The Service Implications of Regional Differences in Suicide Rates in the Republic of Ireland

Abstract:
This paper examines variations in suicide within the Republic of Ireland in order to determine if the services, as currently available, require redistribution. The rates of suicide and undetermined death in the four provinces, 26 counties and five cities of Ireland are examined for the years 1976 to 1994, with the age and gender distributions of local populations taken into consideration. Marked variations between areas are noted with a threefold difference between the counties with the highest and lowest rates. Counties tend to be similarly ranked for men and women but the male suicide rate, overall, was almost three times that for women. The male:female ratio was 2.3:1 for the first half of the study, but this increased to 3.4:1 for the second half; a reflection of increasing numbers of male suicides. Surprisingly, the male suicide rate in Dublin city has stayed steady at 12 per 100,000 over the entire study period, while the national male rate has more than doubled reaching approximately 18 per 100,000 in recent years. There is a need for improved services in rural Ireland. If the various available services are to help reduce the suicide rate, then a mechanism must be found to deliver these in areas of low population density where the need could well be greatest.
Introduction

If there are spatial or temporal differences in the frequency of disease, then it is reasonable to seek similar differences in the prevalence of other factors, which may be of either a causative or protective nature. From the organisational point of view, it is also both reasonable and desirable to focus services on areas of greatest need.

This paper applies these considerations to the topic of suicide.

Several studies have confirmed the rise in Irish suicide rates, which was first identified in 1987.1,2,3 The reasons for the rise have never been clearly identified. Attention has already been drawn to regional and inter-county differences in suicide, however it should be noted that these differences can be attributed to local variations in recording practices and whether they remain once the age and sex distributions are standardised.1,4 If these differences are explicable in terms of variation in the rapidity of social change in rural versus urban areas of Ireland, will be explored in a sister article.

Materials and Methods

The years studied were 1976 (the first year that data are comprehensively available on computer) to 1994, the last available year. There were four national population censuses taken during that time, in the years 1979, 1981, 1986 and 1991. The Republic of Ireland has been historically divided into four provinces: Connacht, Leinster, Munster and Ulster; and at a lower level into twenty-six counties. These are further divided into five cities (county boroughs) with populations varying from 40,000 in Waterford to 478,000 in Dublin. Counties which included county boroughs were treated as two separate areas—the city and the rest of the county. The cities had a combined population of forty-one areas.

For each province, county and city, the annual number of suicides was tabulated into five-year age groups for each sex, using data supplied by the Central Statistics Office. Rates, age-adjusted to the European Standard Population, were calculated according to the nearest previous census, except for 1976-1978 when the 1978 data were used.

Table 1. Similarity of the ranking of the areas for males and females by suicide; undetermined death; suicide plus undetermined death.

<table>
<thead>
<tr>
<th></th>
<th>Spearman's Rank Correlation Coefficient, rs</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide</td>
<td>0.544</td>
<td>0.002</td>
</tr>
<tr>
<td>Underdetermined death</td>
<td>0.495</td>
<td>0.005</td>
</tr>
<tr>
<td>Suicide plus undetermined death</td>
<td>0.467</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Discussion

The results show that inter-provincial and inter-county differences in suicide rates exist in Ireland, even when age and sex distributions are standardised. In all counties, the female rate is lower than that of the male; by a ratio of 1:3 on average. A number of areas (especially the small counties) exhibit wide fluctuations in their suicide rate from year to year, but the majority retain their rank order over the whole study period. The counties with the highest rates in the present study are predominantly rural, and those with the lowest rates are predominantly urban or suburban. Leinster, which is the most urbanised province of all, has the lowest rate for men. The possibility that these differences are explicable in terms of variation in the rapidity of change in rural versus urban areas of Ireland, will be explored in a sister article.4 The situation with regard to Limerick city presents a particular problem which requires more research. Here, the focus is on the organisation of services.

The report of the special Task Force on Suicide, which was set up by the Minister for Health, is due to be published in the near future and is likely to recommend that each health board area appoint a specific resource person(s) with a special interest in suicidal behaviour as it occurs in the particular health board area.5 It is envisaged that such a person would consult with the various voluntary and statutory services which exist for the care of the psychologically distressed. This person would also have a responsibility to report to the Review Group, also to be set up, which will oversee the response to changes in suicide and parasuicidal rates at a national level.

There are specific difficulties in delivering services, whether voluntary or statutory, in rural areas of low population density. There are also highly specialised centres of care. There may be considerable problems of transport, including financial and professional time costs. Vulnerable individuals in country areas find it more expensive and more difficult to make use of available services. The psychiatric services are, generally speaking, of low cost in comparison with high technology medicine. However, within psychiatric catchment areas, it is more expensive to deliver services in sectors of low population density than it is in more highly populated areas.

The Service Implications of Regional Differences in Suicide Rates in the Republic of Ireland
Many health boards do not provide adequate travelling expenses to allow the delivery of services to remote areas. Among the reasons given for this, is the possibility of abuse. Nevertheless, there is a responsibility to deliver care to the populations in need, even when the per-capita cost is higher.

Another aspect of care delivery which should be mentioned, is the very low level of attendance at services of young male suicides prior to their deaths. This is the group with the highest rate of increase in suicide. This phenomenon has also been noted in other countries. It is obvious that this group do not see the services, as presently structured and delivered, as being relevant to them. It can be argued that the reason the rate for the Dublin area has not increased, may be because of the ready availability of services there. This may also apply to other Leinster areas in its hinterland. This highlights the necessity for improved services in more remote areas. If the various available services, whether consultant-led or given by general practitioners or voluntary agencies, are to be of benefit in reducing the number of suicides, then a mechanism must be found to deliver these in rural areas of low population density where the need could well be greatest.

The uneven distribution of care, however, is not confined to consultant-led services. It also affects general practice. Most rural general practices are centred in small towns. The periphery is less well-endowed. Similarly, voluntary services of all sorts are increasingly a small town phenomenon, if not that of a city. It can be argued that the reason the rate for the Dublin area has not increased, may be because of the ready availability of services there. This may also apply to other Leinster areas in its hinterland. This highlights the necessity for improved services in more remote areas. If the various available services, whether consultant-led or given by general practitioners or voluntary agencies, are to be of benefit in reducing the number of suicides, then a mechanism must be found to deliver these in rural areas of low population density where the need could well be greatest.

Acknowledgments
This research work was funded by the Southern and Mid-Western Health Boards, the Department of Health and a Unit Grant from the Health Research Board.

Correspondence:
Dr MJ Kelleher
National Suicide Research Foundation,
1 Perrott Avenue,
College Road,
Cork

References