An investigation of one hundred suicides

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Abstract

Objectives: This study examines the backgrounds of 100 people who died by suicide and whose cases were adjudicated on consecutively over a five-year period, by the two Cork City coroners.

Method: Five main sources of information were used; coroners, relatives, investigating police, general practitioners and hospital records. The cases were examined under the headings of age and gender differences; methods used; social circumstances; illness; treatment prior to death and previous attempts. Certain information may have been missed because peers were not interviewed. There were 72 males and 28 females.

Results: In the 15-44 age group, the male female ratio was 4:1; in those over 45 the ratio was almost equal. Men were more likely to be unmarried even when age differences were taken into account. All the women and all but seven of the men had a psychiatric diagnosis, but women were more than more likely to have received medical treatment in the year before their suicide than men (OR = 6.6). Thirty-seven had made at least one previous suicide attempt.

Conclusions: The study confirms that suicide, particularly for men is becoming more a young person's problem. Psychiatric illness is the single commonest association. Over a third of suicides had made a previous attempt. These findings point to the need to improve recognition of psychological distress and find effective methods to reduce parasuicide.

Key words: Suicide; Young men; Precipitants; Predisposing; Treatment; Prevention.

Introduction

Suicide has risen in prominence from a hidden and infrequent occurrence in Ireland to become the subject of a Ministerial Task Force Report.[1]

This change is because of an increase in incidence that is not fully explicable in terms of better recording practice.[2,3,4] The rise is mainly a male phenomenon, particularly affecting young men.[5] It is not evenly spread across Ireland and the increase until the early 1990s has been a rural rather than an urban phenomenon.[6]

All of the above refers to statistical trends. Such an approach presumes that there is a commonality shared by all suicides, which may not necessarily be so. The study of individual suicides may give a better understanding of the psychological world of the deceased and might thereby lead to practical methods of prevention. To some extent, each suicide is individual and therefore not understandable in a universal sense.

In other countries over the past 40 years or so, efforts have been made to reconstruct the social and psychological world of groups of suicides.[7] Such inquiries have been used to study both adult suicides[8-10] and young suicides.[11] More recently psychological autopsy studies have been published dealing with suicides in Northern Ireland.[12,13]

The present study describes a consecutive series of suicides that were adjudicated on by the two Cork city coroners. The aims were two-fold:

- To understand the reason(s) for each suicide
- To identify possible means of prevention of other suicides.

Method

An experienced psychiatric social worker (BK) attended each sitting of the two Cork city coroners' court and noted the evidence. The coroner mentioned in court that the social worker was present and that he would like to speak to the relatives and other witnesses. This was done both immediately following the court hearing itself and where appropriate and possible, again later. If the relatives wished, arrangements were made for appropriate counselling. The series is consecutive for Coroner Riordan's court from 1989 and for Coroner O'Connell's court from 1992.

A guided semi-structured interview format was used. The schedule was compiled based on previous work and clinical experience of the authors. The cases were examined under the headings of age and gender differences; methods used; social circumstances; illness; treatment prior to death and previous attempts.

Further information, when available, was obtained from the patient's general practitioner, usually by telephone interview. Unfortunately, many suicides did not have a known general practitioner. This was particularly so in men. In part, this may reflect the Irish healthcare system that differs from the British, where over 90% are registered on general practitioners' lists. If the deceased had been admitted to a general or a psychiatric hospital then medical case files were examined. The police officer that had investigated the case was interviewed but for ethical reasons friends and associates from school, work or shared social activities were not contacted.

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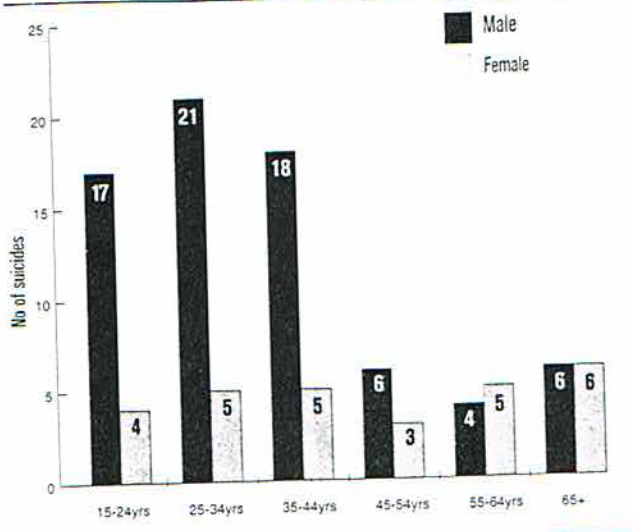
Figure 1: **Age-sex distribution of 100 Cork suicides (72 males, 28 females**



Once all the information was collected, two fully trained psychiatrists discussed each case with the social worker and, where appropriate, made a clinical diagnosis. Unless there was a previous diagnosis or positive evidence of mental illness in the months before death, no diagnosis of psychiatric illness was made. The classification used was that of the ICD-10.[14]

Results

The extent to which the various sources of information were used in the study is outlined in *Table 1*. The inquest was attended for all cases. The 'other' category includes healthcare personnel, clergy and social workers. Most cases had at least three sources of information and all had at least two.

Age and gender differences

There were 72 male and 28 female suicides in the study *(Figure 1)*. As a group, the male suicides were significantly younger than the female (Mann-Whitney U-Test, $P < 0.05$). Among those aged 15-44 years old, males outnumbered females by 4:1 (56M:14F). After the age of 45 years, the number of men and women is almost equal (16M, 14F).

Methods used

Eighty-six per cent of the women and almost three-quarters of the men died by drowning, hanging or overdose *(Figure 2)*. However, women were more likely to use overdose than were men (OR = 3.3, 95% CI 1.15-9.58). While these methods were equally common among the women, drowning was by far the most prevalent male method which contrasts with the national picture, where hanging is the commonest method for men. The 'other' category included such methods as self-burning, gassing and cutting. Alcohol had been taken before the event by 10(14%) of the men and two of the women. Eighteen people (9M, 9F) died by overdose. Most (5M, 7F) took more than one substance. Paracetamol contributed to the deaths of four people (2M, 2F) and was the only substance used by the two men.

Apart from paracetamol, all other drugs ingested are only available on prescription. These were mostly psychotropic medications and included the new and older anti-depressants as well as sedatives, mainly benzodiazepines. Thirteen people (72%) took medicines that had been prescribed for them. It is significant that, of the 18 deaths caused by drug overdose, five (4F, 1M) were associated with the ingestion of dothiepin.

Table 1: **Sources of information**

Source of information	Men	Women
Coroners' reports	55 (76%)	24 (86%)
Police	47 (65%)	14 (50%)
Relative	37 (51%)	15 (54%)
GP	29 (40%)	20 (71%)
Hospital	15 (21%)	14 (50%)
Other	14 (19%)	3 (11%)

Table 2: **Percentages who were single, separated or divorced by gender**

	15-29 years	30-54 years	55 years+	All ages
Men	100	70	70	82
Women	83	64	9	46
All	**97**	**68**	**38**	**72**

Social circumstances

Marital status differed significantly for males and females *(Table 2)* (Chi-square = 19.368, df = 3, $P < 0.001$). Over 80% of men were single, separated or divorced as opposed to 46% of women (OR 5.2, 95% CI 2.0-13.6). This difference remains significant after adjustment for age.

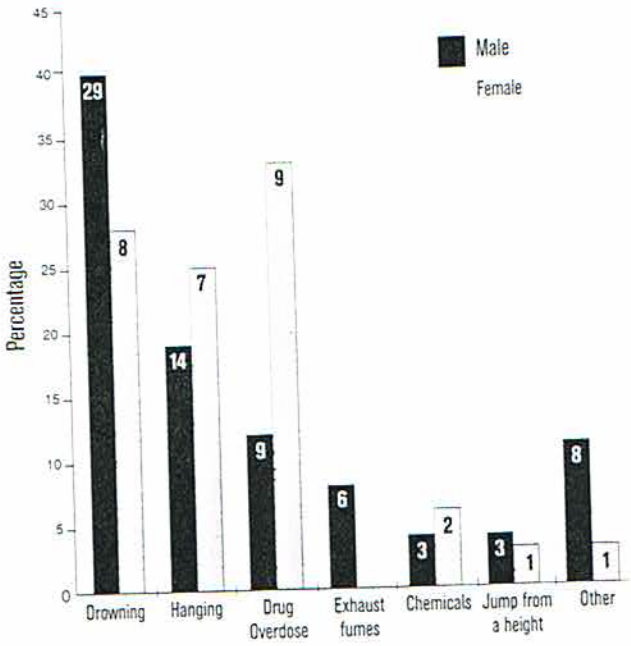
Female suicides were twice as likely to be married at the time of their death. All but one of the nine suicides that had been separated at the time of their death was male while the five suicides that were widowed were female.

Household composition largely reflected marital status. Women were more likely to have been living with a partner (20%M, 43%F; OR = 2.8, 95% CI 1.1-7.3). Almost one in three of each gender lived alone while a higher proportion of men were living with their parents (30%M, 18%F), to some extent a consequence of their age distribution. Six men were listed as homeless and/or stayed in night shelters. Social isolation was mentioned as a factor in a number of cases *(Table 4)*, even for some of those living at home. Over half of the men and a fifth of the women were unemployed and a further 13% of men were disabled or retired *(Figure 3)*. Men were more likely to be unemployed (OR = 3.9, 95% CI 1.4-10.7), as opposed to women who were more likely to work in the home (OR = 3.3, 95% CI 1.4-7.7). All six students were male.

Illness

A psychiatric diagnosis was made in the case of 92% of the men and all of the women *(Table 3)*. More than one diagnosis was made in a third of cases. The distribution of illness varied between the sexes. Affective disorder, usually depression, was by far the commonest diagnosis made for women (86%), while it was present in half of the men. Alcohol abuse (42%) was also a very frequent problem for men. The abuse of substances other than alcohol was mostly due to benzodiazepine overuse. Street drug abuse was uncommon but may have been underestimated among the young because peers were not interviewed.

Figure 2: **Methods of suicide of 100 Cork suicides (72 males, 28 females**



No evidence of any psychological illness could be found in seven cases, all of whom were single men. All but one was aged between 19 and 33 years. Three were known to have relationship difficulties but there appeared to be neither illness nor a known precipitant for the remaining three. One had made previous attempts. The level of information that was available for these cases is as high as for those who were given a psychiatric diagnosis. Medical information was available for all but one case.

Treatment prior to death

The numbers treated for psychiatric illness by a general practitioner or psychiatrist prior to death shows major divergence between the sexes, which is particularly significant given the high rate of probable psychological illness noted above. Overall, women were far more likely to have received medical treatment in the year preceding suicide (OR = 6.2, 95% CI 1.8 - 20.7) and this persisted after controlling for age (OR = 6.6, 95% CI 1.7 - 25.3). Over 80% of the women (39% in the month before death) were known to have been medically treated as opposed to 49% of the men (15% in the month before death). In the under 29 year olds, the situation with the males was even more stark. Twelve (41%) and two (7%) of the 29 in this age group received medical treatment in the year and month before death, respectively. It is not known what proportion of men and women had consulted therapists other than medical doctors. Eight women (29%) and 11 men (15%) had major physical illnesses, although the older average age of the women may partially explain this difference.

Previous attempts

Thirty-seven had made previous suicide attempts, 26 men (36%) and eleven women (39%). Four men and one woman had attempted suicide more than five times prior to death. The commonest method used in previous attempts was overdose, used by just over half of the men and 58% of the women. Of these 37 individuals, 60% employed a different method from their previous attempt. A change of method may thus be associated with fatal outcome.

In particular, changing from drug overdose to a more lethal method seems to be significant. In their last non-fatal attempt, over a half took a drug overdose whereas less than one in four did so as their method of suicide.

Table 3: **Psychiatric diagnosis by gender**

	Men	Women
Schizophrenia	8 (11%)	4 (14%)
Affective disorder	36 (50%)	24 (86%)
Personality disorder	7 (10%)	6 (21%)
Alcoholism	30 (42%)	3 (11%)
Substance abuse	8 (11%)	4 (14%)
Other	6 (8%)	3 (11%)
None	7 (10%)	0 (0%)

Table 4: **Recorded background stressors and recent traumatic events**

	Men	Women	P-value
Bereavement	24 (33%)	9 (32%)	1.000
Unemployment/work problems	21 (29%)	4 (14%)	0.197
Relationship breakup	16 (22%)	4 (14%)	0.578
Family discord	9 (13%)	5 (18%)	0.527
Legal/financial problems	9 (13%)	2 (7%)	0.723
Social dislocation and isolation	7 (10%)	4 (14%)	0.496
Ill-health/health concerns	2 (4%)	4 (14%)	0.050*
None	17 (24%)	5 (18%)	0.602

P-value based on Fisher's Exact Test for 2x2 tables

Psychological and social stressors

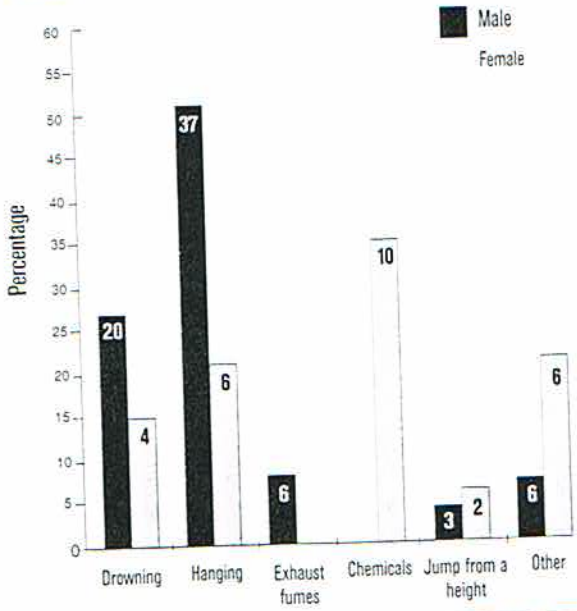
Table 4 summarises the recorded background stressors and recent traumatic events that might have contributed to the person's decision to take their life. There were no significant differences in the levels recorded for men and women apart from health related problems. These were more frequent among the women although this may reflect their older age profile.

Discussion

There are significant limitations (imposed by resource restriction at the time) in the design of this study. No age and gender matched control group is available for comparison. Standardised measuring instruments of proven validity were not used. Although a consecutive series was examined, the study was not confined to a defined geographical area (16 suicides came from outside Cork city) and therefore a valid epidemiological statement cannot be made. Nevertheless, the value of the study lies in the identification of issues which will have to be addressed in suicide prevention in Ireland.

The study confirms that suicide, particularly for men, is becoming more a young person's problem. Psychiatric illness is the single commonest association. The diagnoses recorded differ from those found in Northern Ireland[12] in some striking ways, eg. the diagnosis of schizophrenia for

Figure 3: **Employment status of 100 Cork suicides (72 males, 28 females**



both sexes is much less in Foster's study (8% for Northern men and 4% for women compared with 11% and 14% respectively in Cork). While the level of alcohol abuse for men is similar in both regions, that reported for women is much less in this study: 9.3% compared with 40% in the North. However, both studies agree that mental illness has a very important association with suicide, 86% of cases in the Northern Ireland study had an axis 1 diagnosis and 93% in the Cork study.

Over a third of suicides have made a previous attempt and five had made multiple attempts, ie. they were grand-repeaters,[15] which suggests that suicide may be a relatively common outcome in this population. However, 63% did not have a history of previous parasuicidal behaviour. This confirms other work that between 50% and 70% of suicides die in their first attempt.[16] Much emphasis has been placed on preventing repetition of parasuicide as a stepping stone to preventing suicide itself. If as little as 30%-50% give such a history, then at least half of the at-risk population are not included in this prevention paradigm. Furthermore, the fatal attempt that follows the initial parasuicide act may be separated by years in time.

Review of methods used may offer limited hope of suicide prevention. It has been suggested that limiting access to methods is followed by suicide reduction.[17] Of the 18 suicides by overdose, four had used paracetamol. Guidelines suggest that the sale of this substance be restricted to limited amounts in blister packs at particular outlets, eg. shops, supermarkets and petrol stations. However, these guidelines are not widely implemented and in any case there is nothing to prevent a person going to several outlets. If obtained on prescription from a chemist, these restrictions do not apply. Apart from suicide fatalities, paracetamol is a significant cause of liver damage.

Five deaths were due to dothiepin overdose. Previously, it had been shown that the usage of tricyclics was not a significant factor in the rise of suicides in Ireland.[18] However, their prescription to depressed patients should be circumspect, particularly if there is a history of overdose. Two weeks therapeutic supply may be fatal in a healthy person and much less in someone whose cardiovascular system is compromised.

Common sense prevention methods such as the fencing off of certain bridges and restriction of access to high buildings can be effective in preventing impulsive attempts but some of the common methods, especially hanging and drowning, are very difficult to limit effectively. The latter may be less common among those taught to swim. For general safety reasons, every child in Ireland should learn swimming as part of physical education.

Seeing that suicide has a common association with depression in both men and women it may seem attractive to assume that better treatment of this condition might result in suicide reduction. Such was the conclusion of one Swedish study[19] and hopes of such were also expressed for the Defeat Depression Campaign in Britain.[20] However, interpretation of the apparent tailing off of the rise in suicide in England and Wales is complicated by the recent increase in the numbers of undetermined deaths there.[21,22]

Many may question to what extent organised medicine is effective in suicide prevention. There is no evidence, for instance, that the advent of safer anti-depressants is associated with a fall in suicide,[23] except perhaps with regard to the use of atypical antipsychotic medications in those with a diagnosis of schizophrenia. If official medical services have a part to play, the present study indicates that their uptake is poor among men and particularly young men.

It may be that, especially with the younger group, they do not know how and where to go for help. A recent study of first year university students indicated that the vast majority did not know how to summon help even though many were familiar with suicidal behaviour in others and some had such preoccupations themselves.[24] It is possible that medical care needs better marketing in order to make it more visible and acceptable to the young.

The informants interviewed frequently listed the break-up of relationships through bereavement or separation, as well as relationship problems, as important. This has occurred despite the mushrooming of counselling services, both voluntary and professional; the increase in professional psychological services and the growth of the Samaritans. Perhaps the same factors that militate against the individuals seeking medical help also have influence when it comes to making use of these non-medical facilities.

Finally, six young and one older man were not regarded as being psychologically ill. There was no difference in the numbers of informants between these suicides and the others. Medical information was gained on all but one. It seems fair to say that medicine, as currently organised, appears to have little to offer in preventing suicide among these 'non-illness' suicides.

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Figure 3. Employment status of 100 Cork suicides (72 males, 28 females)