FINAL REPORT OF THE EUROPEAN REVIEW OF SUICIDE AND VIOLENCE EPIDEMIOLOGY (EUROSAVE) PROJECT

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Publications: To date we have published **t**hree project newsletters, seven technical reports and two scientific abstracts. Further publications are in preparation. All these technical reports and project newsletters are or will be available on the project website: **www.euro-save.net**

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1. ABSTRACT AND EXECUTIVE SUMMARY

ABSTRACT

Aim and Objectives: The aim of EUROSAVE was to pool expertise in epidemiology and injury research from across the European Union (EU) in order to strengthen and support the community epidemiological network for monitoring suicide. The specific objectives were to conduct a systematic review of the published literature on suicide and parasuicide, identify and evaluate the quality of existing European data sources for suicide and parasuicide, investigate recent epidemiological trends in suicide and parasuicide, and finally make explicit recommendations on information quality, highlighting deficiencies in routine data.

Methods: Literature reviews on the incidence of suicide and deliberate self-harm, and on suicide and parasuicide prevention were undertaken. Key sources of data were and documented. To allow for comparisons between member states, age-standardised suicide rates were calculated. Monitoring systems for suicide and parasuicide were reviewed and documented while deficiencies in suicide and parasuicide were highlighted and recommendations to remedy these were offered.

Results: The literature review suggested that groups most at risk from suicide include single males, the unemployed and substance abusers. Rates in Northern EU countries are higher thanthose in most Mediterranean countries. The female parasuicide rate is usually two to three times that of the male rate (the reverse of suicide). The epidemiological analyses showed that most countries reported a significant downward trend in suicide mortality although significant increases were observed in Ireland and Spain. Male suicide rates were greater than those for females and the frequency of suicide increased with age. The main deficiencies in routinely available suicide data include the lack of detailed data and different methods for collecting and recording data hampering 'true' inter-country comparisons. The main deficiency in parasuicide data in the EU is the non-existence of appropriate national data.

Discussion: International comparisons of suicide rates are problematic since evidence exists of under-reporting as well as fatalities being misclasssified as "undetermined deaths". Misclassification probably explains a relatively small proportion of the geographical and secular variation.

Conclusions: Suicide mortality rates vary markedly between countries, for reasons that are. Deficiencies in routine data need to be addressed. We recommend that methods of suicide and exposure to risks along with standard demographic variables be included when recording data. This may be achievable via a European-wide code of practice employed by each member state. In the absence of adequate EU wide data, the effective prevention of suicide is likely to remain elusive for the foreseeable future.

EXECUTIVE SUMMARY

Introduction

Suicide is one of the leading causes of injury worldwide with an estimated 10-20 million attempted suicides and 1 million completed suicides each year. Europe alone sees 700,000 suicide attempts per year and approximately 45,000 completed suicide. Although, suicide rates are higher in some EU countries than in others, they do not reach the levels seen in Eastern Europe. The cause of such differences between countries is unknown although alcohol abuse is thought to be an important risk factor. As a result of this growing problem the EUROSAVE (European Review of Suicide and Violence Epidemiology) project was launched in the summer of 2000.

Aim and Objectives

The aim of EUROSAVE was to pool expertise in epidemiology and injury research from across the EU in order to strengthen and support the community epidemiological network for monitoring suicide.

Its main objectives were to

- Conduct a comprehensive literature review.
- Identify and evaluate the quality of existing European data on suicide and parasuicide.
- Investigate recent epidemiological trends of suicide and parasuicide in the EU.
- Seek to explain notable geographical and time trends.
- Attempt to improve quality of EU information.

Materials and Methods

Literature reviews on the epidemiology and prevention of suicide and parasuicide were performed. Electronic databases (including Medline, BIDS, Embase and PSYCINFO) were interrogated. The search terms used were suicide, attempted suicide, parasuicide, epidemiology, self-harm and prevention.

The key sources of data on suicide and parasuicide in the EU were identifed, assessed and documented. Many of the data elements and general information on suicide and parasuicide were obtained with the assistance of EUROSAVE participants and the reference group, in part by means of questionnaires.

Mortality data were collated with the co-operation of the WHO Regional Office for Europe, tbe European Statistical Office (EUROSTAT) of the EC and the national statistical agencies,

using cause of death codes E950-959 and X60-X84 of the Ninth (ICD9) and Tenth (ICD10) Revisions of the International Classification of Diseases. These codes represented all deaths due to suicide and self-inflicted injury. Data were collated for the period 1984 to the latest available year (ranging from 1995 to 1998) for which data were available. To allow for comparisons between member states, age-standardised suicide rates were calculated for the total population, for males and females and for specific age groups. Linear regression was employed to determine whether any trends over the study period were statistically significant, taking 1984 as the baseline year.

Monitoring systems for suicide and parasuicide were reviewed and documented. Deficiencies in suicide and parasuicide data and in current preventive efforts were highlighted and recommendations to remedy these were formulated.

Results

The literature review suggested that suicide rates in the northern EU countries were higher than the rates in the Mediterranean countries of Spain, Portugal, Italy and Greece. Older males, those who were separated and the unemployed, were among the high-risk groups identified. In most countries parasuicide rates were two to three times more common in females than in males. However few longitudinal parasuicide data were available so temporal trends were hard to assess. The WHO/EURO study had, however, reported a decrease in the rates of parasuicide in the centres involved.

Key sources of suicide data were the WHO, EUROSTAT, the national statistical agencies and research surveys. Sources of parasuicide data were hospital record data, surveillance systems (injury surveillance, poison surveillance and parasuicide surveillance), sentinel practice networks, population surveys and the WHO/EURO Multicentre Study on Suicidal Behaviour. However, national parasuicide data were virtually non-existent.

Finland had the highest suicide rate for the latest available year, 1997 (21.6 per 100,000) while Greece had the lowest (2.8 per 100,000). Significant downward trends over time occurred in Austria, Denmark, France, Germany, Greece, Netherlands, Portugal, Sweden and UK while significant upward trends were observed in Spain and Ireland (17% and 89%, respectively). Significant downward linear trends in male mortality were observed for seven of the fifteen EU countries, while eleven countries reported significant declines in female rates over the study period. Males had considerably higher suicide rates than females.

Information on systems for monitoring attempted suicide and national suicide prevention programmes was obtained from the Assembly of European Regions (SUPPORT project) via a EUROSAVE subcontractor. The most widely used monitoring system is that developed by the WHO/EURO Multicentre Study. Ireland has embarked on the development of the first national parasuicide register in the EU.

The evidence base for suicide prevention is weak. Strategies for suicide prevention included targeting high-risk groups, restricting the availability of the means of suicide and increasing access to crisis intervention.

Discussion

International comparisons of suicide rates are problematic since evidence exists of under-reporting as well as fatalities being misclasssified as "undetermined deaths". Varying recording, coding and classification systems employed across the EU might be responsible. Our data suggest that misclassification probably explains a relatively small proportion of the geographical and secular variation in suicide rates although suicide may be less socially stigmatised in some countries than in others.

While a decrease in suicide rates has been reported from most EU countries, rates in young adults (15-24 year olds) have been on the increase for almost half the EU countries. Although a decline was observed in suicide rates in the older age groups, suicide mortality was highest in the 65-year olds and over throughout the study period. Depressive illness is thought to be the most important predictor of suicide among the elderly, and social isolation has also been highlighted as an important contributor.

Conclusions and Recommendations

Suicide mortality rates varied markedly between countries for reasons that remain unclear. Deficiencies in routine data need to be addressed. These include varying methods of data collection, the lack of suicide method-specific data, inconsistency in recording standard demographic variables, and a paucity of data on risk factors. The main deficiency in parasuicide data was the virtual non-existence of data on a national level. Possible remedial measures include the standardisation of recording and reporting suicide events and suicide methods in all member states, and the establishment of national parasuicide registers following Ireland's lead. In the absence of adequate EU-wide data on suicide epidemiology, effective prevention of suicide is likely to remain elusive.

2. INTRODUCTION

Suicide is a serious public health problem that is causing increasing concern throughout the world and particularly in the European Union (EU). It is one of the leading causes of injury worldwide with an estimated 10-20 million attempted suicides each year and one million completed suicides (WHO 1999). Europe reports about 700,000 suicide attempts (parasuicide) per year while suicide is considered as one of the three principal causes of death among young Europeans (Webber 2000). Although suicide rates are higher in some EU countries than in others, they do not reach the levels seen in Eastern Europe. The cause of such differences between countries is unknown (Commission Services Working Paper 2000).

An EC concerted action projection known as EURORISC (European Review if Injury Surveillance and Control) had previously highlighted epidemiological aspects of injury in Europe including the divergence in secular trends between unintentional and intentional mortality rates (Morrison et al 2000a). In particular, the EURORISC study found that suicide and self-inflicted mortality rates were either declining slowly in most EU countries or were actually rising depending on the age group and country (Morrison et al 2000b). In response to a call for proposals from the newly established Injury Prevention Programme of the EC, the EUROSAVE (European Review of Suicide and Violence Epidemiology) project was submitted in 1999 and was launched in 2000.

The administrative base of the EUROSAVE project was the Paediatric Epidemiology and Community Health (PEACH) Unit, Department of Child Health, University of Glasgow, UK. The project was a collaborative effort between the PEACH Unit, the National Suicide Research Foundation (NSRF) of Ireland, and a reference group of experts in the field from almost every EU country (Appendix 1). Two sub-contractors were invited, at the suggestion of the EC, to assist with aspects of the project. The first sub-contractor, based in the UK, conducted a literature review on the incidence of suicide after deliberate self-harm and discharge from psychiatric hospitals. The second sub-contractor, based in Sweden, reviewed and documented suicide/parasuicide monitoring systems, building on work in this field undertaken by the Assembly of European Regions (AER).

An initial meeting of the EUROSAVE Core Group was held in Glasgow, UK, in July 2000 at the outset of the project. A joint meeting of the Core and Reference Groups was held in Cork, Ireland, in April 2001. This gave all the participants the opportunity to discuss the findings to date and plan the way ahead.

3. AIM AND OBJECTIVES

The *aim* of EUROSAVE was to pool expertise in epidemiology and injury research from across the EU in order to strengthen and support the community epidemiological network for monitoring suicide.

The project had six *specific objectives*. There were to:

1. Conduct a comprehensive literature review to enhance the state of knowledge about injuries due to suicide and parasuicide (attempted suicide, deliberate self-harm) and their causes and prevention.
2. Identify and evaluate the quality of existing European data on suicide and parasuicide.
3. Investigate recent epidemiological trends and determinants of suicide and parasuicide in the EU, with special reference to geographical (inter-country) differences and time trends.
4. Seek to explain geographical and secular variation in suicide and parasuicide rates in terms if methodological, socio-economic, environmental and behavioural factors.
5. Attempt to improve the availability, quality and utility of existing information on suicide and parasuicide in the EU by
   (a) developing a monitoring system for suicide, parasuicide and suicidal ideation in the general population
   (b) making recommendations for the improvement of statistical information on suicides and parasuicide in the EU.
6. Promote information exchange on the nature, uses and limitations of data on suicide and parasuicide for setting priorities and designing prevention strategies.

4. MATERIALS AND METHODS

The EUROSAVE project was divided into three inter-linked phases, each addressing two objectives and each lasting six months. These were:

Phase 1: Review of current knowledge and sources of epidemiological data *(Objectives 1&2)*

Phase 2: Epidemiological analyses *(Objectives 3&4)*

Phase 3: Recommendations and promotion of information exchange *(Objectives 5&6)*

Phase 1: Review of current knowledge and sources of epidemiological data (Objectives 1 & 2)

A comprehensive literature review was conducted on the incidence of suicide after deliberate self-harm and discharge from psychiatric hospitals. Overviews of the published literature on suicide and parasucide were also completed and may be found separately elsewhere (see EUROSAVE Technical Reports 1 & 2). Several electronic databases including Medline, BIDS, Embase, PSYCINFO and the British Medical Journal Online facilities were interrogated. The search terms used for identifying relevant literature were: suicide, parasuicide, epidemiology, attempted suicide, self-harm and prevention. The main sources of routine data on both suicide and parasucide in the EU were identified. These included WHO Europe and EUROSTAT for suicide data, and hospital records, population surveys and sentinel GP networks for parasuicide. The data elements and other information on suicide and parasuicide were obtained for each country via personal correspondence with reference group members using questionnaires (Appendix 2).

Phase 2: Investigate recent epidemiological trends and seek to explain geographical variations (Objectives 3 & 4)

Suicide

Mortality data were collected via WHO Europe, the European Statistical Office of the European Commission (EUROSTAT) and the national statistical agencies of the individual EU member states. Data on mortality were collated for the period 1984 to the latest available year for which data were available. This ranged from 1995 to1998. To allow comparisons between member states, age standardised suicide rates were calculated. The direct method of standardisation was used using the world standard

population (Doll and Smith 1982). Age standardised rates were calculated for the total population, for males and females, for specific age groups and for undetermined deaths. Age-specific rates were calculated for 5-14 years and 15-24 years as they were age group categories available for the world standard population. Linear regression analysis was employed to determine whether any secular trends over the study period were significant or not. The baseline year used for this analysis was 1984.

Data on average per capita annual alcohol consumption and total unemployment rate for each member state were obtained from the European Public Health Information Network (EUPHIN) and EUROSTAT, respectively. These data were correlated with the corresponding suicide rates for each member state and a correlation coefficient calculated with a P-value to indicate statistical significance.

Parasuicide

This aspect of the planned analysis proved problematic due to the unavailability of national parasuicide data in the member states. The WHO/EURO Multicentre Study on Suicidal Behaviour (WHO 1999) has published average annual crude parasuicide rates based on data from a number of participating centres. The drawback of these data from our point of view, however, was that the geographically-defined catchment areas used may not have been representative of the country as a whole, and coverage of these areas varied between centres participating in that study.

Phase 3: Review of monitoring systems, recommendations for the improvement of statistical information and promotion of information exchange (Objectives 5 & 6)

With the assistance of our Swedish subcontractor and the Assembly of European Regions, monitoring systems for suicide and parasuicide were reviewed and documented. Deficiencies in the collection, recording and reporting of routine EU wide suicide and parasuicide data were highlighted and recommendations to remedy these made. The implications of our findings for monitoring and planning preventive strategies were explored.

Ethics

EUROSAVE involved the analysis epidemiological research data, and not the participation of human or animal subjects. No tests, interviews or other procedures were required for data collection. Therefore explicit approval of ethical committees was not sought.

5. RESULTS

This section outlines the findings of the EUROSAVE study. These are also presented in more detail in the EUROSAVE newsletters and technical reports (see Appendix 3) and on the EUROSAVE website.

RESULTS RELATING TO OBJECTIVES 1 & 2

A. Literature Review

Three main literature reviews were produced during the first phase of the project. A summary of each is presented below.

1. Suicide: An Overview of the Published Literature

Suicide is a worldwide issue and occurs in both developing and industrialised countries alike, affecting all ages-groups and social classes. The prevention of suicide requires an understanding of epidemiology, risk factors and treatment. Whichever strategy is adopted it should be kept in mind that effective suicide prevention should combine population strategies with those aimed at high risk groups (Appleby, Morris et al 2000). Suicide cannot, however, be prevented without resources (WHO 1998). Unfortunately, a combination of political indifference and adverse economic conditions in many countries creates a barrier to the adequate funding of the treatment and prevention strategies that are needed to address this major public health challenge.

The literature indicates that trends in suicide rates vary throughout Europe. A large epidemiological study (Morrison, Stone et al 2000) investigating injury mortality in the EU over a 10-year period (1984-1993) suggested that in most European countries the age-standardised mortality rates due to suicide and self-inflicted injuries have been declining. A clear geographical trend was observed: suicide rates in northern EU countries were substantially higher than the rates in countries bordering the Mediterranean Sea.

Because preventing suicidal behaviour depends in part on understanding aetiology, many epidemiological studies have investigated a range of putative causal or risk factors. The results have varied but some consistent features have emerged. Specific population subgroups who appear to be most at risk of suicide include:

- Older males
- Individuals who are separated, divorced or widowed
- The unemployed
- Individuals with a history of poor health in general and mental illness in particular
- Substance abusers

In order to evaluate the effectiveness of a suicide/self-harm prevention programs there is a need for adequately sized randomised control trials. The literature has shown that although interventions may indicate some benefit there is little or no evidence of statistically significant improvements when compared to other treatments. Only small trials have shown to be associated with statistically significant outcomes. Problems such as methodology, lack of resources and the need for more subjects to enrol in clinical trials are all contributing factors in this matter. However, there is ample evidence that intervention is feasible and that suicidal behaviour can be prevented. It is probably not coincidental that suicide and attempted suicide rates are decreasing in countries which have implemented comprehensive prevention strategies (WHO 1998).

Components of a suicide prevention strategy might include (Hawton 1998):

- Targeting high-risk groups
- Restricting the availability of the means of suicide
- Setting a standard for media reporting and fictional portrayal of suicides
- School programmes for equipping young people with effective problem solving skills
- Helping school staff to detect those at risk of mental health problems and self-harming behaviour
- Increasing access to crisis intervention including helplines

2. Parasuicide in Europe

Parasuicide is recognised as a major problem worldwide, both in its own right and as a risk factor for suicide. While it seems that the rates of parasuicide are similar in the US and Australia to Europe, there is very little information on the rates of parasuicide in developing countries. An inherently difficult phenomenon to study, it is especially difficult to make meaningful international comparisons in parasuicide incidence. This is partly due to a lack of agreement on definitions, diagnostic criteria and study methodology. To try to overcome these problems, the WHO/EURO Multicentre Study on Suicidal Behaviour began in 1989. The development and application of standardised definitions of parasuicide and the use of validated data collection methods have been major achievements of that exercise.

Geographically, the pattern of parasuicide seems similar to that of suicide in that southern European (Mediterranean) countries have lower rates than northern European ones. There are few available parasuicide data over time and secular trends are therefore hard to investigate. The WHO/EURO study reported a decrease in the average rates of parasuicide in the centres involved since the start of the study.

In most countries the female parasuicide rate is two to three times that of the male rate, while adolescents and young adults of both sexes are the age groups at highest risk. Other risk factors identified include: a history of psychiatric disorders, alcohol and/or drug abuse, unemployment, marital status, and ethnicity. Drug overdose is the most common method used in parasuicide.

Research into parasuicide prevention has focused on secondary prevention (the prevention of repetition). Evaluational studies have reported effective methods of secondary prevention include the carefully selective use of problem solving therapy, long term psychotherapy, the provision of an emergency card and the prescription of appropriate medication for chronic illness.

The findings of these literature reviews are available in more detail in EUROSAVE Technical Reports 1 and 2.

B. Key Sources of Suicide and Parasuicide Data in the EU

1. Suicide Mortality Data

In all EU countries, mortality data are collected as part of routine vital registration. The main sources identified for these data were the World Health Organisation (WHO Europe), European Statistical Office of the European Commission (EUROSTAT), the European Public Health Information Network (EUPHIN) and the national statistical agencies of each member state. Data recorded by the WHO and the national statistical agencies are classified using the Ninth and Tenth Revisions of the International Classification of Diseases (ICD). The relevant ICD codes for "Suicide and Self Inflicted Injury" are E950-E959 and X60-X84 of the Ninth and Tenth revisions, respectively. EUROSTAT data are coded using a system termed the "65-list". The 65-list was formed mainly on the basis that not all member states collected data at the same level of detail of the ICD or introduced ICD10 in the same year. As a result a short list for cause of death (COD) was created which was compatible with all versions of ICD (Eighth, Ninth and Tenth Revisions).

Comparing rates between countries is difficult because of concerns arising from varying definitions, recording, coding and reporting. Some countries investigate deaths that may possibly due to suicide thoroughly while others tend to classify such deaths routinely as accidents. Reasons for such differences between countries are largely unknown although one hypothesis is that suicide is less socially stigmatised in some countries than in others. A study investigating religious influences on the rates of suicide worldwide reported that religious differences between countries influenced the accuracy of suicide data returned to the WHO (Kelleher, Chambers et al 1998). Comparative analysis suggested that the average reporting rates for countries with "religious sanctions" against suicide tended to be lower than those without.

Policies for recording a death as suicide vary between countries despite the use of an agreed standard classification system. Some countries require a suicide note, while others require a decision on intent made by the coroner. An investigation into the reliability and sensitivity of suicide certification (Rockett, Thomas 1999) revealed that some countries (e.g. Austria and Netherlands) generate suicide data of excellent quality for all age groups and gender. However, others such as Finland, Greece, Ireland and the United Kingdom reveal potential misclassification within certain

sub-populations, especially the 15-24 and 75 and older age groups. Suicide misclassification seems most prone to occur through cases of suicide ([ICD9], E950-E959) being misregistered under unintentional drowning (E910), unintentional poisoning (E850-E869) or undetermined injury intent (E980-E989) (Kleck 1998). This last category is likely to be the most important source of systematic misclassification of suicide.

Tables 1-3 summarise the nature of routine data that are attainable from the WHO, EUROSTAT and the National Statistical Agencies, respectively. This information was obtained for each statistical agency via questionnaires sent to members of the EUROSAVE reference group.

Table 1 : Nature of Data available from the World Health Organisation

Country	Using ICD 10	Sex-Specific	Age-Specific	Complete?(Years missing)
Austria	**No**	**Yes**	Yes	Yes
Belgium	**No**	**Yes**	**Yes**	**No (85, 90-92, 95-98)**
Denmark	**Yes (since 1994)**	**Yes**	**Yes**	**No (97, 98)**
Finland	**Yes (since 1996)**	**Yes**	**Yes**	**No (97, 98)**
France	**No**	**Yes**	**Yes**	**No (97, 98)**
Germany	**No**	**Yes**	**Yes**	**No (98)**
Greece	**No**	**Yes**	**Yes**	**No (98)**
Ireland	**No**	**Yes**	**Yes**	**No (97, 98)**
Italy	**No**	**Yes**	**Yes**	**(96, 97, 98)**
Luxembourg	**No**	**Yes**	**Yes**	**No (98)**
Netherlands	**Yes (since 1996)**	**Yes**	**Yes**	**No (98)**
Portugal	**No**	**Yes**	**Yes**	**Yes**
Spain	**No**	**Yes**	**Yes**	**No (96, 97, 98)**
Sweden	**No**	**Yes**	**Yes**	**No (97, 98)**
UK	**No**	**Yes**	**Yes**	**No (98)**

Mortality data recorded by the WHO consist of 10-year age bands.

Table 2 : Nature of Data available from EUROSTAT

Country	Using ICD 10	Sex-Specific	Age-Specific	Complete?(Years missing)
Austria	**No**	**Yes**	**Yes**	No (**84-93, 98**)
Belgium	**No**	**Yes**	**Yes**	**No (84-91, 94-98)**
Denmark	**No**	**Yes**	**Yes**	**No (84-93, 97, 98)**
Finland	**No**	**Yes**	**Yes**	**No (84-93, 98)**
France	**No**	**Yes**	**Yes**	**No (84-93, 98)**
Germany	**No**	**Yes**	**Yes**	**No (84-91, 98)**
Greece	**No**	**Yes**	**Yes**	**No (84-93, 98)**
Ireland	**No**	**Yes**	**Yes**	**No (84-93, 97, 98)**
Italy	**No**	**Yes**	**Yes**	**No (84-93, 97, 98)**
Luxembourg	**No**	**Yes**	**Yes**	**No (84-93, 98)**
Netherlands	**No**	**Yes**	**Yes**	**No (84-93, 98)**
Portugal	**No**	**Yes**	**Yes**	**No(84-93, 98)**
Spain	**No**	**Yes**	**Yes**	**No(84-93, 98)**
Sweden	**No**	**Yes**	**Yes**	**No(84-93, 97, 98)**

UK	**No**	**Yes**	**Yes**	**No (84-93, 98)**

The mortality data recorded by EUROSTAT consist of 5-year age bands.

Table 3: Nature of Data available from National Statistical Agencies

Country	**Using ICD 10**	**Sex-Specific**	**Age Specific**	**Method-Specific**	**Available by region?**
Belgium	**Yes (since 1998)**	**Yes**	**Yes**	Yes	**Yes**
Ireland	**ICD9**	**Yes**	**Yes**	**Yes**	**Yes**
Italy	**ICD9**	**Yes**	**Yes**	**Yes**	**Yes**
Portugal	**ICD9**	**Yes**	**Yes**	**Yes**	**Yes**
Sweden	**Yes (since 1997)**	**Yes**	**Yes**	**Yes**	**Yes**
Scotland	**Yes (since 2000)**	**Yes**	**Yes**	**Yes**	**Yes**
N. Ireland	**ICD9 (ICD10 from 2001)**	**Yes**	**Yes**	**Yes**	**Yes**
England & Wales	**Yes (since 2000)**	**Yes**	**Yes**	**Yes**	**Yes**

Other data elements that are routinely collected are marital status, occupation and social class. Belgium and the UK were the only countries that record all three variables (out of all the countries that responded to the questionnaires). Portugal records both marital status and occupation but not social class, whereas Sweden records only marital status. While all three variables are routinely recorded in Ireland, there are doubts about the reliability of the coding of occupation and social class.

The European Public Health Information Network (EUPHIN) is another a source of EU mortality data. The EUPHIN-East Network is part of a concerted action between the World Health Organisation – Regional Office for Europe, the European Commission and the Countries of Central Europe (CCE) and the Newly Independent States (NIS) of the Former Soviet Union. The database holds health and health-related information for the complete WHO European area from the year 1971 to the current year. Results are presented as standardised rates only and the data are not age specific in terms of 5 or 10 year age bands. Rates are available for all ages combined, 0-64 years or 65+ years. The data are gender-specific.

Research studies are also used occasionally as sources of data. However, the disadvantage with such sources is that comparability of data across studies can prove problematic if the studies are conducted over different time periods. Other problems may arise due to the different age groups and classification systems employed in these studies. Standardisation procedures will also vary. Some may use the direct method of standardisation, others the indirect. Different standard populations, such as the world

standard population, European standard population or national census data may be used again hampering the possibility of comparisons.

2. Parasuicide Data

1.Hospital Record Data

Hospital records are frequently used to study parasuicide. At a local level, the data are easily accessible, either through routine admission/discharge data or emergency department records. Cases are likely to be recorded in a consistent manner within hospitals and medical evidence of a suicide attempt is also an advantage, as recall bias can be a major problem when using other sources of data. On a national level, all EU countries have systems in place recording information on patients admitted to or discharged from hospitals; the data are accessible; and most of the EU countries use ICD9 or ICD10 to code the data. There are however limitations to such data. Firstly, there is variation between countries in the type of hospitals covered. To obtain an accurate estimate of the number of suicide attempts, data should be included from general, private and psychiatric hospitals as well as from GPs, prisons and other institutions (Arensman, Kerhof et al 1995; Jarvis, Ferrence et al 1982; Bille-Brahe, Schmidtke et al 1995).

In many countries routine hospital admission/discharge data do not include data on people seen in emergency departments (Table 4), which treat the majority of parasuicide cases, many of which are not admitted to a hospital ward. The fact that data are only collected on in-patients means that routine hospital data greatly underestimate the extent of the problem in many EU countries (Blanc, Jones, Olson 1993). Classification of cases varies between hospitals and countries. The quality of coding (although using an international classification system such as ICD9 and ICD10) also varies, depending on the individual. In the UK coders are trained and employed specifically to code hospital records, although this is not the case in all countries e.g. (Ireland).

Table 4 Coverage of routine hospital data in European countries

Country	Hospital Ward	Emergency Departments	Out-Patient Departments	Coding
Belgium	Yes	No	No	DSMIV
Denmark	Yes	Yes	Some	ICD 10 (from 1994)

England	Yes	Some	Yes	ICD 10 (from 1995)
Finland	Yes	No	No	ICD 10 (from 1996)
Italy	Yes	No	No	ICD 9
Ireland	Yes	No	No	ICD 9
The Netherlands	Yes	No	No	ICD 9
Norway	Yes	Yes	Some	ICD 10 (from 1999)
Portugal	Yes	Some	No	ICD 9
Scotland	Yes	No	No	ICD 10 (from 1997)
Spain (Basque)	Yes	Yes	Yes	ICD 9
Sweden	Yes	Yes(not as yet)	No	ICD 10 (from 1997)

2. Surveillance Systems

Injury Surveillance

Several European countries operate surveillance systems. These have been reviewed by the EURORISC (European Review of Injury Surveillance and Control) project (Stone, Morrison et al 2000). Many surveillance systems do not differentiate between accidental and intentional injury. Some of the systems that include intent are presented in Table 5.

Table 5 National and regional injury surveillance systems (ISS) in European countries that include data on intent.

Country	Surveillance System	Coverage	Data Collected	Years Covered
Netherlands	LIS	17 A&E	Circumstances of injury	1984-present
Greece	EDISS	4 A&E	Intent (ICD coding)	1995-present
Norway	National Injury Register	4 Hospitals	NOMESCO Codes	1990-present
Sweden	NISS	Swedish Population	ICD diagnosis & external cause	1999-present
	Falun Municipality ISS	County hospitals and 5 primary health care centres	Intent	1989-present
	Umea ISS	County hospitals and 5 primary health care centres	Intent	1989-present
	Vastra Gotlands	County hospitals and primary health care centres	Intent	1998-present
	Malmo	County hospitals	Intent	1992-present
Wales	AWISS	A&E (2/3 of population)	Intent	1995-present
Scotland	CHIRPP	1 A&E	Intent	1995-present

A&E: Accident and Emergency departments

NISS: National Injury Surveillance System

AWISS: All Wales Injury Surveillance System

Poison Surveillance

Drug overdose and poisoning are the most common method of parasuicide. Poison centres carry out poison surveillance across Europe. Their main function is to provide information and advice on the diagnosis, prognosis, treatment and prevention of poisoning. All EU countries except Luxembourg have at least one poison centre. Most of these centres operate twenty-four hours a day, seven days a week. They all record slightly different variables, however most of them keep records of the number of calls received, the age and sex of the patient, the aetiological agent used, the location and circumstances of the poisoning, the treatment/action taken and the outcome (European Commission 1996).

Parasuicide Surveillance

Parasuicide surveillance is scarce within the EU. The first National Parasuicide Registry is being set up in Ireland, by the National Suicide Research Foundation under the auspices of the Irish Governments Department of Health and Children. It is planned that national coverage will be achieved by the end of 2001. The core data recorded will include, among other things, the age and sex of each case, the method(s) used and whether the patient was admitted to hospital. It is hoped that all general and psychiatric hospitals as well as prisons will participate (National Suicide Research Foundation 2000).

3. Sentinel Practice Networks

The main task of most sentinel practice networks is “to monitor morbidity in the population by counting defined health related events among patients in a sample of medical practices” (Schlaud, Brenner et al 1998). These networks are useful for monitoring the extent of parasuicide in the community as many cases which present themselves to family doctors do not go to hospital. They have major limitations, however, due to two main sources of bias. The first arises from the fact that participation is on a voluntary basis. This makes it unlikely that the practices are representative of all the practices in the region, or that the network is providing a representative sample of patients or consultations or both (Schlaud, Brenner et al 1998). The second source of bias stems from the choice of denominator used in the

calculation of rates. This may be the number of practices, the number of consultations or the whole population in the region covered.

The Netherlands, Belgium, France and Portugal have at some stage incorporated parasuicide as part of the data collected by sentinel practice networks. Suicide and parasuicide were included in morbidity surveillance via sentinel general practitioners in Belgium from 1982-1983, 1990-1995 and again from 2000-2001. In the Netherlands, the Continuous Morbidity Registration Sentinel Station collected data on attempted suicide between 1979 and 1986. In Aquitaine, South West France, a regional sentinel GP surveillance system was set up in October 1986 and data were collected on attempted suicides until May 1988.

4. Population Surveys

Surveys are another source of determining the prevalence of parasuicide in the general population. Unfortunately, the results are rarely comparable for several reasons. Primarily there is a problem of sample selection. Ideally a total population or a random sample of the population should be surveyed. It is also essential to obtain a good response rate and, if possible, a profile of the non-responders. Secondly, the methodologies used vary from telephone surveys and self-completed surveys to interviews by trained personnel. Third, the method of case ascertainment also causes difficulties. It has been found that studies that use the phrase “attempted suicide” tend to produce lower estimates than those which use the phrase “ending your life”. As it appears that people interpret these terms differently, studies that use different questions to ascertain whether or not an attempt has taken place, will not be comparable (de Wilde, Kienhorst 1995).

5. WHO/EURO Multicentre Study on Suicidal Behaviour

In recognition of the need for multinational research into non-fatal suicide acts, the WHO/EURO Mullticentre Study on Suicidal Behaviour began in 1989 with 16 centres in 13 European countries (Bille-Brahe, Schmidtke 1995). The participating centres and their period of participation have varied since the start of the study (Table 6). It was decided that each of the centres should cover a population of at least 200,000 adults (15 years and over) and that the catchment areas should be clearly defined, both geographically and administratively. Each centre is required to provide standardised

background information on such things as the size, location, urban/rural division and the economic and cultural profile of the area covered. Sociodemographic information required includes the population figures and distribution for the area (according to the last census), as well as data on employment and housing. Some data are also collected on social stability (such as crime rates, alcoholism and drug use) as well as data on the health and welfare system in the area. For all these factors, centres are required to provide national data in order to indicate how representative the area is of the country. The total population covered by the centres participating in the monitoring study is about 5 million people. Data are collected on every case of parasuicide (in people 15 years and over) seen in a hospital or other health unit within a defined catchment area.

Table 6 Centres in European Union Countries (and Norway) and the years that they have participated in the WHO/EURO Multicentre Study on Suicide Behaviour.

Country	Centre	Data Available
Austria	Innsbruck	1989-1998
Belgium	Gent	1996-1998
Denmark	Odense	1989-1998
England	Oxford	1989-1999
Finland	Helsinki	1989-1997
France	Bordeaux	1989
	Cergy-Pointoise	1989-1991
	Rennes	1995- 1996
Germany	Wurzburg	1989- 1999
Italy	Emilia Romagna	1989- 1994
	Padua	1989-1996
Ireland	Cork	1994- 1999
	Limerick	1994- 1999
Netherlands	Leiden	1989- 1992
Norway	Sor-Trondelag	1989- 1998
Spain	Guipuzcoa	1989- 1991
Sweden	Stockholm	1989- 1998
	Umea	1989- 1995

RESULTS RELATING TO OBJECTIVES 3& 4

The recent epidemiology of suicide in the EU

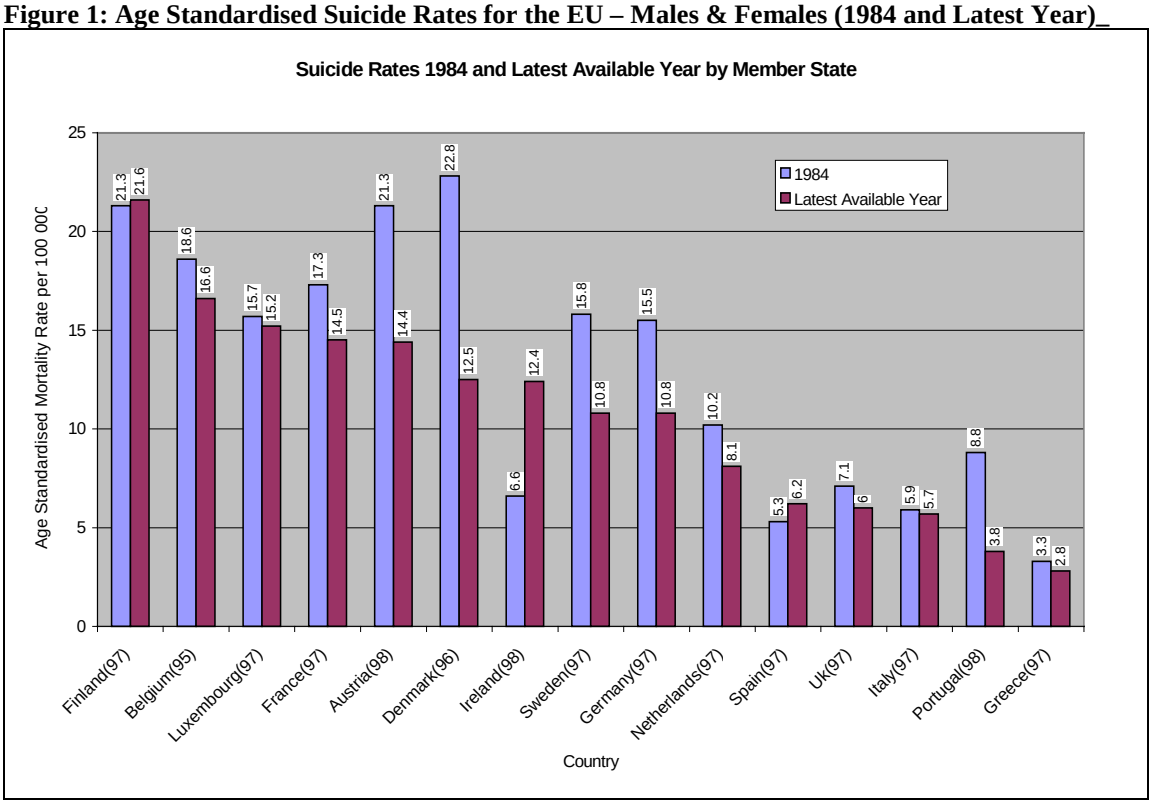
1. Suicide and Self-Inflicted Injury

Overall Rates

Over the study period there was a total of 658,175 recorded suicides in the EU. Of these, 469,782 (71%) were males and 188,393 (29%) females. Age standardised suicide rates for the individual countries showed that Finland had the highest suicide rate for the latest available year (1997), while Greece had the lowest (Figure 1). Significant downward trends over time occurred in Austria, Denmark, France, Germany, Greece, Netherlands, Portugal, Sweden and the UK while significant upward trends were observed in Ireland and Spain (89% and 17%, respectively). No significant trend was observed for suicide rates in Belgium, Finland, Italy and Luxembourg. The greatest decrease in rates over the study period occurred in Portugal (56%). Whether this drop in Portuguese rates is real or artefactual is unclear. It has been reported in the past that the decrease in suicide rates experienced in Portugal may have been attributable to the increase in undetermined deaths since 1980 leading to significant under-reporting (De Castro, Pimenta et al 1989).

The age-standardised suicide rates for Luxembourg fluctuated considerably over the study period. The reason for this was that Luxembourg contained of the smallest population out of all the European countries. As a result, a slight increase in the number of suicides would cause a fairly large increase in the overall rates. Rates in Germany began to decline after 1985 and then rose by 1991. This rise could have been due to the inclusion of the former German Democratic Republic in the national statistics in this particular year. However the rise was short-lived and a decrease was observed thereafter.

Figure 1: Age Standardised Suicide Rates for the EU – Males & Females (1984 and Latest Year)_



Sex specific Rates

A decline in male suicide rates was observed for 10 of the 15 EU countries while 13 countries reported a decline in female rates over the study period. Finland had the highest and Greece had the lowest suicide rates for both sexes for the latest available year (Figures 2 & 3). Significant downward linear trends in male mortality were observed for Austria, Denmark, France, Germany, Netherlands, Portugal and Sweden. Significant upward linear trends in male mortality were observed in Ireland and Spain while no significant trends were observed for Belgium, Finland, Greece, Italy, Luxembourg and the UK. In the case of Luxembourg, a sharp decline was observed in male suicide rates in 1992 but this rose again by 1993. There was again considerable fluctuation in the rates for both sexes, mot likely due to the small numbers in the population. Most countries exhibited a significant downward linear trend in female mortality apart from Finland, Ireland, Luxembourg and Spain, which all reported non-significant upward linear trends in female mortality rates.

Figure 2 Age Standardised Suicide Rates for the EU – Males (1984 and Latest Year)

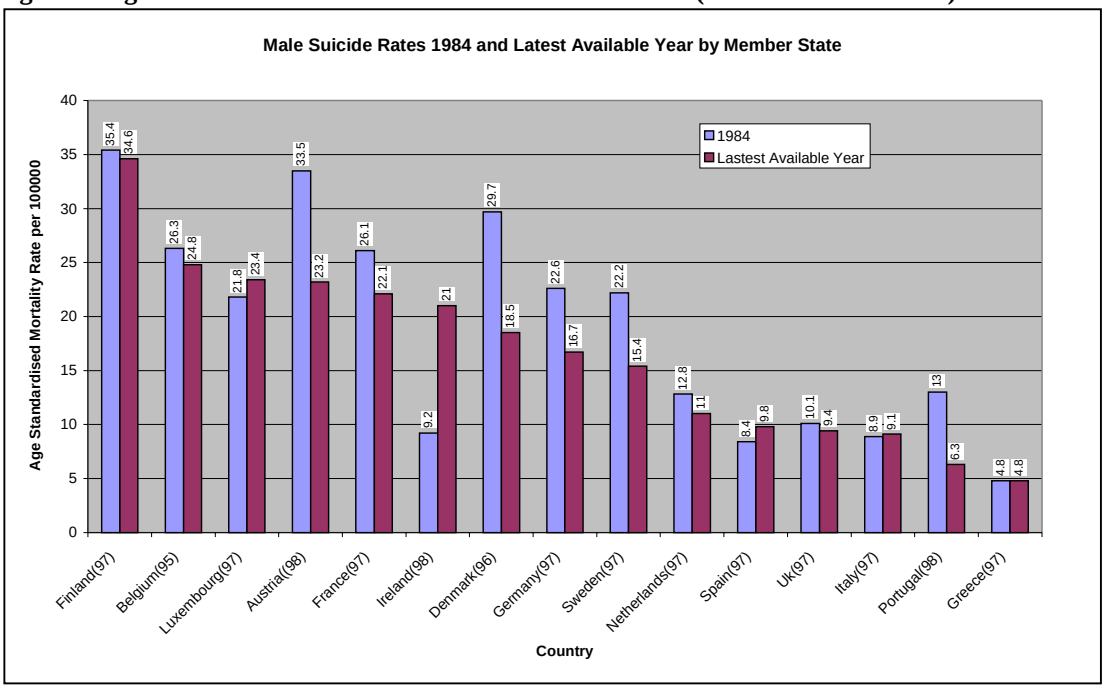


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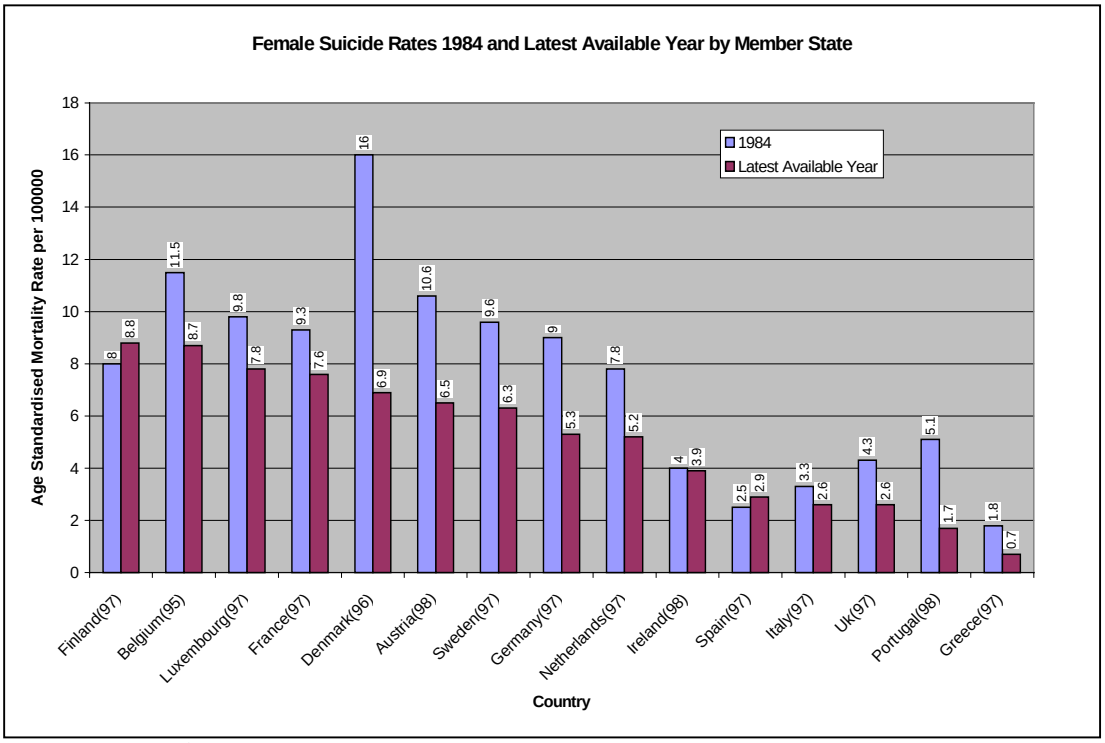
Figure 3 Age Standardised Suicide Rates for the EU – Females (1984 and Latest Year)



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The percentage change in rates over the study period (baseline year 1984) indicated a large increase in male suicide rates in Ireland (128%) in contrast with almost no

change in Irish female rates. Portugal displayed the largest decrease in suicide rates for both males and females (52% for males and 67% for females).

An hypothesised explanation for the magnitude of the rise in Irish suicide rates is that that suicide was not openly accepted in Ireland until recent years resulting in under-reporting of suicide in earlier years. Against this, however, is the lack of a similar trend in the female rates, although the possibility of a differential religious or cultural perception of suicide between males and females cannot be ruled out. Previous studies have suggested that the rise in Irish suicide rates is in fact real and attributable to factors such as marriage breakdowns, illegitimacy, alcohol addiction and crime (Kelleher, Daly 1990).

Male to female ratios for the age standardised suicide rates showed that Greece and Ireland had the highest ratio of male to female suicide rates (6.9:1 and 5.4:1, respectively) for the latest available year (Table 7). For some countries the sex ratios remained stable over time while for other countries, such as Greece and Ireland, the ratios increased substantially.

Table 7 Male to Female Ratios for the Age Standardised Suicide Rates

Country	Male:Female Ratio 1984	Male:Female Ratio Latest Available Year
Austria	3.2:1	3.6:1
Belgium	2.3:1	2.8:1
Denmark	1.9:1	2.7:1
Finland	4.4:1	3.9:1
France	2.8:1	2.9:1
Germany	2.5:1	3.2:1
Greece	2.7:1	6.9:1
Ireland	2.3:1	5.4:1
Italy	2.7:1	3.5:1
Luxembourg	2.2:1	3.0:1
Netherlands	1.6:1	2.1:1
Portugal	2.5:1	3.7:1
Spain	3.4:1	3.4:1
Sweden	2.3:1	2.4:1
UK	2.3:1	3.6:1

Age Specific Rates

Finland experienced the highest suicide rates in the age categories 15-24 years, 25-44 years and 45-64 years for the latest year for which data were available (1997) while Portugal and Greece had the lowest rates. Portuguese suicide rates decreased by 92% over the study period for the 5-14 year age group (Figure 4). In the 15-24 year age group, Irish suicide rates increased by 235% from 5.7 to 19.1 per 100,000 (Figure 5). Sex-specific trends indicated that male Irish suicide rates increased by 322% (7.9 to 33.3 per 100,000) while female rates increased by 33% (3.3 to 4.4 per 100,000) for this age group. Danish suicide rates reduced substantially for age groups 25-44 and 45-64 years over the study period by 54% and 52%, respectively (Figures 6 and 7). Most countries in the 65 and over age group demonstrated a decline in rates with the exception of Spain and Ireland (Figure 8). For most age groups it was apparent that the Mediterranean countries exhibited the lowest male and female suicide rates.

Figure 4 Age-specific suicide rates among 5-14 year olds in the EU

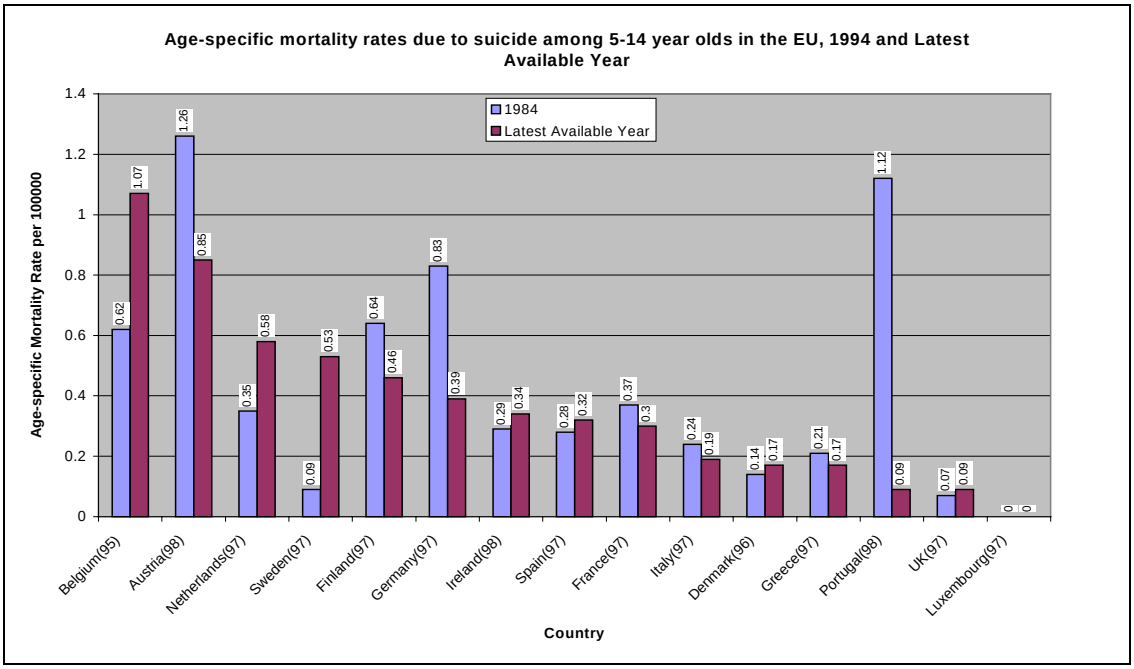


Figure 5: Age-specific suicide rates among 15-24 years olds in the EU

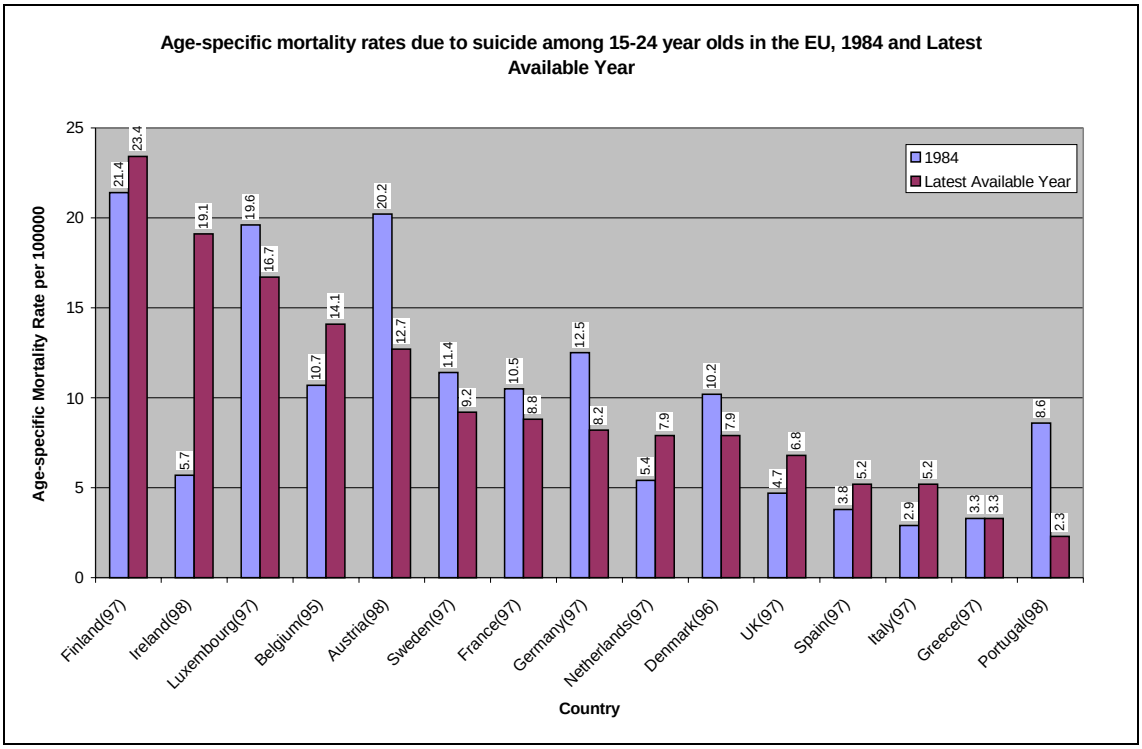


Figure 6: Age-standardised suicide rates among 25-44 year olds in the EU

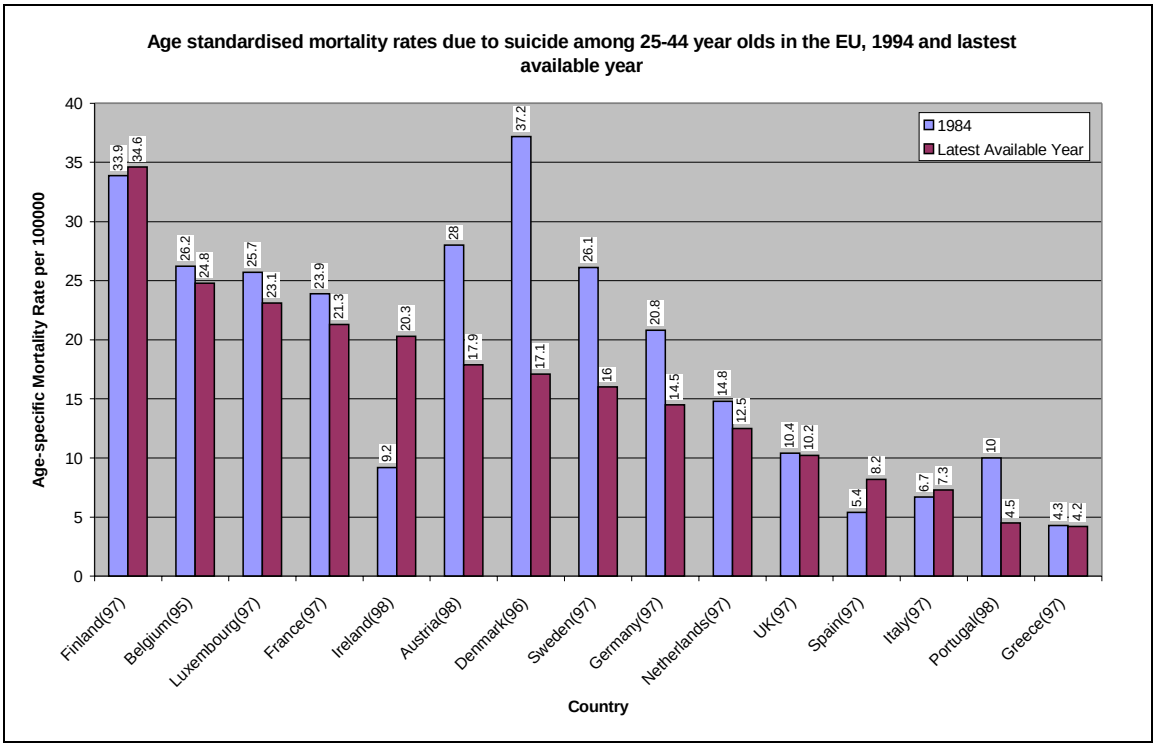


Figure 7: Age-standardised suicide rates among 45-64 year olds in the EU

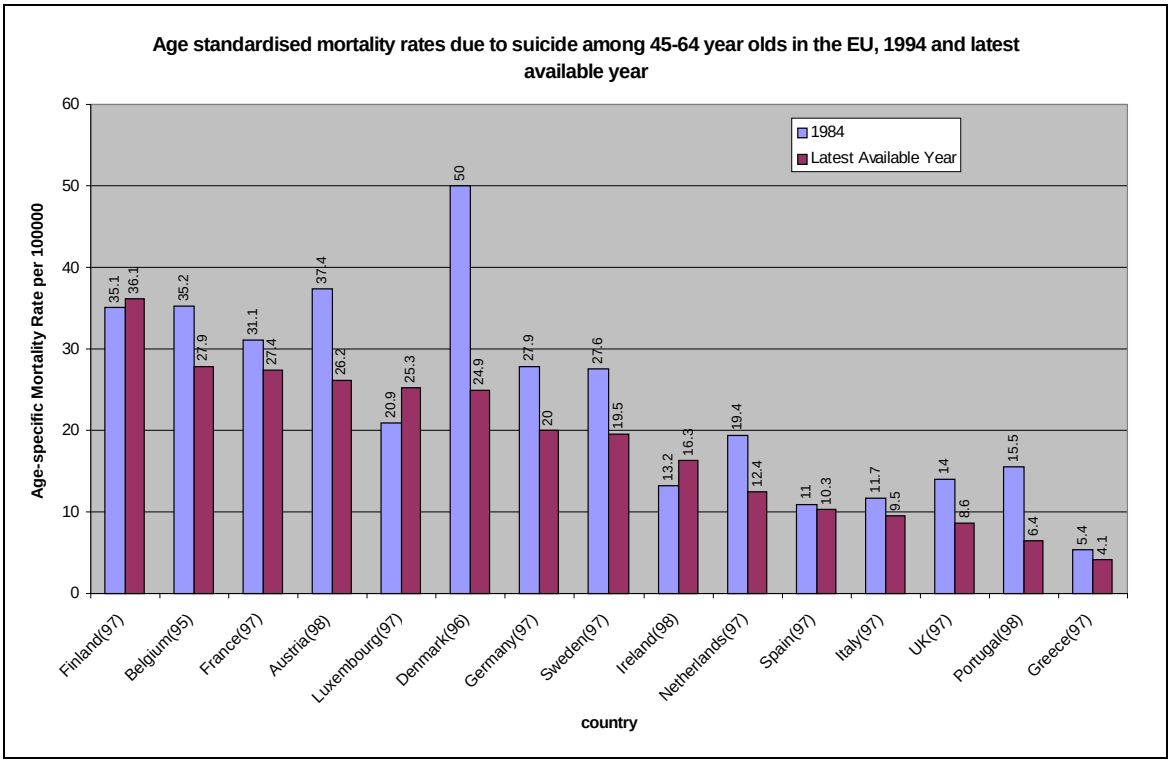
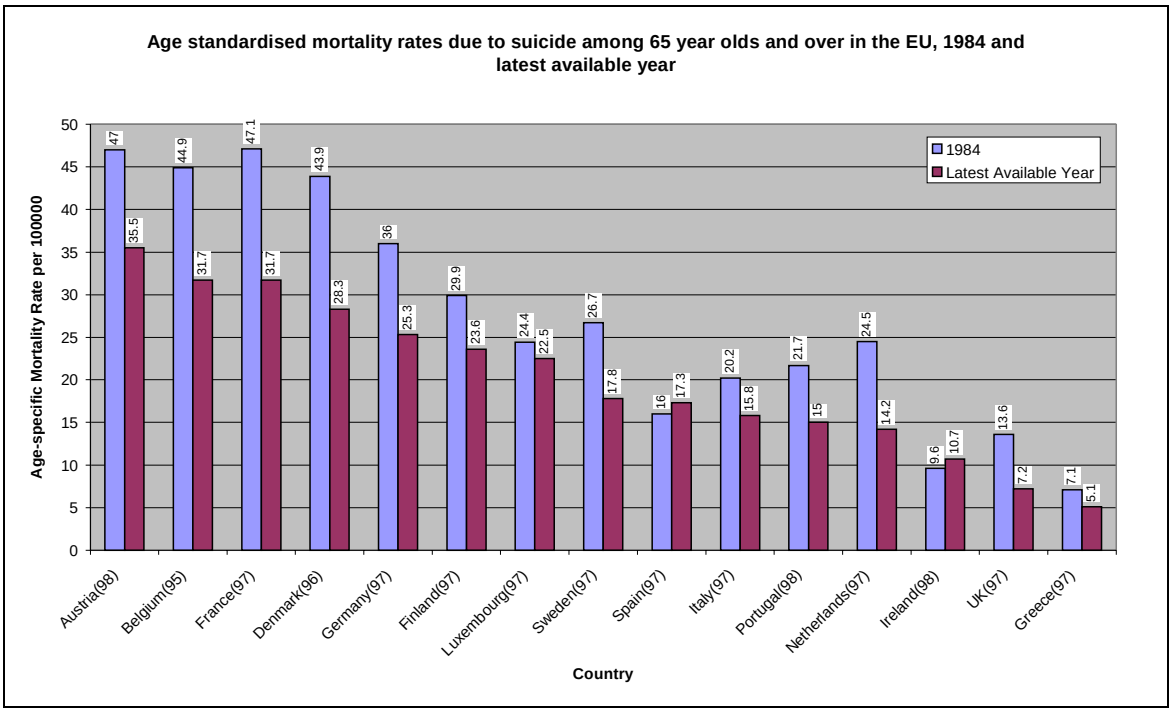


Figure 8: Age-standardised suicide rates among 65+ year olds in the EU



The mean suicide rates for the 15 EU countries were computed separately for each age category for the latest available year (Table 8). In general, it appears that suicide becomes more likely with advancing age. A further breakdown of these data by sex displayed a similar pattern (Table 9). Again the mean suicide rates increased with age for both sexes (apart from the slight drop in female rates between the age categories 45-64 years to 65+ years).

Table 8: Crude and age standardised suicide rates for the latest available year by Member State

COUNTRY	5-14 years	15-24 years	25-44 years	45-64 years	65+ years
Austria (1998)	0.85	12.7	17.9	26.2	35.5
Belgium (1995)	1.07	14.1	24.8	27.9	31.7
Denmark (1996)	0.17	7.9	17.1	24.9	28.3
Finland (1997)	0.46	23.4	34.6	36.1	23.6
France (1997)	0.30	8.8	21.3	27.4	31.7
Germany (1997)	0.39	8.2	14.5	20.0	25.3
Greece (1997)	0.17	3.3	4.2	4.1	5.1
Ireland (1998)	0.34	19.1	20.3	16.3	10.7
Italy (1997)	0.19	5.2	7.3	9.5	15.8
Luxembourg (1997)	0	16.7	23.1	25.3	22.5
Netherlands (1997)	0.58	7.9	12.5	12.4	14.2
Portugal (1998)	0.09	2.3	4.5	6.4	15
Spain (1997)	0.32	5.2	8.2	10.3	17.3
Sweden (1997)	0.53	9.2	16.0	19.5	17.8
UK (1997)	0.09	6.8	10.2	8.6	7.2
MEAN	**0.37**	**10.1**	**15.8**	**18.3**	**20.1**

Table 5: Crude and age standardised suicide rates for the latest available year by Member State – Males and Females separately

COUNTRY	5-14 years		15-24 years		25-44 years		45-64 years		65+ years	
	M	F	M	F	M	F	M	F	M	F
Austria (1998)	1.25	0.44	20.2	5.1	27.4	8.1	40.8	11.9	67.3	16.4
Belgium (1995)	1.61	0.51	21.8	6.2	36.8	12.5	39.9	16.1	52.6	18.2
Denmark (1996)	0.33	0.00	13.2	2.4	24.6	9.3	34.9	15.1	44.9	16.9
Finland (1997)	0.30	0.63	39.1	7.0	54.7	13.8	55.5	16.9	45.1	10.5
France (1997)	0.31	0.29	13.2	4.3	32.6	10.1	38.7	16.2	56.2	15.9
Germany (1997)	0.59	0.18	12.9	3.2	22.3	6.2	29.3	10.6	43.3	15.2
Greece (1997)	0.33	0.00	5.6	0.8	7.6	0.8	6.9	1.4	7.7	1.9
Ireland (1998)	0.34	0.35	33.3	4.4	34.8	5.9	25.3	7.3	20.6	2.7
Italy (1997)	0.17	0.22	8.5	1.8	11.2	3.4	14.6	13.7	28.2	7.2
Luxembourg (1997)	0.00	0.00	29.2	4.2	30.8	15.1	36.6	13.7	49.1	8.8
Netherlands (1997)	1.13	0.00	11.3	4.4	16.8	8.1	16.1	8.6	20.9	9.9
Portugal (1998)	0.17	0.00	3.7	0.8	7.3	1.7	10.3	3.0	25.6	7.8
Spain (1997)	0.40	0.24	8.0	2.3	13.1	3.1	15.2	5.6	30.0	8.5

Sweden (1997)	0.51	0.54	11.7	6.6	23.4	8.4	27.2	11.7	29.3	9.1
UK (1997)	0.08	0.11	11.1	2.3	16.2	4.0	12.9	4.4	11.7	4.1
MEAN	**0.50**	**0.23**	**16.2**	**3.7**	**24.0**	**7.4**	**26.9**	**10.4**	**35.5**	**10.2**

Much concern has tended to focus on the younger age groups in recent years (Webber 2000). Our data suggest that suicide rates did indeed increase in almost half the EU study countries in the 15-24 year age group. Although a general decline was observed in suicide rates for the older age categories, suicide appears to occur most frequently in males aged 65 and over.

2. Undetermined Causes of Death or Other Violence

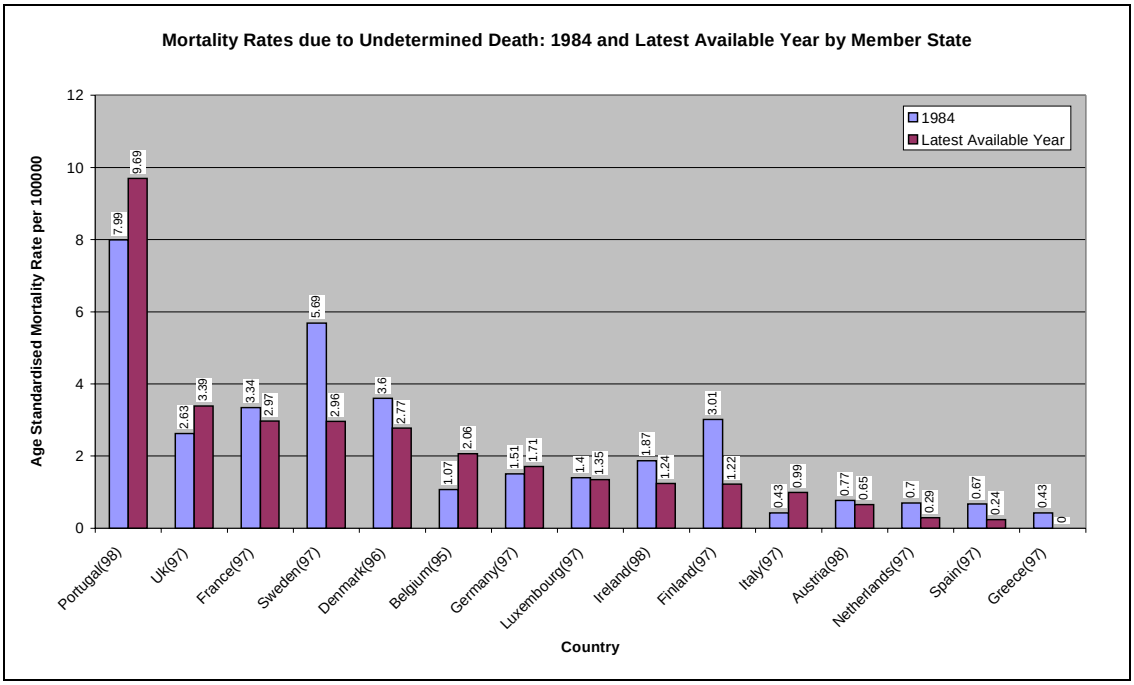
There has been much debate worldwide about the accuracy of official national suicide figures. Death certification as well as cultural and social norms may be the main reasons for the variation in rates across countries. The verdict of "undetermined death" or "other violence" is the most common alternative verdict given in cases of probable suicide.

Portugal had the highest rate of undetermined deaths both in 1984 and in 1998 while Greece had the lowest (Figure 9). It is possible that the high rate of undetermined deaths in Portugal may have contributed to the decrease in suicides over the years. Rates for Ireland decreased during the study period by 34%. This drop seemed small in comparison to the rise in Irish suicide rates (89%) over the study period. However, in 1989 Irish suicide rates began to increase and at the same time the rates for undetermined causes of death began to decrease. Taking 1989 as the base year, the percentage change in suicide rates indicated a 65% increase over time compared to a decrease of 50% in undetermined causes of death. As with suicides, the rates for undetermined causes of death were also lowest for most Mediterranean countries with the exception of Portugal. Austria, Denmark and Germany had all previously exhibited a decline in suicide rates however the corresponding undetermined death rates remained fairly stable suggesting the decline in suicides was not attributable to an increase in the number of deaths classified as undetermined in these countries. The most surprising observation was that Portuguese suicide rates were lower than the undetermined causes of death rates. These rates peaked in 1988 with a decline

thereafter. A rise was again experienced in 1996 but this was short lived. During these rises, the Portuguese suicide rates declined.

It seems, therefore, that there is no consistent geographical or temporal relationship between death rates from suicide and from undetermined causes. Where a relationship does seem to exist, it is unclear. Our view is that misclassification may contribute to a proportion of the variation in suicide rates in the EU in place and time but it does not explain it.

Figure 9: Age-standardised mortality rates due to Undetermined Causes of Death – Both Sexes



3. Exposure Data

In order to identify whether there were any significant relationships between the age-standardised suicide rates already determined and the corresponding unemployment rates for each of the study countries over the study period, correlation coefficients were computed along with the appropriate 95% confidence intervals. Table 6 summarises the results. The only countries to show a significant positive (linear) relationship between suicide and unemployment were Belgium, Netherlands and UK ($p<0.05$). This implied that as the suicide rate increased, so did the unemployment rate. More surprisingly, significant negative relationships were observed for Austria,

Denmark, Finland, Germany, Greece, Ireland and Sweden ($p<0.05$) suggesting that as the suicide rate decreased the unemployment rate increased.

Table 6 Relationship between suicide and unemployment: correlation results

Country	Correlation Coefficient	P-value
Austria	-0.89 (-0.99, -0.30)	**0.016**
Belgium	0.96 (0.85, 0.99)	**<0.001**
Denmark	-0.59 (-0.86, -0.06)	**0.033**
Finland	-0.69 (-0.92, -0.11)	**0.026**
France	-0.37 (-0.75, 0.20)	0.190
Germany	-0.95 (-0.99, -0.71)	**0.001**
Greece	-0.58 (-0.85, -0.07)	**0.031**
Ireland	-0.88 (-0.96, -0.68)	**<0.001**
Italy	-0.28 (-0.70, 0.30)	0.342
Luxembourg	-0.11 (-0.61, 0.45)	0.706
Netherlands	0.81 (0.48, 0.94)	**<0.001**
Portugal	0.38 (-0.16, 0.75)	0.160
Spain	0.32 (-0.25, 0.73)	0.264
Sweden	-0.88 (-0.96, -0.65)	**<0.001**
UK	0.61 (0.11, 0.86)	**0.022**

Any associations between the age-standardised suicide rates and annual alcohol consumption (litres per person) for each country (over the study period) were investigated by computing the relevant correlation coefficients (Table 7). A significant positive correlation was observed between the two variables for Austria, France, Germany and Ireland. In fact Irish suicide rates and annual alcohol consumption showed the strongest association (correlation=0.96). When the trend of alcohol consumption in Ireland was observed it was apparent that the consumption of alcohol had increased dramatically over time compared to the other EU countries. On the other hand, Swedish suicide rates correlated negatively with the annual alcohol consumption suggesting that as the suicide rate decreased and increase was observed in the consumption of alcohol.

Table 7 Relationship between suicide and alcohol consumption: correlation results

Country	Correlation Coefficient	P-value
Austria	0.55 (0.05, 0.83)	**0.033**
Belgium	0.39 (-0.24, 0.79)	0.217
Denmark	-0.23 (-0.69, 0.37)	0.455
Finland	0.35 (-0.22, 0.74)	0.192
France	0.78 (0.42, 0.93)	**0.001**
Germany	0.77 (0.13, 0.95)	**0.027**
Greece	-0.35 (-0.74, 0.22)	0.215
Ireland	0.96 (0.87, 0.99)	**<0.001**
Italy	0.50 (-0.05, 0.81)	0.071

Luxembourg	0.12 (-0.44, 0.61)	0.685
Netherlands	-0.43 (-0.78, 0.13)	0.127
Portugal	0.04 (-0.48, 0.54)	0.885
Spain	-0.49 (-0.81, 0.06)	0.078
Sweden	-0.82 (-0.94, -0.52)	**<0.001**
UK	0.51 (-0.03, 0.82)	0.062

RESULTS RELATING TO OBJECTIVES 5 & 6

A. Review of Monitoring Systems

1. Background

The SUPPORT network is one of two projects sub-contracted to the EUROSAVE project. The network was initiated by the County Council of Västerbotten, Sweden within the framework of AER (Assembly of European Regions), to work on an inter-regional level with suicide prevention in Europe. The distinctive feature of the project is to mobilise political will through recognition of suicide as a major public health problem, through exchange of knowledge and experiences and by stimulation and encouragement to all involved parties (political and administrative decision makers, professionals, NGOs and lay people). The network consists of seven formal partners (Vasterbotten, Salzburg, Sor-Trondelag, Baranya, Vastmanland, Uusimaa and Dublin) and a number of interested regions within Europe (London, Cork, Arkhangelsk, Sarajevo, Ljubljana, Ankara, Timishoara, Dolj and Vilnius).

SUPPORT Project aims

The aims of the project are to develop reliable monitoring systems for suicide and parasuicide in the different regions, to develop instruments for measuring attitudes towards suicide and suicidal ideation in the general population, as well as in specific sub-groups, and finally to develop and implement comprehensive regional suicide prevention programmes.

Methods/Activities

To achieve this a number of planning meetings at the AER level and at regional level have been arranged as well as technical meetings to address specific problem areas, as for example the development of monitoring systems.

Regional action groups, supported by grants from regional authorities, have been established with representatives from different interest groups, in order to carry out regional activities such as;

- collection of data on existing monitoring systems for suicidal and other self-destructive behaviour and to develop and implement such systems in the region
- planning for and conducting studies on suicidal behaviour and attitudes towards suicide
- collection of information on existing prevention activities in the field, and developing and implementing prevention programmes.

The inter-regional meetings have been hosted by different participating regions, and financed both with EU funding, local funding and Swedish grants. Formal as well as associated regions have attended. The first EU-financed meeting was held in Vasteras, Sweden, May, 2000, followed by a network meeting in Bled, Slovenia, September, 2000. In February 2001 a network meeting was held in Helsinki, Finland, and in October 2001 a conference was arranged in Cork, Ireland, sponsored also by the AER. Every region has, as a procedure to become a partner in the network, shortly described their region concerning different aspects, such as epidemiology of the suicide problem, existing systems for registration of suicide and attempted suicide, prevention activities, research activities, available resources and local actors (Appendix 4).

2. Results of the SUPPORT project

(i) Development of reliable monitoring systems for suicide and parasuicide in the different regions.

The ambition that the participating regions should develop monitoring systems for suicide and parasuicide has been met in most of the regions (Salzburg, Sor-Trondelag, Baranya, Trondheim, Umea,Vastmanland, Uusimaa) and in Dublin such a system is under preparation.

The method from the WHO/EUROs multicentre study on suicidal behaviour is applied, where cases of attempted suicide in contact with health facilities are monitored according to a common procedure and a common protocol.

The network has also been informed about the work in Cork, at the National Suicide Research Foundation, concerning the establishment of a National Parasuicide Registry, covering all acute hospitals, psychiatric hospitals and prisons.

(ii) Studies on attitudes towards suicide and suicidal ideation in the general population, as well as in specific sub-groups

This part aims at developing a feasible instrument to measure suicidal ideation and attitudes towards suicide/life in the regions.

A project plan has been agreed upon by the regions, including decision on:

- choice of instruments; ATTS (attitudes towards suicide) developed in Umea, covering both attitudinal questions, contact and experience of suicidal problems and own suicidality (Paykel questions) and TEM (test of existential motivation) developed in Wienna, measuring attitudes towards life.
- target groups; both the general population and specific sub-groups are important in a preventive context such as students, teachers, politicians, health care personnel and media.

After translation, back-translation and piloting of the questionnaires, the regions have started conducting studies among politicians, students, teachers, media and in the general population.

(iii) Development and implementation of comprehensive regional suicide prevention programmes

The process of incorporating the results and experiences gained during the project into regular activities in the different areas involved, is initiated and ongoing in most regions, however conditions for local financial support varies. The experiences of close collaboration between decision makers (political and administrative), professionals and other interested groups in the public health field has generally been proven to be very successful.
Further information is presented in Appendix 4.

Prevention activities directed towards young people/schools

Special focus has been put on developing recommendations for and initiating preventive activities directed at schools and young people. The group has gathered information on methods/strategies for approaching the target group, and there has been an exchange of materials and methods on how to approach the target group.

(iv) Utilisation and dissemination of results among the scientific community and the general public.

Results and experiences from the project have been disseminated through relevant national and international conferences. The results and experiences have also been presented in a book.

3. Conclusions

Interest for the SUPPORT network is growing, and many new regions are interested in joining the network. This might be due the fact, that in spite the numerous ongoing projects dealing with different aspects of the complexity of self-destructive behaviour, a comprehensive approach involving many different actors is usually lacking. As the background to suicide and self-destructive behaviour is comprehensive, preventive measures need to be comprehensive also. This indicates a need for a concerted action from many different areas of society, and this is met by the SUPPORT network due to its broad base. In this project, new networks, new epidemiological knowledge, social and cultural determinants and methods and actions to fight the problem are being developed. In some countries national suicide prevention programmes have been adopted, but in most countries there are no such plans and even if there are national plans there are often no special resources set a side to support these national plans.

It has been interesting and encouraging to see the interest growing in joining the project as it apparently offers opportunities for interested parties to share experiences and to get encouragement and new ideas from others interested in suicide prevention.
The regional basis, as well as the unique collaboration between politicians, administrators, professionals and NGO secures the quality of the network.

B. EUROSAVE recommendations on data quality, information exchange and prevention

The following recommendations are offered in an attempt to help improve suicide and parasuicide data collection within the European Union. Firstly, the deficiencies in routine suicide and parasuicide data are listed along with a series of recommendations on how to remedy them. Secondly, we suggest what is required in terms of prevention, the approach to high-risk groups and a summary on how to formulate a prevention strategy as recommended by the United Nations (1996). Finally, there is a short discussion on the relevant approaches to evaluating intervention strategies.

1. Data Quality

1.1 Deficiencies in Routine Suicide Data and their Remedies

Several deficiencies were recognised in the routine data available for suicide. These deficiencies and recommendations to remedy them are presented below.

Deficiencies

- Different methods of data collection hamper the possibilities of inter-country comparisons.
- Not all countries record the same data elements.
- Routine suicide data available from the WHO and EUROSTAT are not method (of suicide)-specific.

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Data on exposure to risk factors are scarce. In cases where such data are recorded, confidentiality clauses disallow public access.

What is required:

- A European-wide code of practice should be employed for collecting and recording suicide mortality statistics to allow for 'true' comparisons of mortality data across countries.
- Standard demographic variables should be a universal requirement for a minimum data set across the EU.
- Inclusion of the different methods of committing suicide would be informative when conducting inter-country comparisons.
- Data on exposure to risk factors should be routinely available.

1.2 Deficiencies in Parasuicide Data and their Remedies

Parasuicide data are even more problematic than suicide data. The main deficiencies and recommendations to remedy them are presented below:

Deficiencies

- In many countries routine hospital admission/discharge data do not include data on people attending emergency departments that treat the majority of parasuicide cases. Hospital data therefore greatly underestimate the extent of the problem in many EU countries.
- Representative data on parasuicide are unavailable.
- Hospitalisation data from hospital records are difficult to compare due to variations in recording, coding and reporting methods and quality.
- Survey data are difficult to compare due to different time periods, sample selection and varying response rates.
- There is a lack of availability of data on exposure to risk.

What is required :

- There is a need for national parasuicide registers. Ireland is currently in the process of setting up the first such register. In order to ascertain an accurate estimate of the number of suicide attempts, data should be included from hospital wards, emergency departments and outpatient departments ideally from general, private and psychiatric hospitals as well as from GPs, prisons and other institutions.
- Random, systematic and other sampling strategies should be investigated and piloted to generate representative data.
- Data recording, coding and reporting procedures within and between hospitals throughout the EU require greater standardisation and quality control.
- Results of surveys should be validated as far as possible using another source of data (for example, examining hospital records to confirm reports of medically-treated attempts).
- Consideration should be given to the routine recording of risk factors for parasuicide by national statistical agencies. .

2. Prevention

2.1 Deficiencies in Suicide Prevention and Some Proposed Remedies

Deficiencies

- Not all member states have accorded suicide prevention high priority and this is reflected in government policies.
- While some countries may have national suicide prevention strategies, others ither have strategies at local level only or none.
- Communication between the various organisations and agencies concerned with suicide prevention in the EU is variable.
- The range, nature and contact details of different organisations and sources of help for suicide prevention in the EU have not been documented.
- Public awareness of the importance of suicide and its prevention has not been consistently documented or promoted across the EU.

What is required:

- The problem of suicide and its prevention should be given priority in all EU countries.
- All EU countries should develop national and local suicide prevention strategies
- Collaboration between EU member states is required to seek to develop, implement and evaluate an effective and efficient EU wide suicide prevention strategy.
- Increased awareness of the different suicide prevention organisations should be promoted at both local and national level.
- The level of public awareness of the issues surrounding suicide and its prevention should be documented and promoted. More financial support is also required.

2.2 Who Should be Targeted?

Preventing suicide and suicidal behaviour depends in part on knowing why some people want to end their lives. Numerous risk factors for suicide have been identified (Donaldson & Donaldson 2000). These include:

- Age: *Older*

- Sex: *Males*
- Martial Status: *Separated, divorced, widowed*
- Living arrangements: *Living alone*
- Employment status: *Unemployed, retired*
- Physical Health: *Poor, especially terminal, painful, debilitating illness*
- Mental Health: *Mental illness, especially depression*
- Substance Abuse : *Alcoholism, illegal drug misuse*

Prevention strategies often target individuals or high-risk groups. However, high-risk strategies have only a modest effect on population suicide and population based strategies are likely to be more effective Lewis, Hawton, Jones 1997).

Measures to prevent suicidal behaviour in individuals, high-risk groups and the total population are have been outlined by the WHO (1998):

- **Individuals**: **Targeting** the suicidal individual by ensuring that suicidal persons are identified and proper treatment and aftercare offered.
- **High Risk Groups**: **Targeting** high-risk groups (mentally ill, drug abusers and survivors of suicide attempts) by offering treatment, support and guidance from qualified sources.
- **Total Population**: **Regulating** the accessibility of various methods of suicide (e.g. access to weapons and prescription of drugs).

  Providing information to the general public, influencing general attitudes towards suicidal behaviour and promoting awareness of the importance of family and social network support.

  Providing education and training to all relevant personnel within the healthcare sector.

Providing all other professional groups (clergy, teachers and rescue personnel) with knowledge of basic suicidology and how to handle such behaviour.

Encouraging, supporting and training volunteers.

Setting a standard for media reporting and fictional portrayal of suicides.

Preparing school programmes that enhance self-confidence in children and young people and their ability to cope.

2.3 Formulation of a Preventive Strategy

The following are important elements of a national - and arguably international - strategy (United Nations 1996) for suicide prevention:

- Government policy
- Supporting conceptual framework
- General aims and goals
- Measurable objectives
- Identification of agencies/community organisations to implement the objectives
- Monitoring and evaluation

A government agency or a non-governmental organisation should be designated as the co-ordinating body in charge of suicide prevention. One of its roles would be to conduct or commission a study of national trends in suicide and suicidal behaviour. Those at risk of suicide and suicidal behaviour would be identified and all available means of support provided. Relevant groups from the public and private sectors should be invited to participate in the process of setting up a national strategy.

2.4 Evaluation of the Strategy

The monitoring of the effectiveness of a strategy should be undertaken from the beginning of the intervention process. This involves the evaluation of individual projects and programmes and ensuring that the specific objectives were being met

effectively. There are three main approaches to evaluation (Bowen, Choquet, Ladame et al 2001). These are outcome, impact and process evaluation.

Outcome Evaluation: This relates to the goal of the intervention and usually assesses the broad long-term effects. Suicide rates are the preferred means of assessing the final outcome. However employing rates as a tool for such a purpose can be misleading for several reasons. Firstly, suicide cannot be used as the means of assessing small scale interventions because of the small numbers involved. Secondly, awareness of suicide through the introduction of an intervention may lead to a reduction in misclassification and thus a spurious rise in rates. Lastly, confounding factors may influence suicide rates and so changes may be attributable to other factors. Some researchers have used measures such as self-harm and depressed mood as proxy indicators of suicide.

Impact Evaluation: This approach is designed to assess the short and medium term effects of an intervention. For example, this may include the continued provision of helpline cards or increased awareness of suicide through the media or through schools and colleges. Impact measures should match the specific objectives of an intervention particularly when numerous strategies are employed. Innovative techniques of measurement may be required to evaluate the impact of suicide prevention programmes.

Process Evaluation: This relates to the specific activities of a programme and records what the activities are and how they are conducted. Documentation and monitoring of the process comprise a pragmatic approach to evaluation and allow for modification and improvement of the programme. Selected mental health indicators can be employed to assess and monitor the intervention. These may include the level of use of anti-depressants and referrals or to admissions to psychiatric hospitals. Factors such as drug use, sales of paracetamol and alcohol consumption are other useful indicators.

In order to evaluate the efficacy of suicide prevention programmes aimed at specific groups, there is a need for adequately powered randomised controlled trials. Problems such as methodology, lack of resources and the need for large numbers of subjects are all contributing factors to the paucity of the literature.

6. DISCUSSION

The inherent difficulties in undertaking international comparisons in mortality in general, and suicide in particular, have been well documented. Two specific methodological problems bedevil such work on self-harm - under-reporting and (the related phenomenon of) misclassification.

Several previous reports have suggested that suicide is routinely under-reported. Ohberg and Lonnqvist (1998) reported that suicide statistics might be underestimated by 10% in Finland although this would not significantly reduce the officially reported national suicide rate. A study in Scandinavia (Juel Nielsen, Retterstol et al 1987) concluded that suicide statistics were more comparable between countries than is often claimed while another study suggested that about 75% of undetermined deaths were in fact suicides (Horte 1983). Several studies have been conducted in Ireland regarding under-reporting of suicide (Cantor, Leenaars, Lester 1989; Kelleher, Corcoran, Keeley 1997; Connolly 1997; Connolly, Cullen et al 1999; Kelleher, Corcoran et al 1996). The results have shown that over the last 20 years, the rate of undetermined deaths has fallen steadily, which may indicate a decrease in the under-reporting if suicide. Some evidence of under-reporting is still being found and there are indications that the extent of the under-reporting varies by area.

Our ecological data suggest that misclassification may contribute to some of the geographical and temporal variation in suicide rates across the EU but that they cannot "explain" the phenomenon. More detailed individual research comparing suicide recording procedures and practices across the EU would be required to investigate this issue further.

If misclassification does not explain the variation in suicide rates, what does? Exposure to risk may potentially explain differences in injury rates. Both unemployment and alcohol dependence have been identified previously as risk factors for suicide (Gunnell, Frankel 1994).

The issue of whether there is a link between unemployment, suicide and suicidal behaviour is complex. Several studies have determined a strong independent association between suicide and unemployment (Lewis, Sloggett 1998; Stack 2000; Platt 1984) as well as parasuicide and unemployment (Platt 1986; Platt, Kreitman 1985). A more recent study (Ostamo, Lahelma 2001) probed the relationships between attempted suicide and employment status, especially in the context of major economic changes. The authors suggested reverse causality in that that suicidal persons were clearly at great risk of becoming unemployed or dropping out of the labour market. Others such as Makinen (1999) argue that the relationship between unemployment and suicide is far from clear, stating that when unemployment re-emerged dramatically in Sweden, the anticipated increase in suicide rates did not occur.

Unemployment may be a secondary factor in those who choose to commit suicide. Poor physical or mental health or personality disorders are sometimes reasons for unemployment and hence suicide or suicidal behaviour (Platt 1986). One study (Morton 1993) highlighted the fact that when a population of economically active male suicide attempters was examined, a significant relationship between repetition of parasuicide and unemployment was present. However, when this population was stratified by the presence or absence of personality disorder and history of parasuicide, the relationship between unemployment and parasuicide was no longer significant. In the elderly, who are not economically active and yet seem at especially high risk of suicide, the presence or absence of mental illness may be the key. Cattell (2000) observed that depressive illness was the most important predictor of suicide among the elderly and most comprehensive studies in elderly suicide (employing the psychological autopsy method) report the prevalence of major depression and other mood disorders to be between 60% and 90%. The role of social isolation as a risk factor for elderly suicide has also been highlighted as an important contributor but has less often been investigated in younger people.

The impact of changing rates of unemployment is unlikely to be equally distributed across all age and social groups. Therefore analysing the links between unemployment and suicide rates in the population as a whole could be misleading. Unemployment rates are likely to affect principally young people in search of their

first job and this may be reflected in the rising suicide rates among young people in many European countries. Ideally, to assess the relationship between unemployment rates and suicide, the suicide rates should be stratified by employment status (Preti and Miotto 1999).

Alcohol consumption and suicide rates as well as suicide attempts have been shown to be associated in previous studies (Pirkola, Isometsa et al 2000; Suokas, Lonnqvist 1995). Results from a Finnish study of parasuicide (Ohberg, Vuori et al 1996) showed that alcohol was detected twice as often in men as in women whilst a study investigating alcohol problems among suicide attempters in Nordic countries (Nielsen, Bille-Brahe et al 1996) highlighted that the frequency of problem-drinking among suicide attempters varied markedly between the areas under study.

Assessing the nature of a relationship between alcohol and suicide is notoriously difficult (Nielsen, Bille-Brahe et al 1996). In our study, most of the EU countries showed no significant association between suicide and alcohol consumption. A Finnish study (Pirkola, Isometsa 2000) suggested that alcohol misuse was likely to have a deteriorating influence on the life course of those who eventually succumbed to suicide, and its adverse consequences were common in misusers during the final months. Another study (Rossow, Romelsjo at al 1999) conducted on Swedish males concluded that there was a significantly stronger association between alcohol abuse and attempted suicide rather than completed suicide. This could in turn explain why in most cases we observed no relationship between suicide and alcohol consumption.

Strengths and Weaknesses of EUROSAVE Methodology

There were several strengths and weaknesses for a study such as the EUROSAVE project. Experiences over the course of the project have been drawn together are presented below.

Strengths

1. The EUROSAVE project benefited from a multidisciplinary team of professionals consisting of epidemiologists, statisticians, medical experts and mental health professionals.
2. The EUROSAVE team included representatives of almost all the EU countries. The project benefited both from the professional expertise of each participant as well as from the insights into the specific national contexts that these individuals were able to share.
3. The project enabled the networking of many relevant organisations. These included the Global Alliance of Mental Illness Advocacy Networks (GAMIAN – Europe), the World Health Organisation (European Region), the National Suicide Research Foundation, the Assembly of European Regions (SUPPORT project) and various other national and local agencies.
4. EUROSAVE was a project that was built on the foundation of the earlier EC funded EURORISC project (European Review of Injury Surveillance and Control). As a result, the two projects could be combined to provide a series of useful and important results concerning the entire spectrum of unintentional and intentional injuries in the EU.

Weaknesses

1. The project duration was limited to an 18 month investigation of suicide and parasuicide despite being originally designed to include violence and to span three years.
2. The information obtained for the epidemiological analysis was (inevitably) not completely contemporary (the latest year for which data were obtained being 1998).
3. The quality and range of data obtainable - especially on parasuicide - were limited.

Implications of the EUROSAVE Project for the Future

1. The most urgent priority is to develop a standardised approach across the EU to the definition, recording, coding, classification and reporting of suicide and parasuicide.
2. Notwithstanding the current deficiencies in data, continued monitoring of epidemiological trends in place and time in the EU is necessary to inform the

development of preventive policies and activities. In this regard, the establishment of parasuicide databases in each member state is particularly important.

3. The substantial academic and professional expertise in suicidology that we have identified should be harnessed to achieve the long-term objective of preventing avoidable suicide and parasuicide in the EU in the future. This will require leadership, the most appropriate locus for which is the new EU public health programme.
4. Research of an analytical and evaluational nature us especially urgently needed to help improve the evidence base for the clearer identification of high risk groups and environments, and the implementation of effective suicide and parasuicide prevention.
5. Networking between organisations in the field of suicidology is difficult to achieve without an adequte infrastructure. We would urge the EC to support the creation of such an infrastructure (a "network of networks") in the direction that EUROSAVE has embarked upon.
6. We trust that the EUROSAVE project has helped to bring the problem of suicide to the attention of each of the EU countries involved and that there is a continuation in the momentum of interest created by the project. EUROSAVE has helped highlight the extent of the problem of suicide in 15 EU countries and as a result may contribute to the securing of future international, national and local funding for further work.

1. CONCLUSIONS

Key Results: Phase 1 (Reviews of literature and data sources)
Literature review

1. A clear geographical pattern of relatively low suicide rates in the southern countries of the EU and relatively high rates in the northern countries has been reported.
2. Downward secular trends in suicide and parasuicide have been reported in most countries although there are exceptions.
3. A higher risk of suicide has been identified in specific population subgroups, notably males, the elderly, the unemployed, the separated and the mentally ill.

4. A higher risk of parasuicide has been identified in specific population subgroups, some of which are different from those at high risk of suicide. They include females, alcohol or drug misusers and the mentally ill.

Data sources

1. There is a small number of routinely available population-based data sources on suicide in the EU - WHO Europe, Eurostat, the national statistical agencies and *ad hoc* research surveys.
2. The number of sources of population based data on parasuicide is even smaller. Potential sources include hospitalisation statistics, public health surveillance systems and health surveys. In practice, only the WHO multicentre study is capable of generating epidemiologically valid and internationally comparable data.

Key Results: Phase 2 (epidemiology)

1. The wide variation in suicide rates between EU countries followed the previously reported north-south pattern, with Finland having the highest suicide rate and Greece the lowest.
2. A downward secular trend was observed in most countries with two exceptions, Spain and (especially) Ireland, in both of which upward trends were noted.
3. There was a consistently higher risk of suicide in males than in females (male:female ratio = 2:1).
4. The highest rates were observed in the age group 65 years and over.
5. Misclassification of suicide as "undetermined death" may contribute to some of the variation in suicide rates in place and time but cannot explain it.
6. The correlation between unemployment and suicide was inconsistent between countries, as was that between alcohol consumption.

Key Results: Phase 3 (recommendations)

2. To facilitate international comparisons, standardisation of suicide and parasuicide definitions, classification and reporting methods are required across the EU.
3. The means of committing suicide should be specified in routine national data.
4. Risk and exposure variables should be included in routine suicide data.

5. Following the lead of Ireland, consideration should be given to the setting up of national parasuicide registers.
6. Non-total sampling strategies (e.g. random, systematic) should be investigated as an alternative means of collecting data on parasuicide.
7. An EU wide suicide prevention strategy that encompasses data issues should be developed within the context of the new EU Public Health Programme.

Summing up

The original EUROSAVE proposal was for a project lasting three years and encompassing both suicide and violence. On the advice of the EC, the project was substantially scaled down and funding was provided for a review of suicide and parasuicide only over 18 months. The project was accordingly redesigned and all of its revised objectives (i.e. those relating to suicide and parasuicide) successfully met.

The key findings are compatible with previous work in this field. We have highlighted the need for EU wide standardisation of routine suicide and parasuicide data, and we recognise the valuable progress currently being made by others (such as the US sponsored International Collaborative Effort on Injury Statistics, and the EC funded International Classification of External Causes of Injury). We have also sought to explore the current prospects for prevention and have concluded that effective prevention remains elusive in the absence of better quality data, more efficient communication between professionals working in this area, and leadership. We believe that this last s especially important and should arise from within the embryonic EU public health programme.

Although the EUROSAVE project is now formally at an end, we will strive to disseminate our findings as widely as possible via our technical reports, newsletters, scientific publications and presentations and, above all, our website. We will seek to maintain the momentum we have established with the help of numerous colleagues throughout the EU by promoting awareness and knowledge of this topic within and beyond EU institutions.

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APPENDIX 2: Participant Questionnaires

1. General Information on Suicide Data and Prevention Strategies

1. What is the policy in your country for recording a death as suicide?
   (e.g. is a suicide note required, decision on intent made by coroner ?)

2. To your knowledge, have there been any studies conducted in your country investigating the validity and reliability of current suicide mortality statistics?
   (e.g. studies investigating the under-reporting of suicides?)

   If so, what were the main findings?

3. Does the national statistical agency for your country have age and sex-specific mortality data and population figures for years later than 199*?

   If so, could you provide this data or full contact details of someone who could?

4. Are detailed data on suicide deaths in your country available on request?
   (e.g. more detailed than age-sex specific mortality data. For example, mortality data due to exposure to risk factors such as drugs and alcohol)

5. Are the data easily accessible?

   If so, please provide us with contact details.

6. Is there a national suicide prevention strategy in your country?

   If so, please provide a reference, documents or contact details.

   Any other comments?

2. National Suicide Mortality Data

1. Does the National Statistical Agency in your country code mortality data using ICD9 or ICD10?

2. If ICD 10, since when?

3. Is the data broken down by :

   Age
   Sex
   Marital Status
   Occupation
   Social Class

4. Is the data available nationally and regionally?

5. In your opinion is the data representative of the population?

3. National Morbidity Data

1. Which organisation in your country produces national morbidity statistics?
   Name:
   Address:
   Telephone:
   Fax:
   Web site:
   Email:

2. Do you have a contact name?
3.
4. Do they produce an annual report?
5.
6. Do they produce documentation specific to parasuicide / attempted suicide?

4. Hospital Admission / Discharge Data

1. Are data on patients admitted to hospital after parasuicide routinely available in your country (regionally / nationally)?

2. What is the name of the system that collects this data?

3. Which organisation is responsible for disseminating these data?

4. Does this organisation make this data available to professionals/ researchers?

5. Is data collected routinely on all patients?

6. Any comments on the validity, reliability and coverage?

7. Are these data available at an individual level?

8. Are these data available by diagnostic category?

9. How is this data coded?

ICD-9	From:	To:
ICD-10	From:	To:
Other (specify)		

10. Are these data broken down by:
    Sex
    Age Group
    Social Class

11. Do these data include patients who are admitted to:
    Hospital wards?
    Accident & Emergency departments?
    Outpatient departments?

12. Do these data include information on hospital discharge?

APPENDIX 3: List of EUROSAVE-related publications

Newsletters and Technical Reports

EUROSAVE Newsletter No.1 Glasgow, PEACH Unit, 2000.

EUROSAVE Newsletter No.2 Glasgow, PEACH Unit, 2001.

EUROSAVE Newsletter No.3 Glasgow, PEACH Unit, 2001.

EUROSAVE Technical Report No.1- Suicide and Parasuicide: An overview of the published literature- Epidemiology, Causes and Prevention. Glasgow, PEACH Unit 2001.

EUROSAVE Technical Report No.2 – Parasuicide in Europe. Cork, NSRF 2001.

EUROSAVE Technical Report No.3 – Data Sources for Parasuicide. Cork, NSRF 2001.

EUROSAVE Technical Report No.4 – The Epidemiology of Parasuicide in the EU. Cork, NSRF 2001.

EUROSAVE Technical Report No.5 – The Epidemiology of Suicide in Europe. Glasgow, PEACH Unit 2001.

EUROSAVE Technical Report No.6 – Suicide: The Effects of Unemployment and Alcohol Consumption. Glasgow, PEACH Unit 2001.

EUROSAVE Technical Report No.7 – Key Sources for Suicide Mortality Data. Glasgow, PEACH Unit 2001.

Scientific Papers and Presentations

Brennan A., Corcoran P., Perry I., The EUROSAVE Working Group. Attempted Suicide in the European Union: Incidence and Prevalence. In preparation.

Chishti P., Morrison A., Stone D.H. The EUROSAVE Project: A Study of Suicide in Europe. In: Public Health 2001: Faculty of Public Health Medicine, Annual Scientific Meeting; p96 Poster Presentation/Abstract.

Chishti P., Stone D.H., The EUROSAVE Working Group. Suicide Mortality in the European Union. In preparation.

Chishti P., Stone D.H. Suicide in the European Union. Abstract submitted to the 6th World Conference of Injury Prevention and Control, Montreal.

APPENDIX 4: Description of regions participating in the SUPPORT project

REGION	Population	Area km^2	Suicide rate (year)	Annual suicide no	Where produced	Since when	Comments
Nyland/Uusimaa, Finland	1 300 000	6 767	24.5 (1998)	251	Statistics Finland		General statistics of death causes
Sør-Trøndelag, Norway	259 177	18 831	16	30-40	National Bureau of Statistics	1826 (national) 1964 (county)	Age gender method. Good quality of data, underest ~10%.Possible to have info on every case, also from police, however not full coverage
City of London & Hackney, UK	1 018 000	1 679	24.6	40			
Baranya county, Hungary	404 720	4 487	33	130	Nat.Bureau Of Statistic	1880-	Good quality of data, verufied by Forensic Medicine and Police in Baranya
Ljubljana, Slovenia	1 900 000	20 000	31	600-650			
Västmanland, Sweden	260 000	6 302	16	42	Tabell-verket	1750-1860	On data files since 1952. Age gender, marital status, method, date and place, type of examination. Possible to have information on every case. From police and forensic medicine as well, however not complete.
Västerbotten, Sweden	260 000	55 500	18	45	SCB, Stockholm	1861-	
Salzburg, Austria	510 000	7 154	24.8 (2000)	144 (2000)			
Dublin, Ireland	1 290 000	4 640	11.8	126	Central Statistics Office CSO, Cork	1860s	Gender age, location, method, occupation, marital status. Prior to 1967-according to coroner´s inquest, since 1967 a confidential police form (Form 104) including more datails, 1998 expanded version. Possible to have info on every case, however not from police, involvement of forensic medicine varies
Cork, Ireland	546 640	12 180	14.5 (1998)	79 (1998)			
Sarajevo, Bosnia	320 000			48 (2000)	Nat Bureau of Statistcs	1950	Gender age, method, possible to have info on every case, after permission from court, also from police

REGION	Population	Area km^2	Suicide rate	Annual suicide no	Where produced	Since when	Comments
Arkhangelsk, Russia	437 000	293 (?)	39	1998 – 176 1999 – 178 (since –96, 60% increase among adole-scents)	Regional Statistic Committee	1989	Age, gender, method, ”all possible info”, e g past history, mental health, even relatives mental health. Possible to have info in every case, also from police
Dolj, Romania	748 000	7414					
Timisoara, Romania	675 386	8697	17.14 (1998) 16.01 (1999)	117 111	Statistics Of-fice of the Public Health Department of County Timis	1947	Gender, age, residence,method, cause of death, for every case from forensic medicine office, or, in cases of suicide attempts, data from psychiatric departments, including age, gender, history of mental health, diagnosis.
Ankara, Turkey	3 693 390	25 706	3.41 (1998)	179	State Institute of Statistics	1962	Suicide Statistics Form (including data on gender, age, marital status, address, occupation, education, date and method of suicide, reasons for suicide, which is prepared by State Institute of Statistics, is completed by police and Gendarme Institution for every case.
Värmland, Sweden	276 000	19 371	16	44	Tabell-verket SCB, Stockholm	1750-1860 1861-	On data files since 1952. Age gender, marital status, method, date and place, type of examination. Possible to have info on every case, also from police and forensic medicine, however not complete
Vilnius, Lithuania	577 969	287	31.2		Department of Statistics to the government of the Republic of Lithuania		

REGION	Suicide attempt rate	Annual suicide attempt no	System for monitoring attempted suicide, other comments
Nyland/Uusimaa, Finland	300	1200-1500	In the Helsinki area only. Data from National Public Health Institute
Sør-Trøndelag, Norway	125 males 173 females	124 M 178 F	Yes, since 1989 in county (WHO/EURO multicentre study) on regular basis, according to standardixed form (age, gender, method/s, repetition, medical seriousness, socio dem data, main problem, intention. Not on national level
City of London & Hackney, UK	250	400	**No**
Baranya county, Hungary	220	900	Yes in Pécs WHO/EURO multicentre study since 1997
Ljubljana, Slovenia	24	450	Agreement to register each suicide attempt, but not mandatory, WHO/EURO-study
Västmanland, Sweden	160 City of Västerås	240	Yes, 1994-1997 in the district of Västerås, from 1998 in the whole county, however not full coverage yet. Age, gender, method, psychiatric questionnaire. Not on national basis
Västerbotten, Sweden	210 (age 15+)	250	Yes, since 1989, WHO/EURO multicentre study.
Salzburg, Austria		1 500	WHO/EURO multicentre study: monitoring of parasuicide gives us the opportunity to communicate and to collaborate with medical doctors in all hospitals of our county in the sense of suicide prevention.
Dublin, Ireland			National system in preparation (see below)
Cork, Ireland	138 M 166 F (all ages)	M F 375 412	WHO/EURO multicentre study since 1995, in Cork and Limerick. NSRF funded by the government to develop national monitoring system from end of 2002
Sarajevo, Bosnia		480 (est)	Yes, since January 2001 in Kanton Sarajevo. Age marital status, gender, method, date and place, religion, employment status.

REGION	Suicide attempt rate	Annual suicide attempt no	System for monitoring attempted suicide, other comments
Arkhangelsk, Russia	No statistics	No statistics	Yes, there might be on regular basis. Special forms are filled in for every case of attemted suicide
Dolj, Romania			
Timisoara, Romania	37.07 (1998) 41.46 (1999)	253 50 M 203 F 285 83 M 202 F	No organized system for monitoring suicide attempts, but special forms are completed for every cases according to the WHO criteria.
Ankara, Turkey	107 (1990) 113 (1995)	1901 (1990) 2532 (1995)	No, but WHO/EURO Multicentre Study on Suicidal Behaviour since December 1996 in Mamak Region of Ankara.
Värmland, Sweden	-	-	No system
Vilnius, Lithuania			**No system**

REGION	Studies on suicidal ideation/responsible	In which groups	Methods applied
Nyland/Uusimaa, Finland	Suicidal ideation and parasuicide in the Finnish general population/Hintikka et al, 1998	General population, aged 18-74 years Sample 4 869	Telephone interviews 1993-1995
Sør-Trøndelag, Norway	One by prof Tore Bjerke	Students	Questionnaire
City of London & Hackney, UK			
Baranya county, Hungary	By Dr Fekete	Students, nurces, doctors, high school pupils	SOQ, ATTS, PAS
Ljubljana, Slovenia			
Västmanland, Sweden	Enquiry every third year to youths about alcohol, drugs, also including q on ideation/ Public Health Dept at the County Council	9th form in secondary school 3rd form in high school	Questionnaire every 3rd year
Västerbotten, Sweden	Attitudes towards suicide and suicidal ideation in 1986 and 1996/ E Salander Renberg Epidem study on general health in 1998/County Council	General popu aged 18-65 All ages	Postal questionnaire, ATTS Postal questionnaire
Salzburg, Austria	Attitudes toward suicide, existential motivation and self reported suicidal phenomena 2001: Nindl, Fartacek, Salander-Renberg, Sauer.	Physicians, teachers, trainees in psychiatric nursing, politicians and inpatients of a crisis intervention center (N=237)	Self reporting questionnaires (ATTS, TEM), postal questionnaire for politicians (ATTS, TEM)
Dublin, Ireland	INSURE (Epidem Study)/Dr Kevin Malone Fitzpatrick Fitzgerald, O´Brien and Barry	Children & adoloscents Homeless youths and early school leavers	Both self-administred questionnaires and interviews
Cork, Ireland	NSRF survey 1997/1998	350 3rd level students Four faculties in Univ in Cork	Self-reporting questionnaires, administred during lectures, measuring life-time suicidal ideation and attitudes (SOQ)
Sarajevo, Bosnia	Attitudes towards suicide Dec 2000/ Dr E Music	Medical students	ATTS

REGION	Studies on suicidal ideation/responsible	In which groups	Methods applied
Arkhangelsk, Russia	No study		
Dolj, Romania			
Timisoara, Romania	Doina Cozman, Correlations between suicide behaviour and depressive states	Adolescents, young adults	Psychopathological scales for suicide, self-applied questionnaires
Ankara, Turkey	Sayil I, Göğüş AK, Attitudes of clinicians towards suicide Göğüş AK, Sayil I, Suicide ideation and behaviour Sayil I, Pekyardimci C, Attitudes and beliefs towards suicide Tugcu, Palabryirkoglu, Sayil, Various factors related to suicide probability	Doctors Psychiatic outpatients Students, workers Patients, general population	Questionnaires, interviews, and scales
Värmland, Sweden	No study	-	-
Vilnius, Lithuania	By D.Gailiene and N.Zemaitiene	About 5000 adolescents (11, 13, 15 years)	Self-reporting questionnairess

REGION	Prevention activities	National program
Nyland/Uusimaa, Finland	Crisis intervention center (NGO´s, church) Regional programmes on the promotion on Hot line services (several) mental health	Yes, 1990-1996. Redection of suicide by 10% during the program period
Sør-Trøndelag, Norway	Specific regional program. Competence building. Treatment and follow-up chains. Special activities towards children and adolescents, elderly, gay/lesbians and bereaved.	Yes, Norwegian national plan for suicide prevention, 1994-1999 Follow-up project 2000-2002
City of London & Hackney, UK	Samaritans hot line services CALM helpline for young men with mental ill-health Spec activities in psychiatric care Educational programs – schools are visited by Samaritans	Yes, in 1996 Result published: Boardman AP et , 1999, Psychological Med, 29, 27-33
Baranya county, Hungary	Hot line services Specific activities in psychiatric care Educational programs for GP:s Approaching youths, programs in high schools Regional program Mental Hygienic program in the media (drugs, suicide and Peer education depression)	No
Ljubljana, Slovenia	**Crisis intervention center Spec activities in psych care (seminars, survivors)** Hot line services, several Approaching youths (teachers, parents) Public health strategies Regional programs in high risk areas	No, but a draft was published in the book ”How to prevent suicide in Slovenia” (WHO)
Västmanland, Sweden	Public health strategies (information and education) Spec activities in psych care (intensive after-care and follow-up of suicide attempters) Approaching youths, information to teachers	Yes in 1995
Västerbotten, Sweden	Public health strategies Regional network for developing suicide prevention Guidelines for Psychiatric care programmes approaching young people/schools	Yes in 1995 ”Support in suicidal crisis”
Salzburg, Austria	***”Salzburg-Suicide-Prevention”****: start of the project April 2001*, financed by the government of Salzburg-ministry of health (Mag. Gabi Burgstaller). Development of the project plan by R. Fartacek and T. Nindl. **Activities: Suicide Prevention by Networking** • Outpatient crisis service (pro Mentet Salzburg) • 24-hours crisis hotline (pro Mente Salzburg) • inpatient suicide prevention at the Christian-Doppler-Clinic-dept. of Crisis Intervention.-treatment for patients at high risk for suicide • Prevention ”outpatient”-center for GP`s, psychiatrists and psychotherapists – help for the helpers. • Network partners of high priority: GP`s, Psychotherapists, health professionals • Further education of general practitioners, psychotherapists, priests	**G. Sonneck (2000)** on behalf of the Austrian ministry of health and social welfare developed an outline plan of suicide prevention in Austria. This comprehensive plan is waiting to be decided by the parliament of Austria. In 2000 Austrian government changed. The future of the national plan is uncertain.

REGION	Prevention activities	National program
Dublin, Ireland	Samaritans helplines, education Postvention work Network for bereaved by suicide Programe in schools, ”Beat the blues” Pastoral/educational model for prevention Mental health promotion activities	Yes. Report of the National Task Force on Suicide, 1998
Cork, Ireland	Samaritans & Childline Helplines Social, Personal & Health Education in Schools- Best practice Guidelines Organisation of conferences and seminars – awareness/education Risk Assessment Training for GPs Suicide Awareness Training of Psychiatric Staff Voluntary Postvention Support Group	Yes. Report of the National Task Force on Suicide, 1998
Sarajevo, Bosnia	Educational programmes in Psychiatric care	No, but within the Reorganization of Mental Health Care, the basic strategy is a community orientation
Arkhangelsk, Russia	Hot line services Several ”crisis-centers” exist only formally as part of the psychiatric outpatient clinic	No
Dolj, Romania		No
Timisoara, Romania	Psychiatric care, NGO’s activities (The National Anti-Suicide League) Plan to etablish preventive mental health programmes in collaboration with Ministry of Health	No
Ankara, Turkey	Crisis Intervention Center (University of Ankara), educational programmes (seminars to police and teachers)	No
Värmland, Sweden	Approaching youths, information to teachers Public health strategies (information and education) Spec activities in psych care	Yes in 1995
Vilnus, Lithuania	Hotline services (several), postvention programe in schools, decentralisation of psychiatric care, public health strategies, spec activities approaching media	**No, in preparation**

REGION	Research activities	Contribution in the collaboration
Nyland/Uusimaa, Finland	University Center, National Public Health Institute	Activation NGO collaborators and municipalities
Sør-Trøndelag, Norway	WHO/EURO Multicentre Study on Parasuicide	Regional resources/competence for implementing National programme, research competence. Special program for schools (Crisis and Coping)
City of London & Hackney, UK	Epidemiological studies on suicides by coroner in inner north London, 100 cases per year	Based on 24 years investigation suicides and other violent and unnatural deaths
Baranya county, Hungary	WHO/EURO Multicentre Study on Parasuicide Suicide epidemiology. Sociocultural comparative studies on attitudes, media, modelling, suicide epidemics	Experiences from psychiatric clinic Research competence Teaching competence
Ljubljana, Slovenia	WHO/EURO Multicentre Study on Parasuicide	Well organized mental-health system. 30 years of reliable data on suicide. Optional: EPSIS study-comparisons
Västmanland, Sweden	Evaluation of treatment program. Epidemiological studies, suicide attempts. Attitudes towards suicide	5 years experience of developing a regional suicide prevention program. Knowledge in information/education, treatment and research
Västerbotten, Sweden	Suicide epidemiology WHO/EURO Multicentre Study on Parasuicide Attitude studies in general population Suicidal behaviour in general population	Experiences from public health strategies Programs for suicide prevention at the psychiatric clinic Research competence General Public Health Programme in the county
Salzburg, Austria	Attempted suicide – follow-up study. Alcoholism and suicide. Suicide and tourism. Burnout-syndrom. Existential analysis, existential aspects of suicidality. Research on assessment of suicide risk: Attitudes towards suicide, existential motivation, suicidal ideation, hopelessness, Depression in inpatients of the crisis intervention ward. Research on suicide methods (jumping down of the ”Mönchsberg” in Salzburg – development	Chairman of the Austrian society for suicide prevention, national representative/Austria within IASP, long experience in crisis inter-vention, psychotherapeutic experiences, supervision to teachers, schools
Dublin, Ireland	A number of small research projects in the region. One National Research Board funded project in the north inner city (Dublin).	Links to the NGOs and statustory mental health services in the region
Cork, Ireland	WHO/EURO Multicentre study on parasuicide Large scale parasuicide treatment intervention study Hospital-based case control study of adverse childhood experiences associated with parasuicide	Research experience Clinical experience
Sarajevo, Bosnia	Suicide epidemiology, attitudes towards suicide, attempted suicide	Experiences from psychiatric clinic Teaching and research competence

REGION	Research activities	Contribution in the collaboration
Arkhangelsk, Russia	No research activities	
Dolj, Romania		
Timisoara, Romania	3 MD thesis on the subject of suicide in a bio-psycho-social perspective	
Ankara, Turkey	WHO/EURO Multicentre Study since 1996, suicide eidemiology in Ankara Regional differences in suicide and attempted suicide in Turkey	Experiences from psychiatric clinic and crisis intervention center, treatment and research experience
Värmland, Sweden	No	Programs for regional psychiatric prevention Experience of developing a regional suicide prevention program. Knowledge in inforamtion/education
Vilnius, Lithuania	Suicide epidemiology, attempted suicide – follow-up study, ancient attitudes towards suicide, media, ethical issues	Research and teaching competence, experience from public health strategies, national representative/Lithuania within IASP

REGION	Expectations on collaboration	Available resources
Nyland/Uusimaa, Finland	Good interregional programme with relations to NGO´s and research institutions	If EU money is granted, economical resources will be available for own contribution, political will exists for a regional programme
Sør-Trøndelag, Norway	Networking. Exchange of knowledge and experiences. Cross-cultural research results important for prevention activities.	Resource centre for suicide research and prevention. Network of professionals and voluntaires in the region. Clinical and research competence, politicians.
City of London & Hackney, UK	Designing suitable studies for proper estimates of existing statistics	At the moment unknown
Baranya county, Hungary	Exchange of experiences, establishing new networks Promotion of national program	Support from regional politicians. Network of professional services in the region. Central role of the University Department
Ljubljana, Slovenia	Compare epidemiologial, cultural, economic and political factors. Evaluate prevention programs Compare national programs and research experiences	Professional support inside the institution No economic resources Limited man power (1 person)
Västmanland, Sweden	Exchange of experiences, Development of a regional preven-tion program based on local experiences and international comparisons. Common evaluation of treatment activities	There is a political will to support preventive activities in the field. Man power for clinical work and sustension of research is available. No economic resources for adm and implementation
Västerbotten, Sweden	Exchange of knowledge and experiences. Increase knowledge on cultural factors. Development of Regional Programs, especially directed to young people schools	Political will. Clinical and research competence. Regional economic resources are available for implementing suicide prevention strategies in schools
Salzburg, Austria	Close collaboration between diff regions, exchange of experience, working together activity, regular meetings, discussion of ongoing research activities **Research on specific scientific questions**	**Budget given by Salzburg Government:** • 2000: € 93.000 • 2001: € 107.000 • Political will of Salzburg politicians documentet by the resultsof the survey: ”Attitudes towards suicide and existential motivation of Salzburg polititians ”(2001) **Personal ressources:** • Regional project manager: Reinhold Fartacek, M.D. • Research/planning work: Toni Nindl, PhM. • Research assistent: Rudolph Rohrer, PhM. • ”Outpatient”-service for health professionals: Elisabeth Gottwald-Katzlberger, M.D. • WHO/Euro Network on Suicide Prevention/monitoring of parasuicide: Rudolph Rohrer/Dagmar Hofer

REGION	Expectations on collaboration	Available resources
Dublin, Ireland	Exchange of experience, to increase knowledge of the best practice in activities concerned with suicide prevention	Political will and administrative support to develop regional plan
Cork, Ireland	Increased understanding of social, psychological and cultural, factors associated with suicidal behaviour that are shared between regions or unique to a specific region.	Research expertise, administrative support and political will
Sarajevo, Bosnia	Exchange of experience and knowledge Developing guidelines for treatment of suicidal patients	Man power: two persons (S. Loga and E. Music) No economic resources
Arkhangelsk, Russia	Designing suitable studies for proper estimates of existing statistics; Development of a regional prevention program based on local experiences and international comparisons.	Professional support inside the institution. Central role of the North State Medical University No economic resources
Dolj, Romania		
Timisoara, Romania	Professionals in the field of mental health, local authorities, educational institutions (universities, schools), NGO's	There is a political will to support preventive activities in the field. Man power for clinical work and sustension of research is available. Regional economic resources will be available if EU money is granted
Ankara, Turkey	Exchange of experiences, development of regional programmes Support to conduct planned studies Take part in attitude study	Limited economic supplies. Professional support is available in Ankara University Psychiatric Clinic and Crisis Intervention Center
Värmland, Sweden	Exchange of experience, to increase knowledge of the best practice in activities concerned with suicide prevention	Political will, professional and administrative support.
Vilnius, Lithuania	Take part in attitude study. Exchange of experiences by development of a regional prevention programes	Central role of the University Department, good collaboration between professionals. No economic resources

REGION	Political actors	Professional actors	Administrative actors	NGO´s
Nyland/Uusimaa, Finland	Ministry of Social Affairs and Health	STAKES (Reserach Institute) National Public Health Institute	Province of Southern Finland Antero Heloma, Provincial med adviser	Yes, church
Sør-Trøndelag, Norway	Inger Lise Nyberg, the county of Sör-Tröndelag	Heidi Hjelmeland, Assoc prof Arne Opdahl, MD	Heidi Hjelmeland. Head of Regional resource centre for suicide research and prevention	Bereaved/survivors
City of London & Hackney, UK	Dept of Health	Dr Louice Appleby, Manchester		Samaritans
Baranya county, Hungary	Eva Feledi, MD, leader of Committe of Health, General Assembly of Baranya County	Sándor Fekete, MD, PhD, Deputy Head of the Dept of Psychiatry Éva Kovács, MD, psychologist, Public Health Service	Dr.Janos Szasz, County Council, EU Affairs Peter Osváth, MD	
Ljubljana, Slovenia	Ministry of Health	University Psychiatric Hospital		Survivors
Västmanland, Sweden	Stig-Erik Westmark, Olof Walldén	Elisabeth Sjöborg, MD, Psych clinic	Bo Simonsson	
Västerbotten, Sweden	Gunilla Åström, county councillor Ann-Sofi Löfstedt, county councillor	Lars Jacobsson, prof, Dept of Psychiatry Ellinor Salander Renberg, psychol, PhD, Psych clinic	Peter Hedman, director of Regional Affairs, Västerbotten county council Maria Lundmark, Project manager, Västerbotten county council	SPES, Swedish organisation for survivors
Salzburg, Austria	Mag. Gabi Burgstaller, minister of public health	• Reinhold Fartacék, MD, E.C.P.,Medical director of the Salzburg Crisis Intervention Center • Anton Nindl, psychologist, psychotherapist • Rudolph Rohrer, psychologist • Elisabeth Gottwald-Katzlberger, M.D. • Dagmar Hofer	Mag. Andrea Huber, ministry of health	Network of psychosocial institutions
Dublin, Ireland	Mr John Lamont, Assistant Chief Executive Officer, Northern Area Health Board	Teresa Mason, Resource Officer to the Working Group on Suicide for the Eastern Region	Teresa Mason, Resource Officer to the Working Group on Suicide for the Eastern Region	Samaritans
Cork, Ireland	Minister for Health and Children, Politicians Southern Health Board	Paul Corcoran, Deputy Director, National Suicide Research Foundation. Carmel McAuliffe, Research Psychologist, NSRF	Eileen Williamson, Program Manager, National Suicide Research Foundation	Samaritans

REGION	Political actors	Professional actors	Administrative actors	NGO´s
Sarajevo, Bosnia	Prof. Dr. Husein Kulenović, Chairman of Municipality´s Council, Bosnia Herzegovina	Prof Slobodan Loga, Medical Faculty **Dr Emina Music, Psychiatric clinic**		
Arkhangelsk, Russia		Koposov R.A., MD, psychiatrist in training Bogdanov A.B., MD, chief psychiatrist in Archangelsk Markova E.V., MD, adolescent psychiatrist	Sidorov P.I., rector of North State Medical University , Solovyev A.G., vice-rector	
Dolj, Romania	Duta Marian, Dolj County Council		Ing. Ion Voiculescu, President of Dolj County Council	
Timisoara, Romania	Dr. med. Tudor Ovidiu Rares Olariu, county councillor, Timis County Council	Prof. Dr. Mircea Lazarescu, Chief of the Psychiatry Dept. of the Timisoara University of Medicine and Pharmacy, Member of the Romanian Academy of Medical Sciences, Chief of the Timisoara Psychiatric Clinic Dr.Ovidiu Sturz, Timisoara University of Medicine and Pharmacy, First Vice-President of the ”Armonia” Association	Eng. Dan Ioan Sipos, President of Timis County Council	Yes, NGO activities, The National Anti-Suicide League
Ankara, Turkey	City Council	Prof Isik Sayil, University of Ankara	Dr. Cahit Pekyardimci, Ministry of Social Security Dr Tahir Soydal, Ministy of Health	
Värmland, Sweden	Monica Ekström, County comissioner	Dr Per-Olof Michel, dr Ylva Ramfält, dr Tomas Björling, authorized socialworker IngMarie Norberg	Senior administrative officer Anders Andrén	
Vilnius, Lithuania	E. Bartkevicius, Ministry of health	Danute Gailiene, prof., University of Vilnius Paulius Skruibis, Psychologist	Viktoras Meizis, head of International Affairs, Ministry of Health	

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