Transcultural comparison of suicide

The reliability of international suicide data can be highly variable owing largely to differences in death registration practices. In Australia, alone, we have eight different systems over six states and two territories; therefore, international comparisons though valuable must be interpreted with caution.

International comparisons are useful in understanding the role of culture and history in suicidal behaviour. This century cultural attitudes have changed from those of persecution, to more diversified orientations that are still in states of flux. While suicide in most countries is no longer illegal, certain religious influences act as deterrents. Islamic and Catholic religions strongly disapprove of suicide and suicide rates in countries adhering to orthodox teachings tend to be low. Conversely, certain aspects of modern youth culture, for example, heavy metal music tend to positively portray suicide. Moral attitudes are also of relevance to the epidemiology of suicide. Ideally moral attitudes might differentiate and understand diverse motivations for suicide, including mental illness, rational self-euthanasia and the desire to hurt others.

Epidemiological reviews can often suffer from a selection bias when presenting suicide rates from diverse nations because participant nations are selected purely based on data availability. Diversity may obscure observations that might be evident if more homogenous nations were studied. There is no reason to expect that suicide rates in a thriving developed nation would conform to those of a culturally different developing nation. Consequently, former Eastern bloc nations that might be considered western are not included in the comparisons that follow as their social environments are still quite different from the west and are undergoing rapid change which in itself might influence suicide rates.

Generally Eastern European suicide rates are substantially higher than those of Western Europe and have risen in recent years (Sartorius, 1996). Between 1987 and 1991-92 suicide rates in Eastern European countries increased in contrast to decreases in other European countries. However, suicide rates in those over 75 years in Eastern Europe declined (Sartorius, 1996).

While exploration of diverse nations may yield information about gross or universal suicide trends, exploration of more similar nations may be more productive; for example, minor trends in one nation may become more credible when observed in similar nations. Cantor and colleagues (1996) studied suicide rates of eight predominantly English-speaking nations with shared characteristics, finding relatively similar suicide patterns between 1960 and 1989. Historical data collated by Diekstra (1994) further supports this suggestion. When he compared the suicide rates from 1881 to 1988 for 16 European nations, the rank order of national suicide rates remained relatively constant. Similarly, Makinen and Wasserman (1997) found that rankings of European countries by suicide rates were even more stable than the rates themselves. These findings suggest that suicide rates are determined by persisting cross-national differences including traditions, customs, religions, social attitudes and climate.

In the following, we will examine suicide rates of western nations grouped as suggested by Cantor et al (1999a). This approach may add new insights by eliminating comparisons of more heterogeneous nations.

Southern Europe (Greece, Italy, Portugal and Spain)

Over the period 1963 to 1992, Southern European rates were uniformly low. Portugal had the highest rates of the four countries and Greece the lowest. Trends for 15 to 24 year males were variable and unremarkable, with only Spain and Italy showing convincing rises. Modest increases in females 65 to 75+ years in Spain and Italy were observed.

Western Europe (Austria, Belgium, France, Germany, West Germany, the Netherlands and Switzerland)

From 1960 to 1994 Western European suicide rates were uniformly high with the exception of the Netherlands whose rates in males were low but moderate in females. Trends for Austria, Switzerland and Germany in the 1960s and 1980s were remarkably uniform but in the 1970s West German rates diverged from those of Austria and Switzerland. Consequently, West German rates for young males were no higher at the end of the period than at the beginning. In France, Belgium and the Netherlands, however, the suicide rates in young males showed a steady increase during this period. Knowledge of why these different trends have occurred might yield valuable clues for prevention. The other interesting feature is the peaking of suicide rates in the third quarter of the period with subsequent declines - most marked in Austria, Switzerland and Germany, less so in Belgium and France and unobserved in the Netherlands. However, for both sexes and all ages, except 75+ years, suicide rates were declining in the later stages of this period suggesting influences other than youth.

Scandinavia (Denmark, Finland, Norway and Sweden)

Scandinavian suicide rates, during 1960-1993, were moderately high but lower than those of Western Europe, with the exception of Finland where the male rates were particularly high. Norwegian rates for 15 to 24 year old males rose four-fold elevating its position from fourth to second for these nations. Norwegian trends for females 15 to 44 years were also unfavourable. To a lesser extent, most other Norwegian age/sex group rates rose over this period.

Britain and Ireland

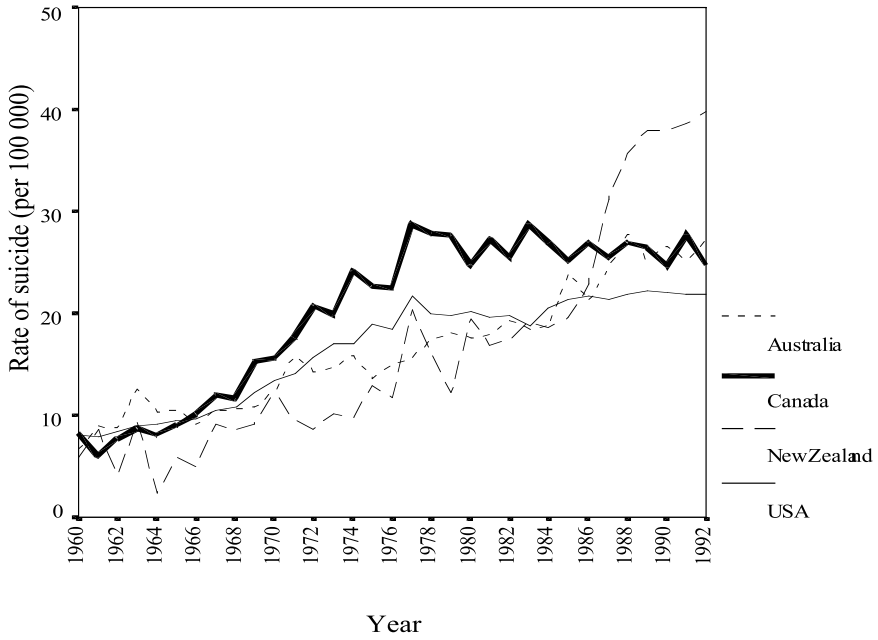
Between 1960-1992, Irish suicide rates increased across all ages. England and Wales showed strikingly favourable trends that were evident in all female age groups except 15 to 24 and in the older male ages from 55 upwards. Scotland showed the most unfavourable changes in rates for the United Kingdom. The most concerning trends were in males aged 15 to 24 years whose rates continued upwards at 1992 - even in England and Wales. However, trends were also upward, although progressively diminishing with age, for males in the 25 to 34 and 35 to 44 year age groups suggesting the problem is most severe in youth but not confined to it. There has been a small but encouraging reduction in rates in 15 to 24 year olds in the most recent years.

Australia, Canada, New Zealand and the USA

These countries, along with Britain and Ireland, showed disturbing trends in males 15 to 24 years of age, with lesser rises in 25 to 34 year old males. However, a distinct plateau of suicide rates for the 15 to 24 age group occurred in both the United States and Canada throughout the 1980s (see Figure 3). In contrast, suicide rates in Australia and New Zealand

coincides with the above-mentioned decline in rates in Western Europe. In contrast, suicide rates in New Zealand for 15 to 24 year old males rose alarmingly between 1986-92 from around 20 to 40 per 100 000. This may partly relate to the small population base, contributing to marked fluctuations in rates. There were favourable declines in suicide rates in females aged 35 to 74 years, in all four countries.

Figure 3: ***Suicide rates for New World males, 15-24 years***



A study by Cantor, Neulinger & De Leo (1999a) found while Australian suicide rates for 15 to 24 and 25 to 34 year-old males rose during 1964-97, comparable rates for females showed no significant change. Suicide rates for both genders between the ages of 45 and 74 displayed a trend of decline until 75+ where males showed highly variable rates. When comparing Australia's age/sex suicide rates to those of 22 other Western countries, rankings for Australian males were: ages 15 to 24 years ranked fourth; 25 to 34 eighth; 35 to 44 thirteenth; 45 to 54 thirteenth; 55 to 64 fifteenth; 65 to 74 thirteenth; and 75+ fifteenth. For Australian female's rankings were: ages 15 to 24 ranked eighth; 25 to 34 fourteenth; 35 to 44 sixteenth; 45 to 54 seventeenth; 55 to 64 fourteenth; 65 to 74 sixteenth; and 75+ fifteenth. Therefore, when Australian rates are examined in an international context, Australian youth (15 to 34 year olds) suicide rates are relatively high, but this is not the case for older age groups.

Table 4: *Rank order of mean male suicide rates for 23 Western countries by 10-year age groups, 1990-94 (for latest available years)*

Rank	15-24		25-34		35-44		45-54		55-64		65-74		75+	
1st	Finland	41.4	Finland	60.7	Hungary	82.0	Hungary	95.1	Hungary	84.6	Hungary	92.5	Hungary	183.0
2nd	New Zealand	39.0	Hungary	54.4	Finland	67.8	Finland	64.1	Finland	57.3	Austria	61.1	Austria	118.0
3rd	Switzerland	25.8	Switzerland	32.7	France	40.1	Denmark	47.5	Austria	46.7	Belgium	50.4	France	103.0
4th	Australia	25.7	New Zealand	32.0	Denmark	38.1	Austria	41.5	Denmark	42.6	Switzerland	47.4	Belgium	98.6
5th	Canada	25.2	France	32.0	Austria	37.2	France	40.1	Switzerland	41.9	France	47.1	Switzerland	89.8
6th	Norway	24.9	Belgium	30.5	Belgium	35.6	Switzerland	39.8	Belgium	38.9	Denmark	46.4	Germany	86.1
7th	Austria	24.3	Austria	30.3	Switzerland	33.0	Belgium	36.2	France	38.1	Finland	45.9	Denmark	74.9
8th	USA	21.9	Australia	29.0	Sweden	29.3	Sweden	31.9	Germany	32.2	Germany	35.9	Finland	71.9
9th	Hungary	20.1	Canada	29.0	Canada	27.3	Germany	31.1	Sweden	30.7	Sweden	33.7	Portugal	59.1
10th	Scotland	19.0	Ireland	27.1	Norway	26.9	Norway	28.8	Norway	28.8	USA	30.9	USA	55.4
11th	Ireland	18.3	Denmark	26.4	Scotland	26.2	Canada	25.6	Ireland	25.9	Norway	30.7	Sweden	51.9
12th	Nthn Ireland	17.6	Norway	26.1	Germany	26.0	Scotland	24.2	USA	25.0	Portugal	30.1	Spain	47.8
13th	Belgium	15.7	Scotland	26.1	Australia	25.2	Australia	24.2	Canada	24.2	Australia	24.4	Italy	44.3
14th	France	15.3	USA	24.6	New Zealand	23.9	New Zealand	24.2	New Zealand	23.2	Spain	23.2	Netherlands	35.4
15th	Germany	14.0	Sweden	23.9	USA	23.5	USA	23.1	Australia	22.9	Italy	22.9	Australia	32.8
16th	Sweden	13.4	Nthn Ireland	22.4	Ireland	22.9	Ireland	19.6	Portugal	21.5	Canada	22.1	Norway	31.8
17th	Denmark	13.0	Germany	21.3	Netherlands	17.7	Netherlands	16.7	Netherlands	18.6	New Zealand	21.2	New Zealand	29.8
18th	Engl & Wales	11.1	Engl & Wales	16.3	Engl & Wales	17.4	Engl & Wales	16.2	Scotland	18.1	Netherlands	19.7	Canada	28.9
19th	Netherlands	9.3	Netherlands	15.9	Nthn Ireland	15.5	Nthn Ireland	15.1	Nthn Ireland	17.4	Ireland	18.3	Engl & Wales	17.1
20th	Spain	7.0	Portugal	13.2	Portugal	11.8	Portugal	14.6	Spain	17.4	Scotland	14.3	Scotland	16.0
21st	Italy	6.1	Spain	10.6	Italy	10.6	Italy	12.6	Italy	17.1	Nthn Ireland	12.8	Greece	15.8
22nd	Portugal	5.8	Italy	10.3	Spain	9.4	Spain	11.9	Engl & Wales	12.8	Engl & Wales	11.9	Ireland	13.8
23rd	Greece	4.0	Greece	5.6	Greece	5.9	Greece	6.7	Greece	7.8	Greece	10.1	Nthn Ireland	13.3

Source: Cantor et al, 1999a

Table 5: Rank order of mean female suicide rates for 23 Western countries by 10-year age groups, 1990-94 (for latest available years)

Rank	15-24		25-34		35-44		45-54		55-64		65-74		75+Rank	
1st	Finland	7.5	Finland	12.0	Hungary	20.3	Hungary	26.5	Denmark	28.5	Hungary	37.6	Hungary	67.3
2nd	Austria	6.2	Belgium	11.8	Finland	17.4	Denmark	25.5	Hungary	28.0	Denmark	31.5	Denmark	30.2
3rd	Hungary	6.2	Hungary	11.6	Denmark	15.7	Finland	20.4	Belgium	17.9	Belgium	23.5	Austria	28.5
4th	New Zealand	6.2	Sweden	10.1	Belgium	14.5	Belgium	18.2	France	17.6	Switzerland	19.8	Germany	26.4
5th	Sweden	5.9	Switzerland	9.0	Switzerland	13.5	Austria	17.1	Finland	17.5	Austria	18.5	France	25.3
6th	Switzerland	5.8	France	9.0	France	13.0	Switzerland	16.7	Austria	17.4	France	17.9	Belgium	24.2
7th	Norway	5.5	Scotland	8.3	Austria	12.1	France	16.5	Switzerland	17.0	Germany	16.7	Switzerland	23.0
8th	Australia	5.1	Austria	8.0	Sweden	11.8	Sweden	15.0	Sweden	15.4	Sweden	13.5	Sweden	14.2
9th	Belgium	5.1	Denmark	7.7	Norway	9.8	Germany	12.1	Germany	12.9	Finland	13.3	Portugal	12.2
10th	Canada	4.9	New Zealand	7.3	Netherlands	9.6	Norway	11.5	Norway	12.0	Norway	12.4	Netherlands	12.1
11th	France	4.5	Netherlands	7.2	Canada	8.1	Netherlands	9.5	Netherlands	10.9	Netherlands	10.4	Spain	11.9
12th	USA	3.8	Norway	7.1	Germany	7.7	Nthn Ireland	9.4	New Zealand	7.7	Spain	8.8	Finland	9.6
13th	Netherlands	3.7	Ireland	6.7	New Zealand	6.9	New Zealand	8.9	Ireland	7.7	Portugal	8.1	Italy	9.3
14th	Scotland	3.7	Australia	6.6	Scotland	6.8	Canada	8.1	Australia	6.9	Italy	8.0	Norway	9.2
15th	Germany	3.5	Canada	6.4	Nthn Ireland	6.8	USA	7.3	USA	6.8	New Zealand	6.6	Australia	8.0
16th	Denmark	3.3	Germany	5.7	Australia	6.6	Scotland	7.2	Italy	6.8	Australia	6.6	Scotland	6.0
17th	Ireland	2.5	USA	5.3	USA	6.6	Australia	7.0	Scotland	6.7	Ireland	6.4	USA	6.0
18th	Nthn Ireland	2.4	Nthn Ireland	3.9	Ireland	4.8	Ireland	6.8	Canada	6.4	Scotland	6.4	Engl & Wales	5.9
19th	Portugal	2.2	Portugal	3.5	Engl & Wales	3.9	Portugal	5.0	Portugal	6.2	USA	6.2	Canada	4.7
20th	Engl & Wales	2.1	Engl & Wales	3.5	Italy	3.9	Italy	4.9	Spain	6.0	Canada	6.1	New Zealand	4.3
21st	Italy	1.8	Italy	2.9	Portugal	3.8	Engl & Wales	4.7	Nthn Ireland	4.8	Engl & Wales	5.2	Greece	3.4
22nd	Spain	1.7	Spain	2.6	Spain	3.0	Spain	3.9	Engl & Wales	4.7	Nthn Ireland	3.9	Ireland	3.0
23rd	Greece	0.7	Greece	1.4	Greece	1.3	Greece	2.3	Greece	2.4	Greece	2.8	Nthn Ireland	2.5

Source: Cantor et al, 1999a

continued to rise, although Australian rates have plateaued since 1989. This plateau

One phenomenon which has not yet received sufficient attention is the proportional increase in suicide rates in old age, particularly in Latin countries, with an almost parallel decrease in Anglo-Saxon ones (Cantor et al, 1999a). A similar trend has also been observed in South American countries (Diekstra and Gulbinat, 1993). The explanation for this is probably related to the differences existing between these two cultural poles, over and above all the less favourable recent social changes affecting the elderly in Latin countries (De Leo, 1998b). However, it may also be explained by a breakdown in family structure in recent decades - particularly in Latin countries. Consequently, there has been a significant decline in 'spontaneous' social support, in the absence of replacement by 'formal' support or education on coping with aging (De Leo, 1998b). Another hypothesis is that the fruition of more comprehensive retirement plans (with improved social security benefits), enjoyed above all by Anglo-Saxon citizens (particularly in the United Kingdom and the United States), has further widened the gap between them and citizens in Latin countries, which are on the whole rather backward in old-age-related socioeconomic policy (De Leo, 1999).

The number of elderly suicides is destined to rise, considering that elderly people constitute the fastest-growing segment of the population in terms of both increase in longevity and the 'cohort effect' or rather the aging of the 'baby boom generation' (Conwell, 1992). It is worth questioning whether the baby boomers' high risk of suicide is an American phenomenon only, or whether it holds true for other countries (Bille-Brahe et al, 1994a).

Current mean life expectancy at 65 years is approximately 19 years for females and 15 years for males. This falls to nine and seven years, respectively, if we consider 'disability-free' years, followed by 10 and eight years in the presence of disability (Trabucchi, 1994). Current forecasts do not envisage a change in life expectancy ratios, with or without disability, over the next few years, which may maintain suicide rates at present levels. Increasing socioeconomic pressure combined with a progressive decline in the proportion of the population which is active may nevertheless worsen the quality of life of inactive subjects, particularly the elderly and more so those aged 75 and more (the "old-old"), with an increase in the incidence of suicides (Conwell, 1992). While this view may seem rather pessimistic, it does not consider that, at least in more advanced countries, this 'cohort effect' may be accompanied by changes in opportunities for elderly people. In fact, newly developing attitudes and social attributes are beginning to modify traditional cultural stereotypes (Mariotto et al, 1999). For example, there has been a rise in elderly travellers, sportsmen and women and older migrants.

The incidence of suicide and deliberate self-harm exhibits opposite tendencies with respect to age. The ratio between attempted suicide and suicide in older adults has been estimated at approximately 4:1, versus a ratio of between 8:1 and 15:1 in the general population and 200:1 in the young (McIntosh, 1992). According to the findings emerging from the WHO/EURO Multicentre Study on Parasuicide, based on data collected over the period 1989-93 by 16 centres from 13 European countries, the population aged 65 and over showed a mean suicide rate of 29.3/100 000 and a mean attempted suicide rate of 61.4/100 000 for the total sample. The attempted suicide/suicide ratio was 2.09/100 000 (De Leo et al, 2001). Marked differences in suicidal behaviours also emerged from the above study between the various centres participating in the project.

Of the phenomena which can be located along the suicidality continuum, suicidal ideation is the most difficult to examine. Despite the difficulties in studying a phenomenon which, unlike suicide and deliberate self-harm cannot be objectively examined since it is reported

by the subject, and because of the differences in the methods adopted in studies conducted to date on elderly suicidal ideation, the frequency of recent feelings of dissatisfaction with life, or death, self-destructive or frankly suicidal thoughts among the elderly, ranges between 2.3 per cent and 17 per cent (Jorm et al, 1995; Skoog et al, 1996; Forsell et al, 1997; Rao et al, 1997; Scocco et al, 2001a).