comparison with other States it does not have a very low suicide rate, neither does it have a particularly high rate. It is, in fact, about average when all States and territories are considered. During the period 1963-1977 South Australia had an average annual suicide rate of 12.0 per 100,000 persons, this rate being ranked fourth among the eight States and territories.

This average pattern has persisted for a very long time. In Chapter Two it was shown that during the period 1871-1900 South Australia, as compared to the other States, had an average suicide rate, and Minogue[3] made a similar finding in analysing suicide rates between 1875 and 1932.

Within a world perspective South Australia's suicide rate is higher than average. Fifty three countries of the world produced suicide statistics for at least three years during the six year period 1970-1975 and South Australia's average annual suicide rate during this period (11.0 per 100,000 persons) was ranked twenty-first among these fifty three countries. (Australia's national rate of 12.2, slightly higher than South Australia's, was ranked fifteenth.) South Australia's suicide rate was thus higher than about three-fifths of the countries for which statistics were available, but was considerably lower than the rates for countries with the highest rankings (e.g. Hungary (37.3), Czechoslovakia (24.1), Denmark (24.0), Austria (23.3) and Finland (23.1)).

South Australia's suicide rate has fluctuated, but within reasonable limits, since 1900, the ten yearly averages varying from 7.8 per 100,000 persons (1940-1948) to 13.0 per 100,000 persons (1960-1969). The male suicide rate has varied markedly, however, with high rates during the Great Depression and low rates during the Second World War. Saint[4] found a similar trend in the male suicide rate for the whole of Australia and pointed out that by the mid-1950's the South Australian male suicide rate began to exceed the national rate for males.

As in practically all other countries and States, more men than women commit suicide in South Australia. Suicide statistics for South Australia have been published for over one hundred years and in only three of these (viz. 1862, 1863 and 1865) has the female suicide rate exceeded the male rate. In recent years the male suicide rate has been two to three times higher than the female rate.

Since 1963 over 2,000 persons have committed suicide in South Australia. Suicide accounts for an average of 1.8 per cent of all male deaths and 1.0 per cent of all female deaths in South Australia; similar proportions of suicides to total deaths are found throughout Australia and the male and female differentials are about the same.

It is an important, if not exactly novel, observation that suicide as a cause of death is greater in the younger age groups; but as might be expected the suicide rate tends to increase with advancing age. This is not the complete picture of the trends however Chapter Four has shown that whilst, during recent years, the male suicide rate has been highest in two groups - the 45-54 years group and

amongst those over 64, the female suicide rate has been highest among those aged 55-64 years. This is not only in South Australia: Stoller and Krupinski[5] have found a similar pattern for suicide amongst the Australian population and Burvill[6] identified similar trends in suicide in Western Australia for the period 1901-67.

An examination of the choice of methods used in suicide, produced a few, but not many, surprises. In South Australia, as elsewhere, guns are more often used by men than women; poisoning is a lady's favourite; but, the recourse to carbon monoxide channelled from a car's exhaust was less easy to discriminate by sex.

Finally, there are a great many other factors in suicide in South Australia which are common to suicide wherever it has been studied: mental and physical illness, alcoholism, drug abuse, homicide and family or economic failure.

The real question remains - of why such problems lead to suicide in some cases affected by them - but not in all. To get closer to this issue all the cases for 1978 were scrutinised.

Suicide and the Individual

The only person who knows why he committed suicide is the person who killed himself - and sometimes even he may not be a reliable guide. Apart from this a study must infer motives from official reports, (e.g. from coroners, police, medical practitioners), personal documents (e.g. suicide notes) and statements from informants who knew the victim. The limitations of such data are obvious and have been discussed previously.

The consideration of the 1978 cases of suicide in South Australia, particularly the reasons for suicide, underlines the need for the more thorough medical and social investigations which was called for in the Western Australian report.[7] In the last analysis each individual case of suicide is unique. Yet the interplay of a common human nature and similar societal pressures combine to provide a number of discernible types and regularities.

These regularities were often not substantially different from the patterns of suicide already described in studies of this kind produced for other States of Australia or for other countries.

For example, over three-quarters of the 1978 cases involved males and 40 per cent of those who committed suicide were between 25 and 44 years of age. When rates per 100,000 persons were examined the highest male rate was amongst those 65 years or older: the female suicide rate was highest among those between 35 and 44 years of age. Separated and divorced persons each had much higher suicide rates than those who were married, single or widowed.

There were nevertheless some significant aspects of the South Australian cases which are worthy of emphasis. Approximately half of the suicides were committed by persons who were not employed or who were outside the labourforce (e.g. students, pensioners, women with the occupation of "home duties"). This is not unusual though it has not always been discovered. As suicides are usually older they are often drop-outs or people who have passed a working career.

Perhaps more importantly is the finding that the suicide rate among the unemployed was much higher than the rates for those who were either employed or not members of the labourforce. Unemployed males in particular had an extremely high rate of suicide per 100,000 of the total males unemployed. Males again predominated amongst the employed. The suicide rate for employed males was considerably higher than for employed females.

However, in the present circumstances of youth unemployment in Australia it is the younger unemployed suicide who is of greatest concern. We sought to discover how closely the unemployment was related to the youthfulness and the act of suicide. Separating the total unemployed out from pensioners, women at home etc. it was found that there were 13 cases classified formally as "unemployed". These were not pensioners, inmates of institutions or women at home. They could have been in the work force and they were not. It was not possible to determine however, whether these 13 were actually registered as unemployed. The majority of the 13 unemployed were over 25 and could therefore hardly be classed as "youthful". Only four were under this age and all of these were male. One of the four was 22 year of age, two were 21 and there was a 17 year old whose overdose may have been accidental and whose work record was interspersed with minor delinquencies. One of the 21 year olds had had an unfortunate love affair which could have been as depressing as his unemployment but it was impossible to speculate further than this - and he left no note. The other 21 year old was formally described as unemployed but a relative referring to his movements before the suicide said that he had returned "from work as usual". Finally, the 22 year old unemployed had other problems as well as unemployment which could have accounted for the suicide. There was no overt case of a young

person who had committed suicide expressly because of his unemployment and no case where it would have been possible to imply such a single motive without extensive qualification.

On the other hand for persons above 25 the lack of work was a fairly obvious source of depression and seemed more likely to have precipitated the fatal decision.

Perhaps of greater importance and concern are the four male persons described as "students" or "high school students".

One of the students, aged 21 years, appeared depressed by peer group criticism; for the other, who was 25 years old, it was not possible to determine the motive for suicide. In both the cases involving "high school students" (one of whom was 12 and the other 15) the suicides were apparently a great surprise to all concerned and an ascription of reasons would have been completely speculative.

The methods most frequently used to commit suicide were shooting, solid or liquid poisoning and hanging, in that order. Males favoured shooting while females preferred to poison themselves. Young and middle aged persons were inclined to use either of these two methods while the elderly frequently hanged themselves.

Most of the suicides during 1978 involved residents of Adelaide, the metropolitan rate of suicide being higher than that for the non-metropolitan area. Elderly residents of Adelaide had a particularly high rate of suicide and young persons living outside Adelaide had a comparatively low rate of suicide.

About one-third of those who killed themselves left behind one or more suicide notes. These persons were usually males, married, and aged less the 35 years, and killed themselves with the use of firearms. Comparing the characteristics of those who left notes with those who did not it was found that males were more inclined to write suicide notes than were females, the young more than the middle-aged or elderly, and the widowed, divorced and separated more than either the single or married. Persons who gassed or shot themselves were more inclined to leave behind a suicide note than those using other methods.

The authors were unable to provide a psychiatric analysis of these notes as has been done by Chynowith.[8] There are obvious risks anyway in such a diagnosis on fragmentary evidence. Nevertheless, it was apparent that while some suicide notes reflected emotional, if not mental, disturbance, others provided seemingly rational explanations as to why the person committed suicide. This is in line with Chynowith's finding that:

> "Examination of the contents of the notes revealed no clear evidence of any psychotic process. i.e. delusions or thought disorder."[9]

Chynowith also found a higher proportion of both sexes who chose shooting among those persons who left suicide notes and he suggested that this could indicate the greater determination of the persons to succeed in taking their lives. Our findings tend to confirm this although we would widen the group that seemed the more determined to take their lives. Those who used carbon monoxide, as well as those who used guns, seemed to be especially resolute about their suicide.

The issue of the relationship between attempted suicide and successful suicide has interested researchers for many years. Dahlgren[10] even went so far as to assert that the number of attempted suicides equals the number of completed ones. This assertion was seriously questioned by Krupinski, Polke and Stoller[11] who suggested that the ratio of suicidal attempts to completed suicides in Victoria was much higher than had been previous thought. The present study was not specifically designed to deal with this problem but in the event it has been possible to throw some light on the subject.

We discovered for example that 23 per cent of all the 1978 cases (i.e. 22 per cent of males and 28 per cent of females) were reported to have made previous attempts to take their lives. This finding is remarkably similar to Burvill's [12] 18 per cent attempts amongst the 1967 cases of suicide in Western Australia. It also follows the 22 per cent of the Western Australian cases from 1978 in which there had been previous attempts.[13] However, in both the Western Australia studies, the proportions of males with a history of previous suicide attempts were much lower than the proportion of females.

One very curious feature of the South Australian cases was that nearly two thirds of those who had successfully committed suicide after making previous attempts did so by changing the method. If they had previously used drugs or cut themselves they ended by using a gun. If they failed by means of gassing they succeeded by hanging themselves. Interestingly enough, even those using poisons, having failed with one type often turned to another or used a combination of solid and liquid poisons in the successful suicide. Does this mean that when we are trying to understand the full impact of an attempted suicide we should look carefully at

previous attempts for a change of method? Does the change of method convey the strength of the determination to commit suicide? These are questions that warrant further investigation.

Among the detailed list of reasons used in the initial stage of analysis the most frequently identified reasons were depression (65 per cent), pain (18 per cent), interpersonal disputes with family members (16 per cent) and separation or feared separation from spouse (14 per cent). Among the abbreviated list of reasons used in the further analysis of reasons for suicide the most frequently identified were depression (65 per cent), physical illness (23 per cent), education, employment and financial problems (21 per cent) and interpersonal disputes (19 per cent).

These findings are different to those from other Australian research, mainly because the classifications of reasons used in different studies are far from uniform. We would have been happy to have employed a categorisation of reasons which had been used before so as to ensure comparability. This proved to be difficult because previous researchers were not always informative as to the detailed methodology and there was a necessary but complicating element of subjectivity which was not usually transferrable. Edwards and Whitlock[14], for example, found that among suicides in Brisbane during 1965 the major precipitating factors were mental illness (30 per cent), physical illness (14 per cent) and alcoholism (14 per cent) but were unable to ascertain factors in one third of all the cases. They doubtless arrived at this division of cases from a scrutiny of case material but it is not clear whether they always took another doctor's diagnosis or occasionally inferred a diagnosis.

Burvill[15] found that alcohol (14 per cent), physical illness (14 per cent), domestic arguments (8 per cent), financial problems (7 per cent) and marital disharmony (6 per cent) were major contributing factors in suicide, but he was not able to identify such factors in 48 per cent of all cases. Again we had the same problem about adapting or adopting this method.

All these researchers had similar problems of method. They and others had considerable difficulty in both identifying and categorising motives for suicide and they were plagued by the number of cases that could not be labelled. Edwards and Whitlock[16], for example, stated that in completed, as compared to attempted, suicide:

> "....there was less certainty in deciding on the precise cause of the act leading to the patient's death....the lists of the precipitating causes for the attempted suicides and suicides are not strictly comparable, largely because of the number of patients in the suicide group for whose act no cause could be discovered."[17]

It is interesting that Edwards and Whitlock, though they defined a "multiple factor" category of suicides, did not find any cases of multiple factor suicide. In the present study and that by Burvill there were many cases where a single factor was found to be inadequate as an explanation of the suicide.

Psychiatric diagnoses (viz. neurosis and psychosis) were identified in 15 per cent of the 1978 cases from South Australia, these including 13 males (12 per cent) and 6 females (19 per cent) diagnosed as suffering from neuroses and 2 males (2 per cent) with psychosis. Other studies, including the

clinical studies by Burvill, Krupinski (et al) and Edwards and Whitlock have incorporated more refined analyses of psychiatric disorders in those who commit suicide, and it is therefore difficult to make comparisons with their findings.

Generally speaking, however, and doubtless because of the different professional orientation of the authors, these studies found higher proportions of cases with psychiatric disorders than was evident in the 1978 cases from South Australia. On the other hand, the present study did confirm these other investigations in showing that although emotional disturbance was frequently if not always attributable to the suicide cases diagnosed, psychotic illnesses were comparatively rare in persons who commit suicide.

Alcoholism or alcohol abuse was found to contribute to the suicide in 11 per cent of cases and was more frequently identified among males (12 per cent) than females (6 per cent). Overseas studies have found that between 6[18] and 30[19] per cent of suicides were alcoholics, but in several investigations 10 per cent of cases were identified as alcoholics,[20] a proportion similar to that found among the 1978 cases from South Australia.

Among the other Australian studies, Edwards and Whitlock[21] found that alcoholism was a precipitating factor in 14 per cent of the suicides which occurred in Brisbane during 1965 and Burvill[22] found that in 14 per cent of the male and 9 per cent of the female cases from Western Australia there was clear evidence of alcoholism or habitual heavy drinking.

The present study therefore provides further evidence that alcoholism and alcohol abuse is a significant reason for, or contributing factor in, suicide, at least in a sizeable minority of cases. Drug abuse or addiction was a less frequently identified reason for suicide among the South Australian cases and was more prevalent among females, these findings being similar to those by Edwards and Whitlock.[23]

Physical illness was identified as a reason for suicide in 23 per cent of the South Australian cases and was more common among women (34 per cent) than men (20 per cent). Conversely, Edwards and Whitlock[24] found physical illness to be more frequent amongst men than amongst women. In their sample 23 per cent of males but only 12 per cent of females who committed suicide were suffering from physical illness.

Apart from the frequency of its occurrence to what extent did physical illness contribute to or precipitate the suicide? Unfortunately only a general answer can be provided.

The significance of physical illness as a factor in suicide is difficult to ascertain because, as shown above, we do not have detailed information in each case or a method for isolating the effects of physical illness on the final decision. Nevertheless, this study provides further strongly persuasive evidence that physical illness and suicide are, closely related - especially with advancing age.

Unlike many previous studies, the present investigation has not only identified the reasons for suicide but has also examined the relationships between reasons and the ages of those who commit suicide. For example, it was found that the incidence of depression among those who commit suicide rose with increasing age, that psychiatric disorders were

most prevalent among those aged 55-64 years and that sexual problems (or love relationships) and interpersonal disputes were major reasons for suicide among the young.

Our final stage of the analysis of the reasons for suicide, where the abbreviated list was clustered into four major factors, showed, interalia, that the lack of mental well being was the most important major factor in suicide, followed by social, physical and economic well-being in that order. Mental well-being was a major factor in over 80 per cent of female suicides and in 65 per cent of male suicides and was the most frequently identified major factor among persons of all age groups except those aged less than 25 years. This finding would support the main conclusion reached by Krupinski, Polke and Stoller[25] that suicide is associated to a high degree with psychiatric disturbances, especially depressive states. At the same time, the present study has shown that there are many other reasons for suicide and that the importance of different reasons varies quite significantly between the sexes and the different age groups.

During the course of this study the authors' attention was drawn to a publication by the Institute of Mental Health Research and Post-Graduate Training of the Mental Health Division of the Victorian Health Commission.[26] This report, edited by Drs. Krupinski and Mackenzie, deals in part with the prevalence of physical and psychological disorders in terms of "quality of life" and indicates a higher incidence of psychiatric disorder amongst persons who feel unfulfilled in the areas of personal relations, material security, recreation, family life, freedom from worry and useful work.

Krupinski states:

> "The findings indicate that the prevalence of psychiatric disorders is less related to the individual's objective "quality of life" than to the question of whether or not the actual way of life is consistent with personal desires and wishes."(27)

This could be interpreted as reflecting the depression flowing from a failure to meet social or personal expectations which can be excessive in some people and lead to suicide. Lack of fulfilment may be another way of describing frustrated expectations leading to emotional or other psychiatric conditions - and sometimes to suicide. Of course, even if all those committing suicide did so because of frustrated social or personal expectations, this does not mean that everyone so frustrated will commit suicide. For some it may mean psychiatric problems only and for others it may lead to a search for other satisfactions.

Expectations

In the study of suicide in Western Australia the various theories of suicidal behaviour were briefly reviewed and the authors suggested that, on the basis of the statistical and case material, it should be possible to link previous sociological and psychiological theories with a broader theory of suicide as being a function of the process of human and social expectations. In every case it seemed that an explanation of the suicide in terms of the frustration of the person's own expectations in life - or in terms of his inability to meet what he conceived as family or social expectations was possible. In more general terms the suicide rate in a society could, it seemed, be tentatively ascribed to the level of expectations in that society; and the imposition or accretion of levels of expectations of

status and achievement (higher than could be justified by reality) could well be a factor contributing to changes in the suicide rates. For instance education levels seemed to affect suicide in Sri Lanka, and in Australia there were changes in suicide predictable on an expectation theory during times of war and depression.

At the time this was advanced as a tentative proposition and it was observed that there were no cases in Western Australia which could not be explained by a theory of expectations. As further confirmatory evidence it has has been discovered that in South Australia too, there were no circumstances or combinations of circumstances which could not be covered by the theory.

However, the use of the word theory is likely to mislead at a time when "theory", "hypothesis" "probability" and the whole credibility of scientific method is still a matter for academic debate. It is necessary therefore to consider the precise meaning of the expectations explanation which has been advanced to avoid both undue limitation and extravagant extension. At first it seemed to the authors that this should be no more than a tentative hypothesis, or proposition which should stand or fall on the extent to which it was subject to verification and further critical analysis of its consistency, reliability and comparability. As to verification this was acknowledged to be very difficult though not entirely impossible. In relation to suicide figures for other countries measured in terms of their educational and employment levels it was thought likely that some form of verification could be attempted. Obviously clinical studies may also verify in individual cases. In similar ways it was thought that the internal consistency of the theory could be tested. And for comparability the relationship between frustrated expectations and the factors

used to measure the quality of life in one State of Australia have already been discussed.

However, "expectations" is "a many splendoured thing" and it will be illusive as a concept until it can be effectively measured. This is the task for the future. Meanwhile the fact that an expectations explanation in one form or another can be reasonably applied to all collective or individual cases of suicide certainly does not make the concept too wide to be meaningful or, in fact, useful. A question raised is whether it is possible to conceive of any possible case or situation to which a theory of expectations would not apply. The implication here is that if no such contrary case can be imagined then certainly the theory will apply but it will be too wide to have meaning or value. This is not true of course. For, were there to be a negative case then the theory would have to be abandoned anyway as a general theory. No truly general theory admits of a negative case. Of its nature it must always be applicable. Thus it is not possible to give negative instances of the sociological theories of social cohesion or isolation or the psychological theories of internalised frustrated aggression. And all general theories have the drawback that whether true or not they can be applied effectively ex post facto. The question of meaningfulness or usefulness is more important however, and the value of an expectations approach is that it can have use in policy formulation.

It is not impossible however, that some negative cases may yet be found to the expectations theory. The authors have come upon one unconfirmed case of a Japanese succeeding as a candidate in an election after a long and arduous struggle and then committing suicide shortly after he had been elected.

Not all the circumstances are known but this is a conceivably negative case. If confirmed it would explode expectation as a general theory: but it would still stand as a hypothesis i.e. useful in terms of probabilities but subject to modification as exposed to the flow of more and more information about suicide in different cultures.

The authors are content that the expectations explanation of suicide as further confirmed by South Australia should rest upon no more than a basis of probability. They claim that however difficult to prove by measurement it is useful for both policy and practice. It might even have predictive potential which has yet to be discovered. Fortunately there can be no scope for laboratory confirmation i.e. by the organisation of a group of people for the kind of experimental test in which expectations might be raised or lowered and the costs counted by the number of suicides in that community!!

The Prevention of Suicide

Suicide, both as a social phenomenon and a very personal, private act, can never be viewed with indifference. Stengel has written:

> "The ubiquity of suicide makes it seem inevitable. But it is difficult to be defeatist once one turns from statistical data to the individual's concerned. In seeing the suicidal act in retrospect as the climax of a crisis in an individual, one cannot help feeling that almost every one could have been prevented.... This is why..... the suicide rates are a challenge to everybody concerned with the preservation of life and health."(28)

McCullock and Philip[29] have considered the prevention of suicidal behaviour under the three customary, but useful, headings - primary, secondary and tertiary. Primary prevention is concerned with preventing the existence of suicidal behaviour, secondary prevention aims at eliminating repeated attempts at suicide and tertiary prevention endeavours to prevent suicidal acts from having fatal outcomes.

Tertiary prevention is, as McCullock and Philip point out, a matter for toxicologists and physicians. Secondary prevention is largely the domain of the psychiatrist, social worker and other specialists in the "helping agencies". As this study is concerned with completed, rather than attempted, suicide it is not appropriate to discuss secondary prevention at any length. Much valuable Australian research which identifies the salient characteristics of persons attempting suicide or who run a high risk of repeating suicidal behaviour has been undertaken in the past.[30]

The major findings from this study which would appear relevant to secondary prevention of suicide are that the majority of those who committed suicide in South Australia during 1978 had not made previous attempts at taking their lives and that two thirds of these had made only one previous attempt. The characteristics of those cases with a history of attempted suicide have also been identified and comparisons made between these persons and those who had not previously attempted suicide. It has not, of course, been possible to compare the incidence of completed suicide (with or without previous attempts) in South Australia with the incidence of suicidal acts which did not result in death. The rate of attempted suicide in South Australia remains unknown.

It is at the primary level of prevention that the findings from this study are most relevant. The personal decision to take one's life will depend to no small extent upon the individual's concept of the meaning of life and his own role. Man has been described as an animal that hopes and suicide is intimately connected with the nature and extent of hope. It is this which is at the basis of a theory of expectations.

A recent Australian survey on attitudes to death, by Warren and Chopra,[31] found that while only 5 per cent of respondents had attempted suicide, 26 per cent indicated that there had been a time in their life when they wanted to die and that this wish had usually been related to "great emotional upset or as an escape from an intolerable social or personal situation."[32] Warren and Chopra also found that among their respondents the probability of suicide was rated extremely low though if suicide did occur it would be predominantly because of physical illness or pain, or loneliness and abandonment.

The present study has identified the importance of these and other factors among the cases of suicide examined and has related the reasons for suicide to the age and sex of those who took their lives. Aggregate statistics have also been analysed to further identify groups in the community that may be at risk, such identification being the first step towards primary prevention of suicide.

NOTES ON CHAPTER 11

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(13) Clifford and Marjoram, Op. Cit. p.41

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(16) Edwards and Whitlock, op. cit.

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(22) Burvill, op. cit. p.40

(23) Edwards and Whitlock, op. cit. p. 938

(24) Ibid.

(25) Krupinski, Polke and Stoller, op. cit. p.77

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