

Differences Between National Suicide Rates

By B. M. BARRACLOUGH

Durkheim directed attention to the suicide rate seen not merely as the sum of individual acts of suicide but as the product of factors which affect the group or society as a whole. The study of suicide rates of different societies thus involves the study of their social structures and leads to inferences about the effects of differences in their cultural, social, psychological and religious composition. Such inferences are based on the assumption that differences in suicide rates are valid and not merely artefacts resulting from differing ascertainment procedures.

Sainsbury has shown that the rank order of the suicide rate of 11 countries is very similar to the rank order of the suicide rate of immigrants from those countries who lived and died in the U.S.A. and were therefore subject to different suicide ascertainment procedures from those of their country of origin (1). The similarity persisted in spite of different ascertainment procedures and must therefore be independent of them, and presumably due to cultural features specific to each country considered. A similar finding for immigrant groups to Australia has been reported by Lester (2).

We wish to report here a further test of the hypothesis that the rank orders of the suicide rates of nations are independent of ascertainment procedures, and therefore reflect real differences in the incidence of suicide.

It is generally agreed that suicide is under-reported. National differences in under-reporting may arise on the one hand from variations in the quality of the investigation given to suspicious deaths, and on the other to the application of different definitions of what constitutes a suicide case. Doubtful cases of suicide may be placed in a category of death 'Injury undetermined whether accidentally or purposely inflicted (AE149, E980-989)', first introduced with the Eighth Edition (1965) of the International Classification of Diseases. This category is for

use 'when it cannot be determined whether the injuries are accidental, suicidal or homicidal. They include self-inflicted injuries not specified either as accidental or as intentional' (3). The ten 3-digit categories E980-989 are identical with those for suicide, E950-959 (see Appendix 1).

The majority of cases allocated to this category are probably equivocal suicides, for homicides are rare and usually obvious, and doubtful accidents will be more readily placed in the accident category.

If this is true, and it seems true for England and Wales, and for Scotland (4), then the sum of the suicide rate and the undetermined death rate may be a closer approximation to the true incidence of suicide than the suicide rate alone. If ascertainment procedures are not important in causing the observed rank order in the suicide rates of nations, then the rank order of countries according to their suicide rate should be very similar to the rank order of countries according to this new statistic, the suicide rate plus the undermined rate.

Statistics for the 22 countries using the Eighth Edition classification for their most recent mortality returns (5) are shown in Table I. The rank order correlation coefficient between the suicide rate and the suicide rate plus the undetermined rate is 0.89 ($p < 0.001$), and if Chile, the one remarkable exception to the general rule, is excepted, the coefficient rises to 0.95. Thus even when doubtful suicides are included the order is maintained.

Our previous finding that the rank order of suicide rates is valid and independent of ascertainment procedures is therefore corroborated and extended to include other countries.

The independence of the rank order from the effects of ascertainment procedures is strong evidence that differences in national, official suicide rates truthfully reflect that countries do

TABLE I
Suicide death rates and undetermined death rates per
100,000 for 22 countries (1968)

Country	Suicide rate (AE 147)	Rank	Rank	Undeter- mined rate plus suicide rate	Undeter- mined rate (AE 149)
West Berlin	42.7	1	1	42.8	0.1
Belgium ..	15.5	2	4	15.5	—
France ..	15.3	3	3	20.6	5.3
Japan ..	14.4	4	5	15.2	0.8
Australia ..	12.7	5	6	14.5	1.8
Yugoslavia	12.6	6	7	13.1	0.5
U.S.A. ..	10.7	7	8	12.8	2.1
Bulgaria ..	9.9	8	12	10.2	0.3
New Zealand	9.6	9	13	9.9	0.3
England & Wales ..	9.4	10	10.5	11.9	2.5
Salvador ..	8.2	11	9	12.1	3.9
Chile ..	8.1	12	2	32.3	24.2
Scotland ..	7.2	13	10.5	11.9	4.7
Northern Ireland	6.6	14	17	7.4	0.8
Venezuela	6.1	15	15	8.2	2.1
Panama ..	3.9	16	16	7.9	4.0
Greece ..	3.6	17	20	5.0	1.4
Barbados ..	3.2	18	18	5.6	2.4
Dominica ..	3.1	19	14	9.5	6.4
Ireland ..	2.4	20	19	5.4	3.0
Mexico ..	1.6	21	21	1.6	—
Malta ..	0.9	22	22	1.5	0.6

$\rho = 0.89, p < 0.001$
(Suicide rate rank correlated with Undetermined rate
plus Suicide rate rank)

differ in their incidence of suicide. This established, enquiries to explain the differences become worthwhile.

REFERENCES

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2. LESTER (1972) *Medical Journal of Australia*, April 28, 941.
3. INTERNATIONAL CLASSIFICATION OF DISEASES (1967). Geneva: World Health Organization.
4. BARRACLOUGH, B. (1972). 'Are the Scottish and English suicide rates really different.' *British Journal of Psychiatry*, 120, 267-73.
5. W.H.O. (1971), WORLD HEALTH ANNUAL STATISTICS (1968), Volume 1, Vital Statistics and Causes of Death, Table 4.1.2. Geneva: W.H.O.

APPENDIX

- E950, 980 Poisoning by liquids or solids.
E951, 981 Poisoning by gases in domestic use.
E952, 982 Poisoning by other gases.
E953, 983 Hanging, strangulation, suffocation.
E954, 984 Drowning.
E955, 985 Injury by firearms and explosives.
E956, 986 Injury by cutting and piercing instruments.
E957, 987 Jumping or falling from high place.
E958, 988 Injury by other and unspecified means.
E959, 989 Late effect of injury.

B. M. Barraclough, M.B., M.R.C.Psych., M.R.A.C.P., *Medical Research Council, Clinical Psychiatry Unit, Graylingwell Hospital, Chichester, Sussex*

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