Epidemiology of Suicides in Northern Ireland 1984-1989

P. M. Darragh

Queen's University of Belfast.

Summary

Suicide in the UK is the 2nd commonest cause of death among the under 45 year age group accounting for 10% of all Potential Years of Life Lost (PYLL). An epidemiological analysis has been carried out on selected factors based on 558 consecutive cases (1985-89) of self-inflicted death. The study reveals a dramatic increase in suicide among young men and especially security force personnel. There has also been a change in the methods used and the age/sex profile.

Introduction

Injury during 1989 in Northern Ireland whether due to violence, self-inflicted or accidental cause accounted for 50% of all Potential Years of Life Lost (PYLL) up to age 45 years. In this age group suicide in terms of PYLL was the third commonest cause of death, having been displaced by violence among males, while it was the second most important for females. There is considerable room for disagreement on diagnosis and this may account for some variation across the British Isles. In Northern Ireland Coroners do not bring in a verdict as they do in England and Wales instead they produce "a finding". A verdict generally requires evidence of intent to be manifest. In England and Wales and the USA[2] under-recording is believed to be of the order of 25-30% and the present study would indicate a similar level for Northern Ireland. The current rates of suicide across the British Isles are: Eire 8/100,000[3]; England and Wales 9/100,000 and Scotland 10/100,000[4], while in the USA the rate is 13/100,000[2]. Eastern European and Nordic countries have higher rates whereas Spain and Italy are lower. Generally the rate for males is three times greater than for females in these countries[5]. The method of suicide closely reflects on the availability of a readily accessible fatal means, cultural tradition and changing fashion. Coal gas was for example responsible for up to 50% of suicides in the UK prior to the conversion to natural gas. Its progressive withdrawal in England and Wales did not result in a switch to other fatal means and in fact there was a 35% fall in suicides which has been largely sustained over the last 25 years especially among females[6]. In Holland when gas conversion occurred there was however a switch to other equally lethal means with no overall reduction[5]. During the last 30 years there has been an increase in the notification of suicide both in the North of Ireland and Eire. This appears to be a real increase and not simply a reflection of greater willingness to report[7].

The relationship of parasuicide to suicide is frequently discussed and it is true that parasuicide is the most consistent marker for future completed suicide[8]. Only 1-2% of parasuicides commulatively go on to commit suicide per year yet 35-50% of those who succeed will have attempted suicide previously. Furthermore as many as 50% will have sought some form of medical help witin the previous 2 weeks[8]. Community studies in the USA suggest that medical practitioners may fail to refer 30% of recognised parasuicides for hospital follow-up and that a further 50% of attempts are not disclosed to medical practitioners[2]. It has been estimated in the U.S.A. that there are 8 attempts for each completed suicide[2]. The situation in the UK is unlikely to be greatly different. Males and females may a priori be considered to have an equal desire to die however males seem to choose and have access to more lethal means. Hence the ratio of success to recorded attempts is considerably higher among males[4,5]. Other risk factors include a pre-existing major psychiatric illness or personality disorder, a critical life event and social isolation[8]. Among young males, only 20% of suicides can be attributed to major psychiatric illness, leaving the majority as otherwise unexplained events[8]. Some psychiatrists believe that there is considerable under-recording of mental illness[9]. Yet it must also be stated that the pattern of suicide has altered greatly over recent years and this association may also have changed

Coroners' Information

All unexpected deaths must be notified to the Coroner in Northern Ireland. If the death appears on prime faciae evidence to suggest the individual may have taken their own life, a post-mortem and inquest will be held to clarify the circumstance of the death on which the Coroner produces a finding. In the light of this information experienced coding clerks employed by the Registrar General's office allocate the death to the most appropriate ICD code. A finding remains open to interpretation and this must be taken into consideration in any study. There is however a wide measure of agreement between Corners in Northern Ireland in regard to their findings. The alternative of a verdict as in the UK is perhaps no more satisfactory in providing the true incidence of suicide due to the inflexibility of the legal system which seeks proof of intent. Inquests in Northern Ireland on suicide cases usually take place between 3-12 months after deaths.

Method

A retrospecitve study of 558 consecutive deaths registered (1984-89) under ICD codes relevant to suicide was carried out using information supplied by the Registrar General relating to age, sex, home address, work, marital status and date of death. The Coroners' reports were carefully scrutinised to determine circumstances and contributing factors in each

Correspondence to;
Dr Paul M. Darragh,
Department of Epidemiology and Public Health,
Institute of Clinical Science,
Royal Victoria Hospital,
Grosvenor Road, Belfast.

SUICIDE AND SELF INFLICTED INJURY

NORTHERN IRELAND

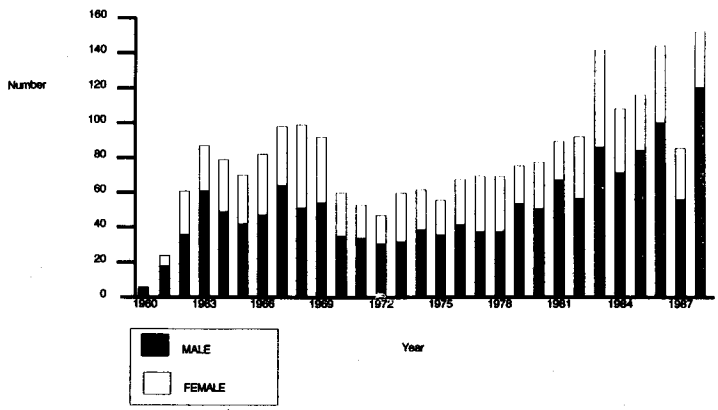


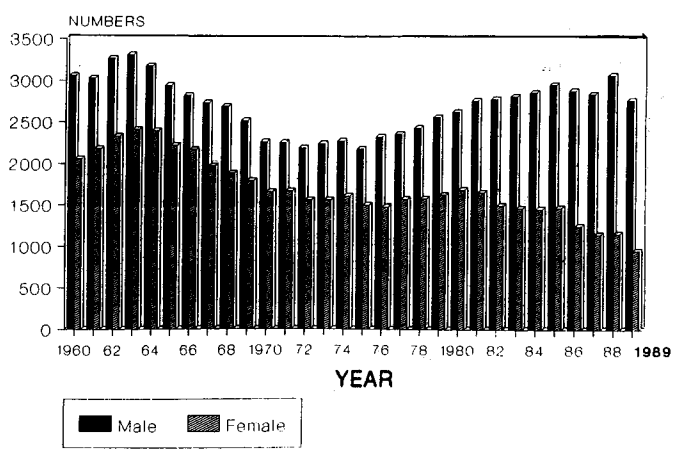
FIGURE 1

case. Information about the mental health of the individual prior to the event, social, emotional or other pivotal life events were noted. Details on the method employed were compared with post-mortem findings. Cross-tabulations for significant variables were produced. Where appropriate, data were compared with data available from other parts of the British Isles. Special consideration was given to younger males who committed suicide and especially members of the security forces.

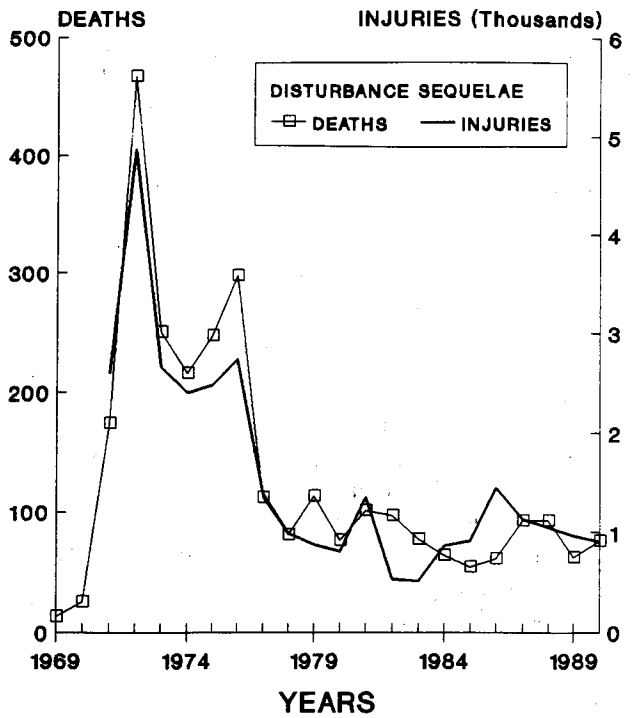
Findings

The rate of recorded suicide in Northern Ireland is 7.4/100,000. The total number of suicide deaths has been rising since 1960 with only a temporary decline during the early 1970s, a feature which in retrospect can now be discerned in other parts of the British Isles (Figs. 1 & 2). This decline coincided with the peak years of civil disturbance in Northern Ireland (Fig. 3). The most frequent means of suicide was hanging followed by firearms, intentional drug overdose, drowning and carbon-monoxide from car exhaust (Table I). Females often chose drugs in combination with alcohol in preference to the more violent methods which were most likely to be used by males (Table I). Suicides by females exceeded males only in the early adolescent years before reaching near parity again around the time of the menopause.

SUICIDE & SELF INFLICTED INJURY(1960-89)
ENGLAND AND WALES (ALL AGES)



SEQUELAE OF N.IRELAND "TROUBLES DEATHS & INJURIES (1969-90)



Security force personnel, army police and prison officers, 9% of the total, most frequently used an issue weapon either a handgun or rifle, while shotguns were most available to civilians (Table II). Only once was an illegal weapon used for this purpose. The divorced, single or widowed accounted for 60% of suicides in this study.

10% of suicides had previously made a recorded attempt. There was evidence of a recent medical consultation in 50%

TABLE I
Common means of suicide by sex-ratio – Northern Ireland 1984-89.

	M/F Ratio	Total
Hanging	6 : 1	137
Drowning	4 : 3	85
Gun-shot wounds	103 : 1	104
Drug poisoning	1 : 2	100
Carbon monoxide	9 : 1	51
Weed-killer	6 : 1	29
Others		52
	TOTAL	558

TABLE II
Use of legally held weapons in suicide.

Security services (hand-guns)	50 (29 aged 20-29 years)
Other (hand-guns)	1
Shotguns (civilians)	52
	103
(Illegal weapon)	1
	104

TABLE III
Suicides by major employment categories (Total 558).

		Male	Female
*Security force etc.	50	50	0
Labourers	50	50	0
†Unemployed	40	39	1
Farmers	30	30	0
Health Service personnel	19	6	13
Students	11	7	4
Clerical Staff	11	11	0
Financial advisors	6	6	0
Civil servants	3	3	0

*Includes police, army, UDR, Prison Officers
†Average unemployment rate over study 13%

of cases, mostly involving General Practitioners for vague psycho-somatic disorders. In most instances this was considered insufficient to merit a hospital referral. Only 20% of this sample had any prior contact with a consultant psychiatrist. During the period of the study 10 suicides occurred among hospital patients or those on licence and 5 among jailed prisoners. The larger groups by employment category were noted (Table III). In this study there was no appreciable variation in incidence by months of the year.

Discussion

There are many uncertainties in the matter of suicide and principal among these must be incomplete recording. Nor can we easily distinguish between an accident, an intended death or those who change their mind too late. The rapid increase in the numbers of suicides in Northern Ireland is a matter for concern, though the level is appreciably lower than in some other developed countries. The increase over the last 30 years appears to be real. It is not simply a matter of transfer from other unspecified categories, since the totals attributable to these groups have remained unchanged over this same time prior[8]. Ireland both North and South shares with other emigrant population of Irish descent lower levels than those of their host countries[8].

There is a special problem involving young male suicides which have increased by 400% over 30 years, while the numbers of young females have remained fairly stable. This same phenomenon has been recorded elsewhere in the British Isles and North America with the rate among young females now falling appreciably. It is interesting to reflect that intervention "help-lines", such as those operated by the Samaritans are most frequently used by young women, now one of the groups with the lowest rates of completed suicide. In this study relatively few individulas communicated their intent making intervention impossible. Altogether, 20% either communicated their intention of commiting suicide through leaving a note or were receiving treatment for a major psychiatric problem with a recognisable suicidal risk. Clearly this is a most serious issue and some effective means of identification of those at risk and intervention would be highly desirable.

Decreasing the easy access to potentially fatal means may offer a partial answer. Clearly the necessity of firearms for self-defence among security personnel carries a negative consequence. Typically 10 security force personnel committed suicide each year whereas 25 died due to terrorist action, over the period of this study. In the instances where issue firearms were involved the decision appeared to be taken on the spur of the moment, though in retrospect 20% did reveal some indication of psychological instability. During the study period 151 individuals aged 20-29 years committed suicide, of these 29 were members of the security services. Some 20 of these were locally recruited and resident within the community while 9 were members of the regular armed forces serving temporarily in the Province. Personal issue weapons are normally available for self-protection to all security service personnel living in the community. Those army personnel serving temporarily in the Province do not have the same access to weapons during off-duty periods. Publicity surrounding unusual types of suicide can lead to copy-cat episodes and may have contributed to several small clusters. The impression gained was that for the majority of episodes involving hanging, carbon-monoxide poisoning and drowning considerably prior planning had usually taken place. Alcohol played a part in around 20% of cases overall and was especially significant among those who used a fatal dose of drugs or carbon-monoxide.

The fall in incidence among young women, now an international phenomenon, does not appear to be directly attributable to the availability of crisis intervention. Nevertheless, there are obviously some who will benefit greatly from this type of provision. The evidence for the use of crisis intervention "hot-lines" will inevitably remain obscure and controversial. It is more likely to be due to the reduction in ready access to a fatal means such as non-availability of potentially lethal drugs, firearms or a carbon-monoxide source. This fall has also paralleled a period when the social status of women has been rising. Enlightened social legislation which has protected women from intolerable situations such as domestic violence have had a beneficial effect in this regard.

Prevention

The most important preventive steps must involve removing easy access to potentially fatal means and better indentification of those at greatest risk. The impression gained from the present study was that there was no readily available form of crisis intervention which would be beneficial in a majority of cases.

Among those recognised to be at general risk due to psychiatric illness there is the dilemma between quality of life, risk taking and a continuing duty of care. It is worth noting that a number of very determined patients succeeded in completing suicide even while under strict medical supervision.

Crisis intervention along the lines of the Samaritans may be helpful but the evidence world-wide is equivocal. Fortunately young women who generally make most use of crisis intervention "Hot-lines" now have one of the lowest levels of suicide and this is continuing to fall in the remainder of the UK and the USA. Among older men and women suicide is often a carefully planned event and seems to be the outcome of a conscious and pre-meditated decision. Among those over 45

years there appears to be an almost equal desire to die between both sexes and they generally choose methods which are rapidly fatal. Little effort has been directed towards reducing numbers of suicides among older people.

The alarming epidemic of young male suicides in developed countries but especially in Northern Ireland focuses attention on the link between the availability of firearms and suicides. These are deaths which frequently have no overt preceding morbidity, they are bizarre and without obvious rationale. The manner of their departure is a sad commentary on the nature of their lives. This problem has been addressed by the police in Northern Ireland with specific instruction being given to personnel in training about coping with stress and how to obtain help without stigma. The rather nebulous concept of stress has been suggested by some as a factor. A programme of intensive counselling is also in place for dealing with post-traumatic stress disorder within the RUC. There is a remarkable parallel in the USA with high levels of suicides also being encountered among armed police officers.

The situation in Northern Ireland bears some similarity to the USA where firearms account for 60% of suicides. The excess between the rates in the UK and the USA being entirely attributable to the much greater availability of firearms (60 million handguns). It is noteworthy that highly motivated paramilitaries in Northern Ireland who also have ready access to firearms rarely appear to choose this method. Clearly there must be more research into the pre-event mental state of these individuals with the use of techniques such as psychological autopsy to derive some understanding of the mental state of those involved. Suicide is a serious Public Health problem at all ages but especially among the young and clearly demands the same level of epidemiological interest directed to it as is currently given to conditions such as heart disease or cancer.

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