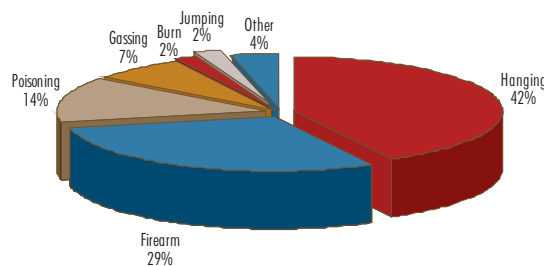


# CHAPTER 8. SUICIDE

*Compiled by Hilton Donson and Ashley van Niekerk*

In 2001, 2500 suicides were reported. Figure 32 shows that hanging (42.3%) and firearms (29.4%) were the major causes of suicides. Poisoning by means of drugs and pesticide for example, was the cause of death in 13.6% of the suicides, while gassing accounted for 7.1%. The other category included sharp objects, asphyxia, electrocutions, drowning and falls.

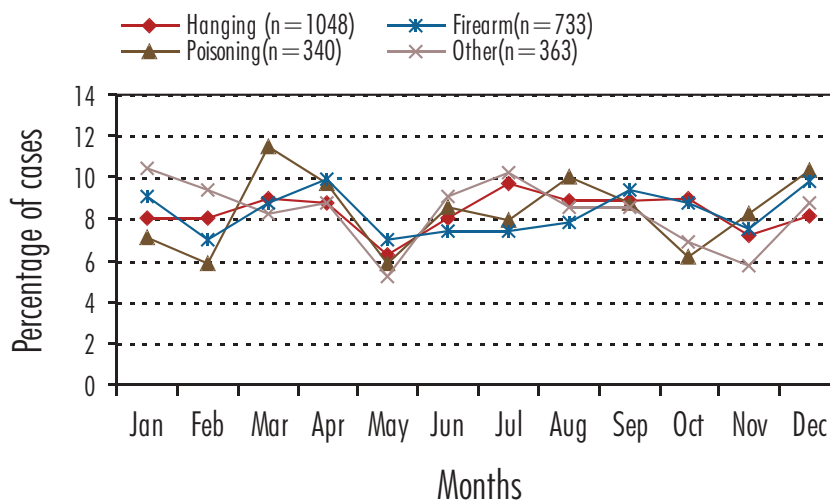
Figure 32. Suicide: external causes, 2001 (N = 2500).



## 8.1 SUICIDE: SEASONAL TRENDS

The percentage of poison cases peaked in March (11.5%), the highest percentage of all the external causes by month in 2001. The percentage of hanging suicides peaked around July (9.7%), while the peak for firearm suicides was seen in April (9.9%). There was a noticeable trough of all external causes in May. Also of note was that at the end of 2001 all suicide trends appear to increase. Figure 33 shows trends from January 2001 to December 2001 for the three major external causes of suicide as a percentage of all suicides in each month.

Figure 33. Suicide: leading external causes by month of death, 2001 (N = 2484).



## CAUSES BY SEX

There were nearly 5 male suicides to every female victim, with males accounting for 82.4% of cases (Table XIV). The major external causes in males were hanging (46.4%) and firearms (31.4%), while in females most suicides were by poisoning (35.1%) and hanging (22.7%). For every 1 female hanging suicide, there were 9 male hanging suicides, 7 male firearm suicides and 4 male gassing suicides.

Table XIV. Suicide: external causes by sex, 2001 (N = 2482).

	Male	Female	M:F ratio
Hanging	948 (46.4)	99 (22.7)	9.6 : 1
Firearm	643 (31.4)	90 (20.6)	7.1 : 1
Poisoning	184 (9.0)	156 (35.7)	1.2 : 1
Gassing	142 (6.9)	33 (7.6)	4.3 : 1
Jumping	41 (2.0)	18 (4.1)	2.3 : 1
Burn	19 (0.9)	22 (5.0)	0.9 : 1
Other	68 (3.3)	19 (4.3)	3.6 : 1
TOTAL	2045	437	4.7 : 1

The percentage of male suicides through hanging was twice that for females, while the reverse was true for jumping suicides. The percentage of female poisoning suicides was four times that for males, and the percentage of burn suicides in females five times that for males. The percentage of female gassing cases was a fraction higher than that for males.

## 8.3 SUICIDE: EXTERNAL CAUSES BY POPULATION GROUP

Hanging accounted for the largest percentage of suicides among Asians, Africans and Coloureds (see section 1.6 - Terminology), while firearm accounted for the largest percentage in Whites (45.0%). Gassing was a particularly common method of suicide in Whites, accounting for 15.8%, while poisoning suicides were most frequent in Coloureds (27.8%). Table XIV shows the distribution of external causes of suicide by population group.

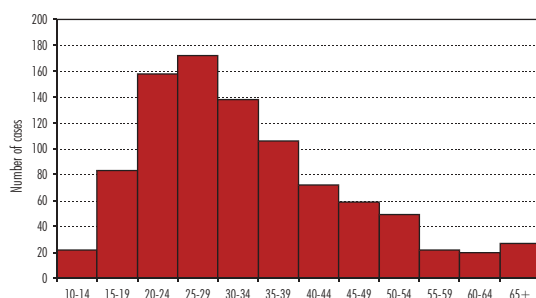
**Table XV. Suicide: external causes by population group, 2001 (N = 2481).**

	Asian	African	Coloured	White
Hanging	72.0 (54.5)	761 (54.7)	74 (35.4)	140 (18.7)
Firearm	30.0 (22.7)	317 (22.8)	48 (23.0)	337 (45.0)
Poisoning	19.0 (14.4)	151 (10.9)	58 (27.8)	112 (15.0)
Gassing	5.0 (3.8)	43 (3.1)	9 (4.3)	118 (15.8)
Jumping	3.0 (2.3)	36 (2.6)	4 (1.9)	16 (2.1)
Burn	1.0 (0.8)	33 (2.4)	3 (1.4)	4 (0.5)
Other	2.0 (1.5)	50 (3.6)	13 (6.2)	22 (2.9)
TOTAL	132	1391	209	749

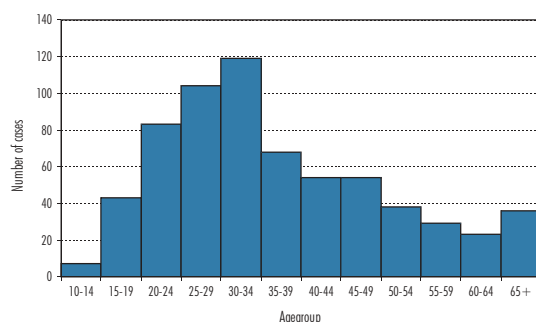
**8.4 SUICIDE: MAJOR EXTERNAL CAUSES BY AGE**

The youngest recorded victims were 10 years old. Hangings predominated among victims aged 10-54 years. From age 55 onwards firearms took over as the major cause of suicide. The percentage of firearm suicides was highest in the 30-34-year age group, while the percentage of poisoning suicides was highest in the 25-29-year age group. Gassing suicides peaked between the ages 40 and 44 years. In the other external cause group the highest number of cases - which were largely due to burns and jumping - was in the 25-29-year age group. Figures 34a to 34e show the distribution of the major external causes of suicides by age group.

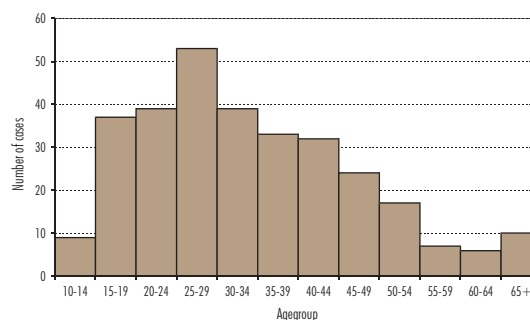
**Figure 34a. Suicide by hanging, by age, 2001 (N = 928).**



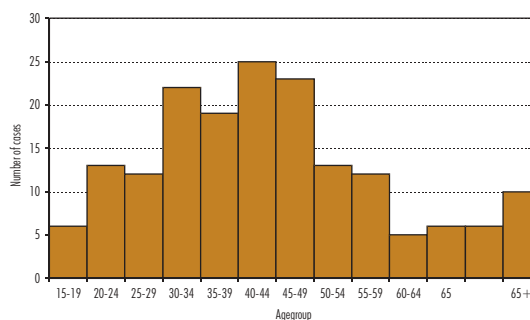
**Figure 34b. Suicide using firearms, by age, 2001 (N = 658).**



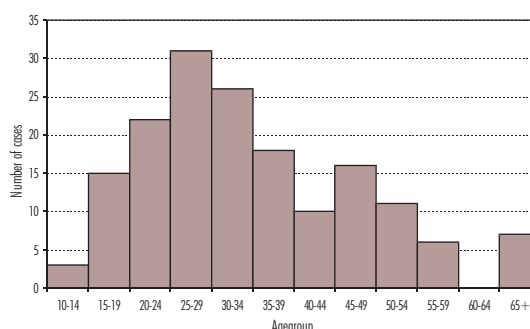
**Figure 34c. Suicide by poisoning, by age, 2001 (N = 306).**



**Figure 34d. Suicide by gassing, by age, 2001 (N = 156).**



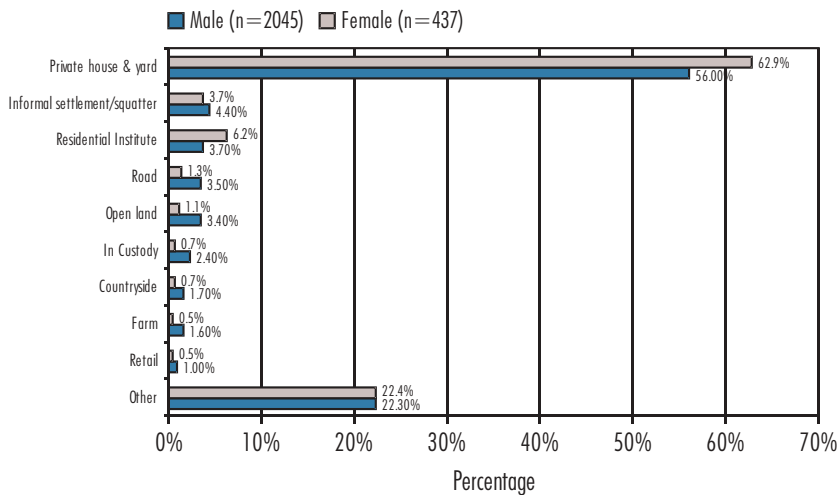
**Figure 34e. Suicide: other external causes, by age, 2001 (N = 165).**



**8.5 SUICIDE: SCENE OF INJURY BY SEX**

The most frequent site of suicide for males and females was in and around the home, followed by residential institutions and informal settlements. Females had a higher percentage of injuries in and around the home and residential institutions, while males had a higher percentage of cases for all other scenes. The difference in percentages between male and female suicides was greatest for private homes and residential institutions. Figure 35 shows the number of male and female suicides by scene of suicide.

Figure 35. Suicide: scene of injury, by sex, 2001 (N = 2482).

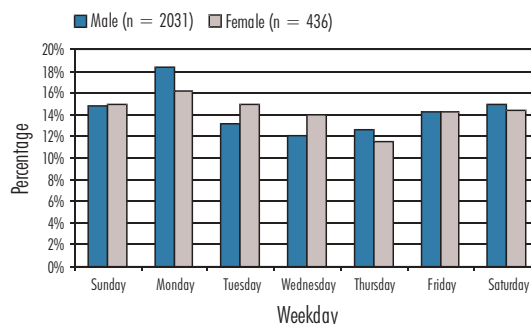


## 8.6 SUICIDE: DAY AND TIME OF DEATH

### DAY OF DEATH

For males and females, suicides peaked on Mondays. Over 40% (43.5% and 43.7% respectively) of male and female suicides occurred over the weekend (Friday to Saturday), with an additional 18.3% and 16.1% occurring on Mondays. The largest variations in the percentage of suicides for the two sexes were on Mondays and Wednesdays. Figure 36 shows the distribution of suicides by day of week for males and females.

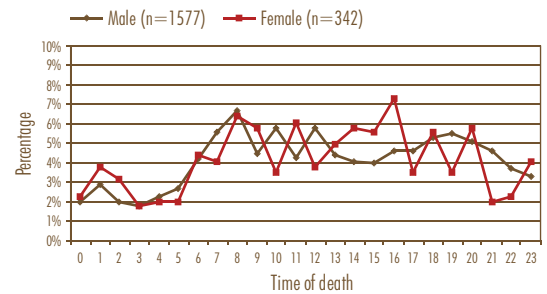
Figure 36. Suicide: day of death, by sex, 2001 (N = 2467).



### TIME OF DEATH

Suicide deaths were least frequent in the very early morning hours from 24h00 to 06h00 and most frequent from 07h00 to 20h00. The time trends for males and females were similar. Female suicides peaked at 08h00 and at 16h00. Male suicides also peaked at 08h00. Figure 37 shows the distribution of suicides by hour of day for males and females.

Figure 37. Suicide: time of death, by sex, 2001 (N = 1919).



## 8.7 SUICIDE AND BLOOD ALCOHOL CONCENTRATION

Blood alcohol concentrations were obtained for 1081 (43.2%) of the 2500 suicides. Figure 38 shows the percentage of cases by BAC, and Table 16 the distribution of BACs across the external causes of suicide. As Figure 38 shows, most (63.2%) of the suicides had zero blood alcohol. Of the suicide victims who were BAC positive, 27% were at or above 0.05 g/100 ml.

Table XVI shows that with suicides, the highest alcohol-relatedness was found among poison victims (44.7%). Most of the alcohol-positive cases tended to have fairly low levels of alcohol, with one-third (31.3%) with BAC concentrations above 0.05 g/100 ml. For hanging, firearm and gassing suicides, around one-third had positive levels. Mean positive BACs were similar across all causes

Figure 38. Suicide: percentage of deaths by blood alcohol concentration, 2001 (N = 1081).

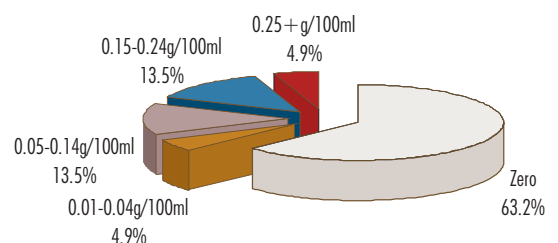


Table XVI. Suicide: blood alcohol concentration by external cause of death, 2001 (N = 1081).

	Zero	0.01-0.04	0.05-0.14	0.15-0.24	0.25+	TOTAL	Mean positive BAC (+/- Std.dev)
Hanging	304 (64.4)	20 (4.2)	72 (15.3)	61 (12.9)	15 (3.2)	472	0.15 (0.09)
Firearm	236 (62.8)	16 (4.3)	47 (12.5)	52 (13.8)	253 (6.6)	376	0.16 (0.09)
Poisoning	58 (59.2)	8 (8.2)	12 (12.2)	13 (13.3)	7 (7.1)	98	0.18 (0.13)
Gassing	44 (61.1)	8 (11.1)	9 (12.5)	9 (12.5)	2 (2.8)	72	0.12 (0.09)
Other	41 (65.1)	1 (1.6)	6 (9.5)	11 (17.5)	4 (6.3)	63	0.23 (0.13)
All suicides	382 (66.0)	20 (3.5)	78 (13.5)	65 (11.2)	34 (5.9)	579	0.16 (0.1)

## **8.8 SUICIDE - IMPLICATIONS FOR PREVENTION**

The NIMSS report provides information that may assist organisations interested in the provision of both suicide prevention and support interventions for survivors and their families. Successful suicide prevention programmes in other settings have noted the inclusion of strategies such as suicide education, screening programmes, peer support programmes, crisis centres and hotlines, and 'intervention after a suicide' programmes.<sup>8</sup> In addition, interventions directed at the underlying social, familial and developmental causes might play a critical role in preventing future suicides.

The focus on future suicides underscores the importance of focusing on persons who may not yet be at high risk for suicide. Young persons or older ones who still have good supports but might be at risk later on when these supports are lost would be appropriate groups to include in prevention interventions. In this section we outline a brief selection of suicide prevention implications and strategies that may be developed based on the NIMSS data. More detailed examinations of the benchmark interventions in the areas of suicide prevention and control remain a priority for research and support agencies in South Africa.

### **FIREARMS**

Hanging and firearms constituted the dominant external causes of suicide in males, and with poisoning, were the major causes in female suicides. The implication of firearms in these deaths may suggest educational, enforcement and screening strategies for firearm control among the general population but especially individuals at high risk of a suicide attempt. The NIMSS data needs to be complemented by research that identifies the individual, familial and social risk factors that predispose people to suicide.

### **DAY, TIME AND SEASONAL TRENDS, AND ALCOHOL**

Suicide did not have any major seasonal variations over the year. The largest percentages of suicides occurred over weekends. Most male and female suicides took place on Mondays. Most occurred in private homes. Female suicides peaked at 08h00 and at 16h00, while most male suicides also occurred at 08h00. The NIMSS data further reported alcohol-relatedness in about one-third of all suicide deaths. Prevention strategies could be incorporated into a life or social-skills component, include education programmes for children and youth, and more specifically for high-risk individuals and their families and other supports, about the various risks associated with suicide, including alcohol consumption.