

Suicidal behaviour in Europe

The situation in the 1990s

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Target 12 – reducing mental disorders and suicide

By the year 2000, there should be a sustained and continuing reduction in the prevalence of mental disorders, an improvement in the quality of life of all people with such disorders, and a reversal of the rising trends in suicide and attempted suicide.

Abstract

This document summarizes the status of suicidal behaviour within the European Region of WHO. The definitions and meaning of suicidal behaviour in various cultural settings are discussed and the frequencies of suicide and attempted suicide are reported. Suicidal behaviour has constituted a problem of increasing concern in most European countries for many years. In recent years, the rates of suicide have been decreasing in most countries in western Europe, but marked increases have taken place in most countries in the eastern part of the European Region. There are no national statistics on attempted suicide, but studies indicate that there are at least 8–10 times as many suicide attempts as completed suicides. Finally, the work of WHO on preventing suicide together with that of the United Nations resulting in the document *Prevention of suicide. Guidelines for the formulation and implementation of national strategies* is discussed and various initiatives recommended.

Keywords

SUICIDE – statistics
SUICIDE – prevention and control
SUICIDE, ATTEMPTED – prevention and control
EUROPE
EUROPE, EASTERN

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Foreword

Suicidal behaviour is a serious public health problem. Today it is a matter of great and increasing concern in the European Region, especially in some of the newly independent states and the countries of eastern and central Europe. It is a personal and family tragedy, causing great suffering to the person concerned and to those close to him or her. It also entails tremendous costs to society: both years of life lost and negative health effects among family members and friends.

The patterns of suicidal behaviour in Europe are astonishing and sometimes unexpected. In some countries of the Region, suicides and suicidal behaviour are decreasing; in other areas dramatic increases are being seen, often especially acute among young people and males. It is crucially important that people have access to protection, support and treatment directed towards the underlying conditions and that society at large become more aware of the problem of suicide.

Compared with traffic deaths, which are similar both in magnitude and in the cost to society, too little is still known about the background, treatment and prevention of suicidal behaviour. The subject of suicide is taboo in many societies, despite increasing knowledge about suicide and access to means of prevention.

In the health for all policy for the European Region, WHO recognizes suicide as an important challenge for public health and urges countries to reverse the current rising trends in suicide and suicide attempts, reducing existing suicide rates by at least a further one third by the year 2020.

In 1984, the WHO Regional Office for Europe began a multicentre study on parasuicide, setting up a task force to raise the level of awareness and to enhance specific local and national strategies for the prevention and treatment of suicidal behaviour based on international research and work done by the task force. On an international level, the study group has become a most important collector and disseminator of knowledge and methods related to suicide research and prevention.

The work of the multicentre study group has already inspired many information products in the form of books, scientific publications, journal articles, seminars and training courses. This report brings together the main findings of the group in a readily accessible form.

The multicentre study group has shown that there is hope for the future. Furthermore, educational activities have been initiated to increase the ability of primary health care workers to recognize and treat the depressive conditions that give rise to a substantial proportion of the suicides completed. Positive results have already been noted as a result of these activities.

The report also shows that rising trends in suicide have been reversed in some European countries. Further improvement can be expected if this problem is discussed more openly and if continual attempts are made to develop policies and strategies aimed at tackling this most severe public health problem.

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Contents

Introduction	1
The magnitude of the problem	5
The frequency of suicide	6
Suicide in the western part of the European Region	7
Suicide in the eastern part of the European Region	7
Suicide in Europe	8
Frequency of attempted suicide	16
Preventing suicidal behaviour	21
When should suicidal behaviour be prevented?	21
Knowledge of suicidal behaviour	23
International initiatives to prevent suicide	24
Strategies for preventing suicide	25
References	29

Introduction

Suicide is a global tragedy....the suicide problem has been generally neglected or ignored all around the globe....

In many countries, suicide attempts are one of the main reasons for hospital emergency admissions and treatment of young people, putting a heavy burden on their health-care systems....

In addition to the many millions of persons who, for reasons of social and emotional suffering and loss of hope, commit or attempt suicide, there are the innumerable others, such as family members, friends, colleagues and care-givers, whose lives are profoundly affected....

In most cases, the tragedy of suicide can be prevented....

Rising to the challenge of preventing suicidal behaviour is the basic human motive behind the call for countries to develop national strategies for suicide prevention and for relevant organizations to assist them in this most needed and urgent endeavour.

Source: United Nations (1), pp. 13–14

Suicide is a distinct and definite act that has had various names throughout history, such as *mors voluntaria*, *autothanasia*, self-killing and self-murder, indicating that attitudes towards the self-destructive act have varied, ranging from full acceptance (such as *hara-kiri* in Japan) to absolute condemnation (such as by the medieval Catholic Church).

Regardless of the many names, suicide has usually been defined as “willing and willful self-termination”. Several suicidologists have provided more elaborate definitions. Erwin Stengel’s (2) widely used definition sees suicide as “...a fatal act of self-injury undertaken with conscious self-destructive intent...”, a definition close to the one published in *Encyclopaedia Britannica* (1973): “Suicide is the human act of self-inflicted, self intentional cessation”.

Such definitions have, however, been criticized as being too vague, at least for research. In his book *Definition of suicide*, Edwin Shneidman (3) states that “The genesis of wisdom lies in the clear and distinct ideas: In the beginning is the definition”, arguing that none of the definitions in use is good enough to permit understanding of the events that are desired to be changed. Shneidman therefore included both intent and motivation in his definition (3): suicide is “a conscious act of self-induced annihilation, best understood as a multidimensional malaise in a needful individual who defines an issue for which the suicide is perceived as the best solution”.

Although agreement seems to be general that, to be defined as suicidal, an act has to be conscious and deliberate, there is an ongoing debate on whether motives, explanations and such concepts as “death wish” should be part of the definition. The problem is that suicide is a manner of death, and death can be seen both as a means and as a goal. Arguments against the inclusion of motives (such as an urge to die) are that it is impossible posthumously to ascertain any underlying motives for the act or prove either the presence or strength of a death wish. Further, many suicidologists maintain that nearly all suicidal acts are characterized by at least some ambivalence, and that in most cases the person does not want to die (does not see death as the goal) but wants to stop living or, more specifically, cease being conscious (perceiving death as a means).

Already in the 1960s, Erwin Stengel (2) stated that people completing suicide and people unsuccessfully attempting suicide constituted two different groups if only because the age and sex distributions were so different; suicide is most frequent among elderly people and especially among men, whereas younger people and especially women predominate among those who make nonfatal attempts. Arguing that the two groups also differ in intent and motives, Kreitman et al. (4) proposed the term parasuicide to replace such labels as attempted suicide, thereby stressing that the differences between those completing and those attempting suicide is not only a question of the outcome of the self-destructive act (5).

The 31 participants representing 15 European countries in York at the 1986 meeting of the Working Group on Preventive Practices in Suicide and Attempted Suicide arranged by the WHO Regional Office for Europe discussed the need for common definitions of fatal and nonfatal suicidal acts and agreed on the following definitions (6):

Suicide is an act with fatal outcome, which was deliberately initiated and performed by the deceased, in the knowledge or expectation of its fatal outcome, and through which the deceased aimed at realizing changes he/she desired.

This definition does not include anything about the “intent to die” or the lethality of the act, but it excludes people who do not understand or are not qualified to understand the potential lethality – such as a psychotic person who steps out of the window on the sixth floor, believing that he or she can fly or a person with severe developmental disability who does not know what traffic lights mean.

Defining nonfatal suicidal acts is more complicated. The increasing frequency of attempted suicide, especially after 1945, when medical knowledge was growing rapidly and treatment improving, indicated that far from all nonfatal suicidal acts were unsuccessful suicides; they have to be seen as a cry for help, the intent being not to die but to live and the motive behind the act being to provoke the changes deemed necessary to make life bearable. The Working Group defined attempted suicide (6):

Attempted suicide (parasuicide) is an act with a non-fatal outcome, in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognized therapeutic dose, and which is aimed at realizing changes which the subject desired via the actual or expected physical consequences.

The definition of attempted suicide includes acts interrupted by others before the actual self-harm occurs (for example, a person removed from a railway track before the train arrives), but excludes, as in the case of completed suicide, self-harmful acts by people who do not understand the meaning or consequences of their act (for example, because of developmental disability or severe mental illness).

The WHO/EURO multicentre study on parasuicide adopted these definitions, and they are now generally accepted in most European countries. However, it is crucial that neither these nor any of the definitions mentioned previously (not even Shneidman’s (3)) explain suicidal behaviour so that it can be understood.

Albert Camus (7) claims that the question of suicide is the most fundamental of all philosophical questions. Although the person standing with the rope or a glass of pills in his or her hand does probably not consider his or her decision to kill himself or herself to be a philosophical question, the views on life and death in force in his or her surroundings most certainly influence the attitudes towards self-killing in general and thereby his or her own decision. Canadian researcher Menno Boldt (8) discussed this very important fact, arguing that:

The prevailing definition... has little relevance for the decisional process of the suicidal individual. The meaning of suicide, on the other hand, is critical to our understanding of the individual's decisional process.

Meaning goes beyond the universal psychological criteria for certifying and classifying self-destructive death: It refers to how suicide is conceptualized in terms of cultural normative values. Some examples of particular sociocultural conceptualizations of suicide are that it is an unforgivable sin, a psychotic act, a human right, a ritual obligation, an unthinkable act, and so on. The meaning of suicide is derived from cultural experience and encompasses the historical, affective qualities that the act symbolizes for a cultural group.

Whether within a sociological, a psychological, a psychiatric, a biological or any other frame of reference, these considerations have to be kept in mind when trying to determine why some people want to kill themselves. They are just as important in preparing proposals for prevention and intervention.

The magnitude of the problem

Many countries in Europe reported increasing rates of suicide between the early 1960s and the mid-1970s (9). During the 1970s and 1980s, continuously increasing rates of suicide and attempted suicide caused growing concern throughout Europe. Between 1972 and 1984, the mean suicide rate among men in 24 European countries (20 in western Europe and 4 in central and eastern Europe) increased by 42%, from 23.4 to 33.2 per 100 000 inhabitants 15 years and older; the rates for women increased by 38%, from 8.9 to 12.1. The increase occurred in all age groups, but was especially steep among men 15–44 years old and women 25–44 and 65–74 years old (10).

According to the WHO Databank, in the 1980s suicide was one of the most frequent causes of death in the world, especially among younger people. Every year, almost as many deaths were caused by suicide (about 800 000) as by traffic accidents (about 856 000) or as by war (about 320 000), violence (about 282 000) and HIV infection and AIDS (about 291 000) combined.

In contrast to the situation for suicide, no national statistics exist on nonfatal suicidal acts (attempted suicide or parasuicide), but agreement seems to be general that the frequency of attempted suicide would be about ten times the frequency of completed suicide. Studies from some European countries indicated that, during the 1970s and 1980s, the frequency of these nonfatal suicidal acts had been decreasing from the very high rates in the early 1970s, whereas others showed increasing rates. There was, however, general agreement that risk of repeat acts seemed to be growing; more and more suicide attempters seemed to repeat their suicidal acts, not only once, but often several times, with an increasing risk of an eventual fatal outcome.

Based on this, the 38 European regional targets for health for all (11) included a target on reducing mental disorders and suicide. Regarding suicidal behaviour, it states that "...by the year 2000, the current rising trends in suicide and suicide attempts in the Region should be reversed".

The frequency of suicide

Statistics on suicide have been compiled in most western European countries since the mid-nineteenth century. Fig. 1 gives an overview of suicide in western Europe from 1830 to 1970.

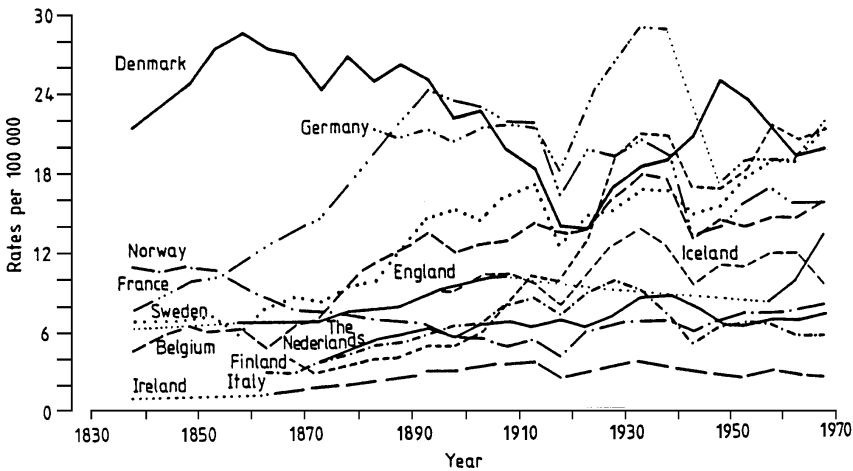


Fig. 1. Suicide rates per 100 000 population in European countries, 1830–1970
Source: Pærregaard 1980 (12)

The reliability of the older data, has to be taken with some reservations. The comparability of suicide statistics in various countries has been – and still is – much discussed. An early report from WHO (13) emphasized the uncertainty in the reliability and validity of the registration of suicide – and with this the difficulty in comparing the rates of suicide in various countries. The report concluded that the differences in registration procedures between the countries were so great that (13): “...to construct epidemiological or socio-demographic theories about suicide will remain a hazardous occupation until the statistics can be proved”.

Others have, however, had more confidence in the official statistics, especially since modern information technology was introduced after the Second World War. A series of studies has been performed, and in 1982, WHO (9) concluded based on a study by Sainsbury et al. (14) that the differences between countries in the reported rates of suicide reflect real differences between the countries. Sainsbury (14) later confirmed this for western Europe. Less is known about the registration of suicide in the countries of central and eastern Europe, and more studies are definitely needed.

Suicide in the western part of the European Region

Platt (10) found that significantly more countries reported increasing suicide rates among both men and women than reported decreasing rates between the early 1960s and the mid-1970s. The trend continued in 1972–1984 but was only significant for men. Two other important findings (10) were that more countries were reporting a peak in the age group 45–54 years than previously and that the age group 25–34 years tended to have the greatest increase in suicide rate of any age group during the period.

From 1980 to 1984, 13 of 17 countries in western Europe reported increasing rates of suicide, two reported a decrease and two countries had stable rates. By the end of the 1980s, rates varied from 27 per 100 000 in Finland to 5 per 100 000 in Italy, but few countries (Austria, Denmark and Finland) had rates higher than 20 per 100 000. The sex ratio (male:female) varied too. In Denmark and the Netherlands, the sex distribution was rather even (1.6:1), whereas Finland (3.9:1) and especially Iceland (5:1) had high ratios. In most countries, however, the ratio was between 2:1 and 3:1.

Suicide in the eastern part of the European Region

Until 1988, suicidal behaviour was considered a nonexistent problem in most countries in eastern and central Europe. In the former USSR, data on suicide

were compiled but were kept a strict secret, and only after perestroika were they released to the public. In a study on the state of suicidology in the USSR, Miller & Miller (15) concluded that suicide had clearly become of increasing concern in the USSR and that this concern had led to expanded prevention programmes and to a new emphasis on social and psychological explanations of the causes.

The Estonian-Swedish Suicidological Institute in Tallinn, Estonia has provided the most detailed information on suicide in the former USSR. A 1993 report (16) showed that suicide rates in the former USSR doubled from 1966 to 1984. At the end of this period the individual republics differed considerably. Suicide rates in 1984 were especially high in the Slavic and the Baltic republics. The suicide rates per 100 000 population in the Slavic republics were: Russian Federation 38, Belarus 29 and the Ukraine 27. In the huge multicultural USSR, suicide rates fluctuated from 3 per 100 000 in north Caucasus in the Dagestan Republic to 41 in the Udmurt Republic. Low suicide rates were reported from the Caucasian republics (Armenia 3, Azerbaijan 4 and Georgia 5 per 100 000) as well as from the central Asian republics (Tajikistan 6, Turkmenistan 8 and Uzbekistan 8 per 100 000). Average suicide rates were reported from Kyrgyzstan (15), Republic of Moldova (23) and Kazakstan (26).

From 1984 to 1988, rates decreased by 34% for the whole USSR, from 29.6 to 19.4 per 100 000. The rates decreased in all the republics, but not to the same degree; the decrease ranged from 40% in Turkmenistan and Georgia to 5% in Armenia. In 1988, the rates among men were somewhat higher in the rural areas (34 per 100 000) than in the urban areas (29 per 100 000), whereas the rates for women were higher in the urban areas (9.6 versus 8.8 per 100 000). The sex ratio was rather high: 3.3:1 in 1988 (17). The authors, however, question the reliability of the data, as do Miller & Miller (15) in their overview.

One of the very few regional epidemiological studies in the former USSR published in English presents data on suicide in Kuzbass in the Kemerovo region in western Siberia, one of the most highly industrialized regions in the Russian Federation (18). Fig. 2 is an abridged version of the data presented and shows how the rates, which were already high in the 1980s, increased dramatically during the early 1990s.

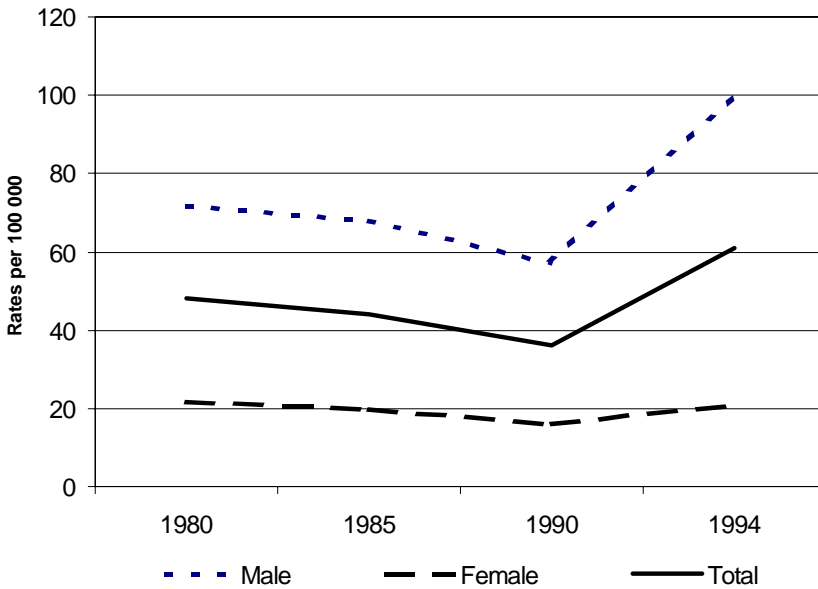


Fig. 2. Suicide rates per 100 000 population in Kuzbass, western Siberia, Russian Federation
 Source: Lopatin & Kokorina (18)

Kuzbass seems to have become a very high risk area. In 1993 and 1994, the rates were 55 and 62 per 100 000, respectively, whereas the average rates in the Russian Federation for 1993 and 1994 were 31 and 38 per 100 000. The increase was especially steep among men; the sex ratio (male:female) changed from 3.3:1 in 1990 to 4.5:1 in 1994.

The first papers on suicide in the Ukraine reported a more moderate increase from 20.6 in 1990 to 24.0 per 100 000 in 1994 (19,20). The suicide rate was 30% higher in the rural areas than in urban areas, and the sex ratio (male:female) was higher in the rural areas, 6.2:1 versus 5.3:1 in the cities.

Suicide was also a restricted topic in other newly independent states and the countries of central and eastern Europe. For example, according to WHO data, Poland and Romania reported zero (and not “not available”) suicides for various years, although later statements have shown that the hidden statistics showed differently.

Hungary is an exception to this pattern; the long tradition for high suicide rates has been recognized as a well known fact, and suicide statistics have been compiled since 1887. Suicide rates in Hungary have always varied markedly from region to region; the northwestern region has a low frequency and the southeastern region a high frequency. In the late 1980s, the lowest rates in the northwestern region were 26 per 100 000 (in Győr) and the highest in the southeastern region 64.4 per 100 000 (in Bács-Kiskun) (21). In 1970 the average Hungarian rate was 29; by 1987 it had decreased to 26 per 100 000.

Bulgaria and the former Czechoslovakia have also reported rates, at least since 1970. According to the WHO Databank, the Bulgarian rates in 1970 were 9 per 100 000 and 11 per 100 000 in 1989; the rates for the former Czechoslovakia were 23 per 100 000 in 1970 and 16 per 100 000 in 1989.

In the former Yugoslavia, the rates were 13 per 100 000 in 1978 and 14 per 100 000 in 1989. Data on suicide rates in the region of Vojvodina (in the northern part of the former Yugoslavia) were presented at the 1st European Symposium on Suicidal Behaviour in 1986 (22). The rate increased from 20.5 per 100 000 in 1960–1964 to 26.0 per 100 000 in 1980–1984. According to the authors, the average rate for the whole (former) Yugoslavia was then 13.8 per 100 000.

Recent studies indicate, however, that rates of suicide in Slovenia, which gained independence from Yugoslavia in 1991, are and have always been much higher. From 1931 to 1959, the estimated rates increased from 19.4 to 23.3 per 100 000, in 1976 they were “above 30”, and in 1984 and 1989 they were 35.8 and 35.2, respectively (personal communication Onja Grad, 1993). The male:female ratio is estimated to be 3.5:1. The WHO Databank reports a rate in Slovenia of 31 per 100 000 for 1985 and for 1989 (male:female ratio 3.8:1).

Fig. 3 shows the rates of suicide in the three Baltic countries over a period of 23 years. The figures are based on data published in 1994 by the Estonian-Swedish Suicidological Institute in Estonia (23). The frequency of suicide has more or less followed the same pattern in all three countries, and in all three countries the male:female ratios have been rather high.

An article on mortality from suicide in Latvia (24) emphasizes the markedly increasing rates of suicide after the late 1980s in all three Baltic countries and the fact that the increase was especially steep in the rural areas in all three

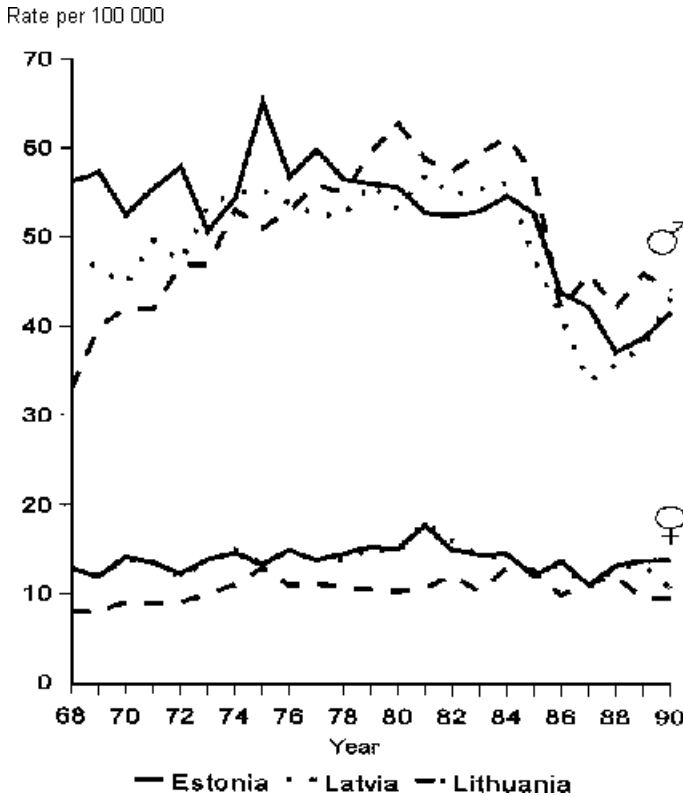


Fig. 3. Suicide rates per 100 000 population by sex in the Baltic countries
 Source: Värnik et al. (23)

countries. Further, Krumins notes that “Estonia and Latvia are ranked second and third, respectively, among the European countries as to the ratio of foreign population, the foreigners constituting more than 25 per cent of the total population”.

Finally, Dinkel & Görtler (25) conclude that suicide mortality had been higher in the German Democratic Republic than in the Federal Republic of Germany from the beginning, but both countries experienced very similar reductions in the absolute and relative importance of suicide for overall mortality from the mid-1970s. According to the WHO Databank, suicide rates in 1970 were 19 per 100 000 in the Federal Republic of Germany and 22 per 100 000 in the German Democratic Republic, and in 1989 12 and 19 per 100 000, respectively. The sex ratios were 2.1 and 2.3 in 1989 and 2.6 and 3.1 in 1970 (respectively).

Suicide in Europe

Tables 1–3 and Fig. 4 present an overview of suicide rates in Europe from 1972 to 1984 and rates for 1989 in western Europe and in central and eastern Europe.

Table 1. Crude suicide rates per 100 000 population aged 15 years or older by sex in 24 European countries, 1972–1984

Country	1972		1977		1982		1984	
	Male	Female	Male	Female	Male	Female	Male	Female
Austria	44.9	18.6	45.3	18.8	53.2	17.5	50.1	17.8
Belgium	28.2	13.0	32.0	16.8	37.6	17.1	40.7	18.7
Bulgaria	20.5	8.8	26.6	10.2	27.9	11.0	31.0	11.9
Czechoslovakia	47.1	17.1	43.2	13.6	40.2	13.3	37.7	12.2
Denmark	39.4	22.8	39.9	22.6	46.4	26.1	45.3	25.7
England and Wales	12.3	8.0	12.9	7.9	14.6	7.2	14.8	7.0
Finland	51.6	12.8	54.0	13.3	48.5	13.0	51.9	12.3
France	30.7	12.0	30.3	12.6	38.9	14.7	41.9	15.4
FRG	34.5	17.8	38.3	19.5	36.1	16.0	34.1	15.4
Greece	5.3	2.0	6.2	2.6	6.5	2.6	7.4	2.7
Hungary	67.6	26.4	71.6	31.7	80.7	32.9	87.3	32.2
Iceland	16.7	8.4	22.8	5.1	17.5	8.2	41.0	7.9
Ireland	6.3	2.4	8.6	4.7	14.6	5.2	NA	NA
Italy	10.9	4.7	11.7	4.8	NA	NA	NA	NA
Luxembourg	26.2	12.1	NA	NA	41.7	11.6	32.5	14.0
Netherlands	13.7	8.7	15.2	9.0	16.6	10.6	19.0	11.9
Northern Ireland	5.9	2.9	7.1	5.6	10.0	6.0	12.8	6.1
Norway	17.2	6.6	22.2	7.6	26.2	9.4	27.6	8.9
Poland	27.2	5.4	27.8	5.2	NA	NA	31.8	6.4
Portugal	18.9	4.8	19.5	5.9	16.4	6.2	19.4	7.5
Scotland	13.1	8.9	13.1	8.4	18.8	9.1	18.3	7.3
Spain	9.2	3.1	8.4	2.9	NA	NA	NA	NA
Sweden	37.3	14.1	35.9	14.0	34.5	13.7	33.8	14.3
Switzerland	37.0	14.4	43.7	17.9	43.4	17.7	44.0	16.8

NA: not available
Source: Platt (10)

Suicidal behaviour in Europe

In western Europe, changes in the frequency of suicide during the first part of the 1990s can be calculated for 16 of the 17 countries listed in Table 2.

The rates increased in two countries (12%), Ireland and Italy. Eight countries (50%) had stable rates, and the rates declined in six countries (38%). The sex ratios varied somewhat between the countries, from a high of 7.5:1 in Iceland to a low of 1.8:1 in the Netherlands, but in general they were reasonably stable over the years.

Table 2. Suicide per 100 000 population in countries in western Europe in 1989 and the latest year by sex

Country	1989				Latest year			Sex ratio (male:female)	
	Male	Female	Total	Year	Male	Female	Total	1989	Latest year
Austria	29	10	20	1996	27	8	18	2.9	3.4
Belgium	22	9	15	1992	22	9	15	2.4	2.4
Denmark	28	17	23	1994	21	8	15	1.6	2.6
Finland	43	11	27	1995	41	11	26	3.9	3.7
France	25	9	17	1994	26	9	17	2.8	2.9
Germany	NA	NA	NA	1995	18	6	12	NA	3.0
Greece	5	2	3	1995	5	1	3	2.5	5.0
Iceland	15	3	9	1994	15	2	9	5.0	7.5
Ireland	13	4	8	1993	15	4	10	3.3	3.8
Italy	8	3	5	1993	9	3	6	2.7	3.0
Netherlands	11	7	9	1995	11	6	9	1.6	1.8
Norway	22	8	15	1994	17	6	12	2.8	2.8
Portugal	9	3	6	1995	9	3	6	3.0	3.0
Spain	9	3	6	1993	9	3	6	3.0	3.0
Sweden	23	9	16	1995	19	8	13	2.6	2.4
Switzerland	27	11	19	1994	25	10	17	2.5	2.5
United Kingdom	11	3	7	1995	11	3	7	3.7	3.7

NA: not available
Source: WHO Database

Of the 23 newly independent states and countries in central and eastern Europe for which changes can be calculated, rates of suicide were increasing in 13

(57%) countries and decreasing in 10 countries (43%). This means that substantially more countries in the eastern part of the European Region than in the western part of the Region are reporting increasing suicide rates.

Table 3. Suicide per 100 000 population in newly independent states and countries in central and eastern Europe

Country	1989			Year	Latest year			Sex ratio (male:female)	
	Male	Female	Total		Male	Female	Total	1989	Latest year
Azerbaijan	5	2	4	1995	1	0	1	2.5	1.0
Belarus	39	7	22	1993	51	8	29	5.6	6.4
Georgia	7	2	4	1990	5	2	3	3.5	2.5
Kazakstan	36	9	22	1995	57	9	32	4.0	6.3
Kyrgyzstan	25	7	15	1995	30	7	18	3.6	4.3
Republic of Moldova	30	8	18	1995	33	7	19	3.8	4.7
Russian Federation	42	8	25	1995	73	11	41	5.3	6.6
Tajikistan	10	4	7	1992	8	3	5	2.5	2.7
Turkmenistan	15	6	10	1994	11	4	7	2.5	2.8
Ukraine	33	7	19	1992	37	7	21	4.7	5.3
Uzbekistan	16	5	10	1995	15	4	9	3.2	3.8
Albania	4	1	2	1993	3	2	3	4.0	1.5
Armenia	5	1	3	1992	4	1	2	5.0	4.0
Bulgaria	17	6	11	1994	18	6	12	2.8	3.0
Croatia	25	9	17	1995	24	7	15	2.8	3.4
Czech Republic	22	7	15	1996	20	5	12	3.1	4.0
Estonia	37	12	24	1995	67	13	39	3.1	5.2
Hungary	54	16	35	1995	42	11	26	3.4	3.8
Latvia	36	11	23	1995	69	12	39	3.3	5.8
Lithuania	49	8	27	1995	81	13	45	6.1	6.2
Poland	20	4	12	1995	25	4	14	5.0	6.2
Romania	16	5	11	1996	21	4	12	3.2	5.3
Slovakia	NA	NA	NA	1995	25	5	15	NA	5.0
Slovenia	48	13	31	1995	41	10	25	3.7	4.1

NA: not available
Source: WHO Database

The increases have been especially steep among men, and this is reflected in increasing male-female ratios. In general, the sex ratios seem to have been higher in the eastern part of the Region than in the western part, and further marked increases have taken place during the 1990s.

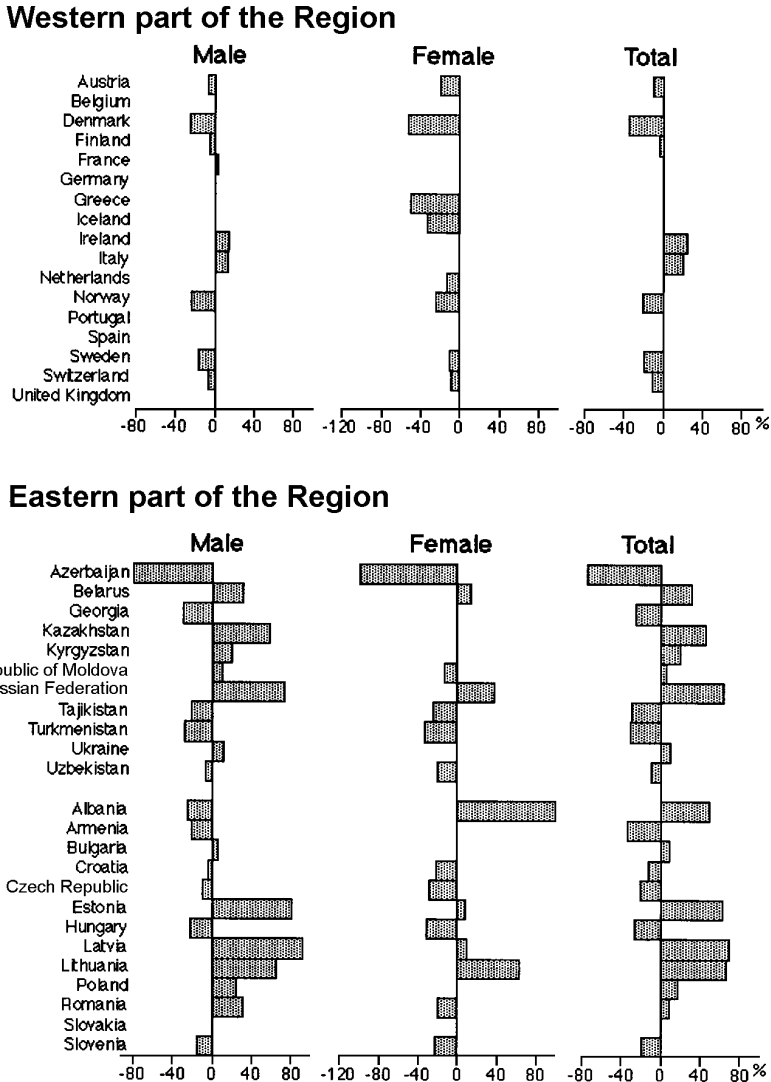


Fig. 4. Percentage change in the suicide rates for males, females and total in countries in western Europe and newly independent states and countries in central and eastern Europe from 1989 to the year for which the latest data are available

Source: WHO database

There are several explanations for the increasing rates of suicide in most of the countries in the eastern part of the Region. They are discussed later as part of the problems of countries in transition.

The general decrease in suicide rates in western Europe may have several causes. Although it is difficult to prove, it seems reasonable to suggest that the increasing awareness of the problem caused by such factors as the ongoing WHO/EURO Multicentre Study on Parasuicide has indirectly helped to reduce the frequency of suicide. The responses to a questionnaire completed by all participating centres showed that the project has positively influenced national suicidology and has created higher awareness of the problem of suicide and suicidal behaviour. Most centres stated that the project has been useful in helping to promote suicide prevention activities, and the results from the multicentre study have been valuable in establishing national programmes or strategies in at least five countries. Studies on the short-term and long-term effects of the initiatives taken are on the programme of the multicentre study.

Frequency of attempted suicide

In most western European countries, nonfatal suicidal behaviour – attempted suicide or parasuicide – has been identified for some time as a major public health problem with considerable impact on the utilization of resources in both primary and secondary health care. Further, a suicide attempt is an inherent risk factor; it is well established that people who have attempted suicide have an increased risk of future suicidal behaviour (including completed suicide). People who have attempted suicide therefore constitute an obvious target for suicide prevention, and research on these people and on nonfatal suicidal acts are vitally important.

As mentioned earlier, national data on nonfatal suicidal acts are not compiled in any European (or other) country, and given the absence of national data, information on attempted suicide has been collected mainly from local surveys, which vary widely in terms of defining attempted suicide (or parasuicide), representativity of the samples, the time period covered and other factors. Cross-cultural differences both in the treatment of nonfatal suicidal behaviour and in definitions and research methods have made it almost impossible to make valid comparisons between countries and between studies. The WHO Regional Office for Europe initiated the WHO/EURO Multicentre Study on Parasuicide in

the mid-1980s to get comparable information on the frequency of attempted suicide, on high-risk groups and high-risk factors, and to enhance suicidological research in Europe in general, the ultimate goal being to prepare proposals for suicide prevention. The project was to cover two broad areas of research:

- monitoring trends in the epidemiology of parasuicide, including identifying risk factors (the monitoring study); and
- conducting follow-up studies of parasuicide populations as a special high-risk group for further suicidal behaviour (the repetition-prediction study).

In this research, studies were to be based on the same definitions, case-finding criteria, and methods. For detailed information on the multicentre study, see Platt et al. (26), Schmidtke et al. (27) and Bille-Brahe et al. (28,29).

Table 4. Person-based, sex-specific suicide attempt rates per 100 000 population aged 15 years or older in 16 centres in Europe, 1989–1992

City or region	1989		1990		1991		1992	
	Male	Female	Male	Female	Male	Female	Male	Female
Berne	130	178	99	119	NA	NA	NA	NA
Bordeaux	129	248	NA	NA	NA	NA	NA	NA
Cergy-Pontoise	248	509	263	570	246	546	NA	NA
Emilia-Romagna	58	98	48	114	54	110	42	101
Guipúzcoa	65	85	53	69	20	62	NA	NA
Helsinki	330	237	340	266	323	247	314	238
Innsbruck	94	141	78	95	75	101	85	97
Leiden	81	148	102	144	82	129	78	134
Odense	188	233	175	199	152	173	159	175
Oxford	277	384	272	363	271	364	239	362
Padua	70	117	55	90	55	93	63	94
Sør-Trøndelag	147	210	145	210	151	177	142	169
Stockholm	179	314	176	227	115	192	148	195
Szeged	190	222	188	208	203	218	157	167
Umeå	94	148	104	145	93	142	76	143
Würzburg	72	99	66	84	68	105	55	108
Average	147	211	144	193	136	190	130	165

NA: not available

Source: Schmidtke (27)

The term parasuicide as used in the project includes suicidal behaviour in a person with a strong intention to kill himself or herself (the “true” attempted suicide as many professionals see it) as well as suicidal behaviour that can be interpreted as a cry for help.

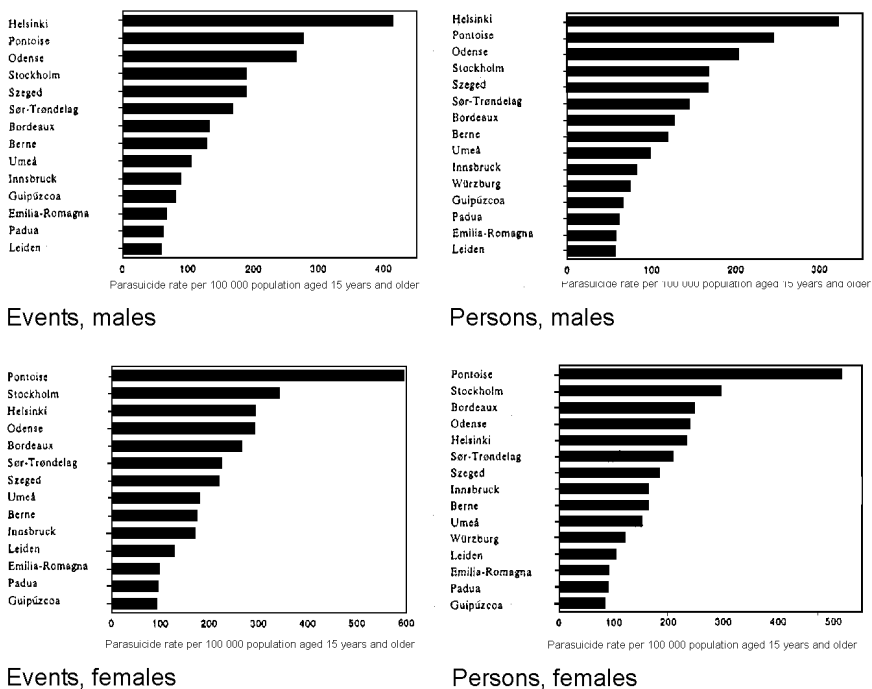


Fig. 5. Parasuicide rates (events and persons) by sex in 14 European centres in 1989

Source: Platt et al. (26)

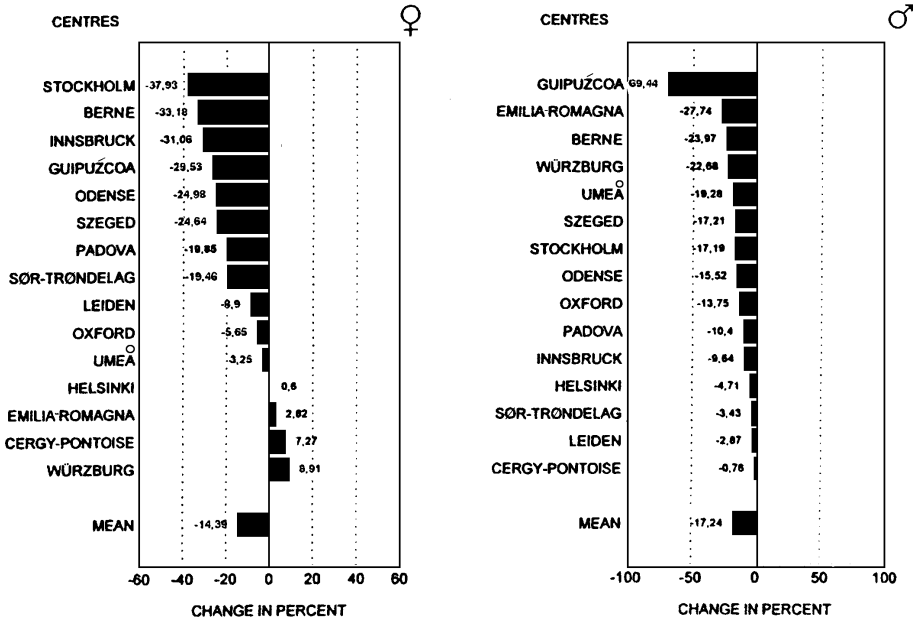


Fig. 6. Percentage changes in person-based suicide attempt rates according to sex, 1989–1992 in 15 centres (Berne 1989–1990 and Cergy-Pontoise and Guipúzcoa 1989–1991)
 Source: Schmidtke (27)

Initially, 16 centres took part in the project. These centres represented 13 countries in western Europe and one in central Europe (Hungary). The initial results from the monitoring study published in 1992 are depicted in Fig. 5.

In 1994 Kerkhof et al. (30) published more results from the monitoring study, including the rates and trends of attempted suicide from 1989 to 1992. The frequency of attempted suicide has been decreasing during the four-year period, especially among women (Fig. 6).

Further analysis showed that single people were overrepresented among those attempting suicide and that close to one third of both the men and the women who attempted suicide were living alone or only with children.

Poorly educated people were clearly overrepresented in the material, and about one fifth of the men and one eighth of the women were unemployed. Compared with the general population, people attempting suicide more often belonged to the social categories associated with social destabilization and poverty (27).

From 1989 to 1992, more than 50% of the people attempting suicide made more than one attempt, and the analysis confirmed that people attempting suicide who have a history of previous attempts constitute a high-risk group for further attempts.

Data from the monitoring study and the repetition-prediction study are being presented and discussed in a large series of publications (updated lists are available from the WHO Collaborating Centre for Prevention of Suicide, Tietgens Allé 108, DK-5230 Odense, Denmark).

After 1989, the WHO Regional Office for Europe especially wanted to assist countries in the eastern part of the Region in their effort to tackle the problem of suicidal behaviour, which seemed to be increasing rapidly in most of the newly independent states. The multicentre study has been highly instrumental in working towards these aims. At each participating centre, several people – students, including undergraduates as well as senior researchers and professors – have been involved, and in fact many centres have been serving as training institutes in suicidology. The awareness of the problem of suicide and interest in doing something about it is spreading, especially in the eastern part of the Region. Sixteen new centres have joined the multicentre study; of these nine represent newly independent states or countries in central and eastern Europe. It is to be hoped that they can be supported in their efforts to carry out research that can lay the basis for preventive activities.

Preventing suicidal behaviour

When should suicidal behaviour be prevented?

Before one discusses how to prevent suicidal behaviour, a basic question has to be answered: should suicidal behaviour be prevented? Always? Sometimes? Never?

As mentioned briefly in the introduction, the attitudes towards self-killing and self-murder have varied markedly through history, spanning from full acceptance to absolute condemnation. In modern societies more people seem to argue that nobody has the right to interfere in another person's life and that a person has the privileged right to decide when and how he or she will die.

Suicide, then, is seen as a rational act – a point of view previously expressed by, for example, Schopenhauer, who stated (31): "...as soon as the terrors of life reach the point at which they outweigh the terrors of death, a man will put an end to his life".

Others are not prepared to consider suicide a rational act – they argue that people in such severe distress can never look at themselves, their situation and their future rationally. On the contrary, people tend to develop tunnel vision and see suicide as the only way out of the tunnel.

It is also argued that accepting suicide as a rational act requires meeting at least three criteria (cf. Boldt (32)): 1) the suicidal person knows and fully understands the consequences of his or her act, 2) the act is absolutely voluntary and 3) there are no alternatives to escaping the pain and the problems.

These criteria are, however, rarely – if ever – met. People do not know what death is like; understanding such concepts as eternity and infinity is simply beyond the capacity of the human brain, nor can humans grasp what not living

is really like. The act of suicide is rarely, if ever, voluntary – it is a road the person feels compelled to follow, because he or she can see no other way out of the problems, pain and misery. Usually, however, there are other ways out – but somebody else may have to point them out to the person contemplating suicide and support him or her in the efforts to follow them.

Undoubtedly, some suicides cannot – and (perhaps) should not – be prevented. A person suffering from a painful mortal disease or living with severe injuries after a traffic accident without any hope of ever being able to live a tolerable life may seem to be entitled to decide that he or she does not want to live any more. Nevertheless, this right under such specific circumstances is something quite different from a general right to kill oneself. Claiming that a person has the right to die how and when he or she wants makes it possible to disclaim – both on the personal and the societal level – any responsibility for one's fellow human beings and may be seen as just another way of saying “It's none of my business, and I couldn't care less.”.

If suicide is a human right, it follows that other people cannot be blamed and do not have to feel any guilt when people kill themselves – in theory, that is. In real life, such concepts as rational suicide and privileged rights are of no use when a suicide has taken place – and they definitely do not help the survivors to overcome their sorrows, their angst and definitely not their feelings of guilt.

Politicians and administrators are responsible for allocating public resources. The resources are limited, and the decision-makers therefore have to carry out cost-benefit analyses: how and where can one get the most out of the money invested? The rationale for preventing suicide is not good from a strictly economic viewpoint. First, the number of suicides is small – other aspects of health and health care involve many more people. Second, the individual suicide does not cost much; there are some expenses connected with an autopsy and medico-legal inquest but none connected with treatment and aftercare. Life income might be lost – but as many people completing suicide are elderly people or psychiatric patients, drug abusers or others in need of public assistance, the net outcome of such a cynical cost-benefit analysis could be close to zero.

Suicide attempts, however, constitute a severe economic burden on society. First, the number of suicide attempts treated in the health care system is ten times the number of completed suicides. People attempting suicide constitute

a high-risk group for further suicidal behaviour (suicide attempts and suicide), and the problem of repeated attempts is increasing in most countries. Second, treatment and aftercare of people who attempt suicide is costly. No overview has yet been made of the costs of treating suicide attempts, but some preliminary data from the WHO/EURO Multicentre Study on Parasuicide indicate an average cost of about US \$10 000–15 000 per attempt. In a country with 5 million people and a yearly frequency of attempted suicide of 150 per 100 000, this means an approximate expenditure of US \$100 million per year. Expenditure connected with sick leave, any later disability pension and other social costs has to be added to this. A cost-benefit analysis will most surely indicate a high positive return for the money invested in preventing suicide attempts. The United Nations guidelines for the formulation and implementation of national strategies on the prevention of suicide (1) sum up the discussion as follows:

Apart from the economic costs involved in providing a range of services to those who exhibit suicidal behaviour and the persons around them, there is also the fact that these individuals no longer contribute to the social and economic functioning of their communities. One measure of this is the calculation of years of productive life lost. It has been estimated that at a global level economic loss from suicidal behaviour amount to about 2.5% of the total economic burden due to disease.

In conclusion, both from the humanitarian and economic viewpoints, although all suicides cannot be prevented, suicidal behaviour should be prevented as often and as effectively as possible.

Theories on suicidal behaviour

Preventing suicidal behaviour presupposes knowing why some people want to kill themselves, and the literature includes numerous studies on the risk factors for suicidal behaviour and high-risk groups. Suicidological research comprises a number of theories on suicide and attempted suicide. Sociological theories (usually) concentrate on the traits and mechanisms working on the level of society as a whole, affecting the propensity of humans towards suicidal behaviour. Émile Durkheim (33), the classic author in suicidology, introduced the key concept of social integration and pointed to the correlation between the

frequency of suicide in a society and the psychological climate in that society. Psychological theories operate mostly at the individual level and deal with the individual and the interplay between the individual and his or her surroundings. In continuation of clinical psychology, neuropsychologists and researchers within a biochemical frame of reference study covariation between concentrations of neurotransmitters (such as 5-hydroxyindoleacetic acid) and suicidal behaviour and, finally, psychiatrists concentrate on correlations between mental disorders and suicidal behaviour.

Awareness is increasing that suicidal behaviour is a multifactorial phenomenon and that the various theories are not in conflict but supplement each other. Interdisciplinarity is of paramount importance in developing the understanding of suicidal behaviour that is the prerequisite to any effective prevention. More research on these lines is needed, taking into account societal, cultural and traditional mechanisms when trying to identify risk factors at the personal level.

Even though suicidal behaviour is multicausal in its origin, in practice risk factors need to be defined and risk groups identified. In the practical world of everyday life, it can be necessary to concentrate on the high-risk groups that realistically can be reached by preventive activities. In international research there is general agreement that at least the following groups should be targeted: mentally and physically ill people, drug abusers, people who have attempted suicide and the relatives of suicide attempters and especially of suicide completers.

International initiatives to prevent suicide

Already back in the 1980s, prevention of suicide was on the agenda of the United Nations. In 1987, the Interregional Consultation of Social Welfare Ministers formulated a set of guiding principles for development of social welfare policies and programmes in the near future. In the same year, the United Nations General Assembly endorsed these principles as a resolution (no. 42/125). The principles were renegotiated in 1989 (resolution no. 44/65) and finally accepted in 1991 as a frame of reference for local, regional, and interregional activities (resolution no. 46/90). From this, guidelines for national strategy

were prepared that emphasize the need for the governments to work out national strategies for preventing suicidal behaviour and to establish national committees charged with the responsibility of working out programmes aiming at promoting, coordinating and supporting culturally appropriate intersectoral programmes for preventing suicidal behaviour at the national, regional and local levels.

In 1989, WHO had requested the Member States to prepare national policies on suicide prevention, and in 1993, WHO and the United Nations arranged an expert meeting on the topic. The importance of the establishment of national committees was underlined once more, and a final version of the above-mentioned guidelines was prepared (1).

Strategies for preventing suicide

The basic starting-points for initiatives to prevent suicide are 1) that suicide is a preventable mode of death and 2) that suicidal behaviour is a multicausal phenomenon that cannot be understood as a result of personal circumstances and characteristics only but has to be seen in the light of the history, traditions and culture of the society in question as well. This means that preventive activities can have not one but many possible targets and that the activities may have different aims.

Finland has one of the relatively few national strategies prepared so far. Suicide prevention is described as follows (34):

Suicide prevention includes a range of activities aimed at influencing the factors and events proved to be significant in life processes culminating in suicide...in order to:

- prevent suicide from occurring;
- prevent problems from worsening and becoming insurmountable, e.g. by supporting coping resources;
- prevent the circumstances or factor interactions which lead to problems; and
- teach individuals to manage their own life, while offering alternatives and support when needed.

The principles of preventive activities are summarized (34) as being to:

- eliminate or reduce the influence of factors which directly increase the possibilities of suicide;
- eliminate or reduce the effects of difficulties and problems, which in unfavourable circumstances could lead to suicide; and
- create circumstances and experiences which improve the individual's options for controlling his own life, and which support his own resources for coping.

Considerations such as those in Finland emphasize the importance of the regional and national settings: factors directly increasing the possibilities of suicide may differ from society to society and so may difficulties and problems. The existing conditions for the individual to control his or her own life and the immediate opportunities for changing these conditions are far from similar in all countries.

Nevertheless, some elements in the practicality of daily life ought to be part of a suicide prevention strategy:

- research: producing the knowledge necessary to understanding the many facets of suicidal behaviour;
- information: communicating results from research on epidemiology, high-risk factors and high-risk groups, reasons and motives to clinicians and others working in the field and to the public in general, thus affecting the general attitudes towards suicidal behaviour;
- education: making personnel who might meet suicidal people in their everyday work aware of the problem and providing them with knowledge of basic suicidology;
- training: qualifying experts and others working in the health sector to treat and prevent suicidal behaviour; and
- treatment: providing qualified treatment and aftercare for suicidal people and people in crisis.

These elements must be based on a holistic view, incorporating interdisciplinary approaches and frames of reference, and should target several levels of society.

In practice, measures to prevent suicidal behaviour (suicide and suicide attempts) may target specific, special and general prevention.

Specific prevention

Specific prevention targets the suicidal individual, including people who have attempted suicide and people making suicidal threats, trying to intervene in the suicidal process by making sure that suicidal persons are identified and proper treatment and aftercare offered.

Special prevention

Special prevention targets high-risk groups (such as mentally ill people, drug abusers and survivors of suicide attempts) by offering qualified support and guidance.

General prevention

General prevention includes:

- regulating the accessibility of various methods of suicide, such as access to weapons and prescription of drugs;
- providing information for the general population, influencing the general attitude towards suicidal behaviour and making people aware of the importance of support from the family and the social network;
- providing education and training to all kinds of personnel within the health care sector who work with suicidal people and their families;
- providing all other professional groups (such as priests, teachers and rescue personnel) who may be confronted with suicidal behaviour in their daily work with knowledge of basic suicidology and how to handle such behaviour;
- encouraging, supporting and training volunteers; and
- preparing school programmes that enhance self-confidence in children and young people and their ability to cope.

Suicide cannot be prevented without resources, and in many countries the economic situation is not conducive to extra public expenditure. However, suicidal behaviour causes human suffering and constitutes an increasing socio-economic burden to most countries, and effective prevention will undoubtedly provide substantial benefits for the costs involved by reducing the magnitude

of losses in human resources and the expenditure in health, social and other services. This requires, however, that both activities and resources be coordinated.

Unfortunately, evaluating the effect of various treatments and prevention activities entails several methodological problems that have not yet been overcome. Few studies have therefore been able to demonstrate the effects of preventive strategies using advanced science. On a less ambitious level, however, proof is ample that intervention is feasible and that suicidal behaviour can be prevented. It is hardly coincidental that the rates of suicide and attempted suicide are decreasing in countries in which prevention strategies are being implemented.

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