



# WHO/EURO Multicentre Study on Parasuicide

Centre for  
Suicidological  
Research

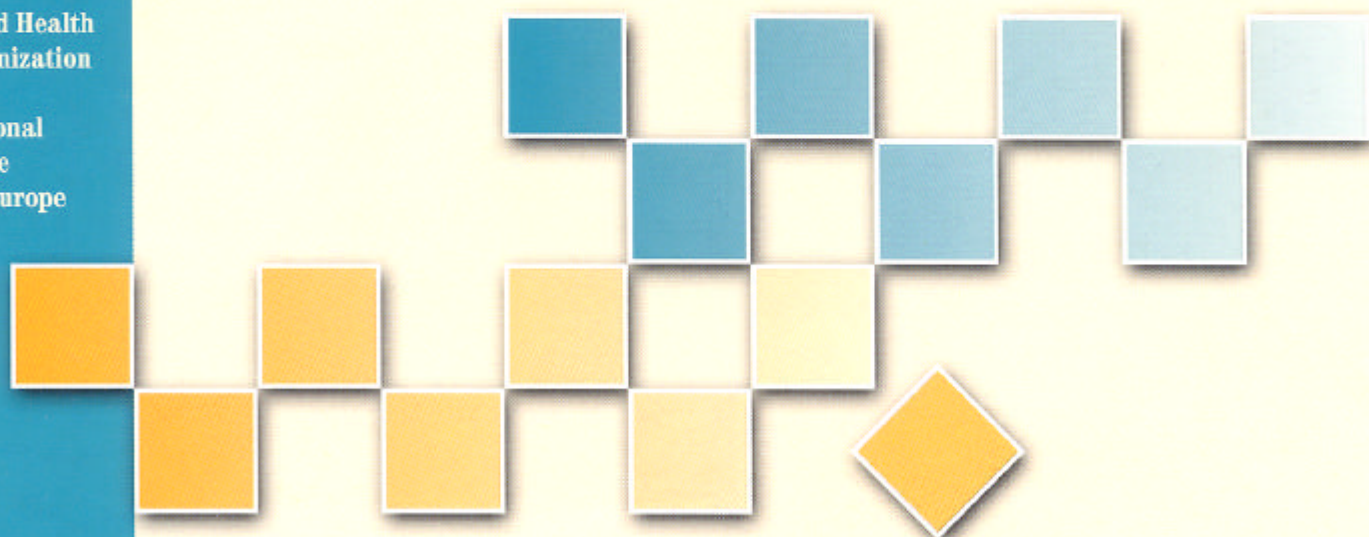
WHO  
Collaborating  
Centre for  
Prevention  
of Suicide

Odense,  
Denmark

World Health  
Organization

Regional  
Office  
for Europe

# Facts and Figures



# **WHO/EURO MULTICENTRE STUDY ON PARASUICIDE**

## **FACTS AND FIGURES**

**Second edition, 1999**



World Health Organization  
Regional Office for Europe  
Copenhagen

## EUROPEAN HEALTH21 TARGET 6

### IMPROVING MENTAL HEALTH

By the year 2020, people's psychosocial wellbeing should be improved and better comprehensive services should be available to and accessible by people with mental health problems

*(Adopted by the WHO Regional Committee for Europe at its forty-eighth session, Copenhagen, September 1998)*

### ABSTRACT

When carrying out collaborative multinational research – or studying results from such research – it is often useful to have at hand some general information on the areas and nations involved in the study and also some general knowledge on relevant conditions in those areas. It is the aim of this publication to provide those interested in the WHO/EURO Multicentre Study on Parasuicide with such information. The catchment areas under study by the twenty-eight centres involved in the Study differ to varying degrees as a result of differences in political and economic factors, in cultures, traditions, lifestyles and so forth. Each centre was asked to describe its catchment area – its demography, history and other general and specific characteristics. The characteristics of the centres participating in the first wave of the Study were described in the first version of Facts & Figures (WHO, 1993). In this edition, new centres are included and information on the “old” centres is updated.

### Keywords

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STATISTICS  
SOCIOECONOMIC FACTORS  
HEALTH SERVICES  
EUROPE  
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# PREFACE

## Suicidal Behaviour - the WHO/EURO perspective

Suicidal patterns are a growing concern and somewhat confusing issue throughout Europe: some countries show increasing suicide and depression figures, others increasing depression and constant or decreasing suicidality, a few others again show a decrease both in the prevalence of depression and the number of suicides. Some countries seem resistant to transition, at least in certain sectors of the population, others are afflicted “in toto”, to a degree where national authorities warn of a risk of "depopulation".

The complex patterns and background of suicide make multifactorial, process-related thinking highly necessary, even if specific links such as that to depression and/or alcoholism can be identified. Intervention to prevent suicide should consequently take into consideration the complexity as well as the more specific causalities which characterize the suicidal process. What is needed today, is the development of comprehensive, holistic and process-related approaches, as well as practicable, evidence-based and feasible intervention. To exemplify: in addition to improving access to effective recognition and management of depressive conditions, multifactorial and sociological approaches are demanded to intervene in the process of becoming depressed and consequently suicidal, as this process is characterized by an interaction of social, psychological and existential factors against a background of individual biological vulnerability.

Thus, the suicidal process can be seen as a typical one, reflecting human processes of development, empowerment, breaking down and reorientation and linked to other stress-related morbidity and mortality.

To study these complex interactions, identifying the salutogenic, strengthening, as well as pathogenic, weakening factors in suicidality, as well as in society and life, should today be considered one of the most exciting and advanced challenges in the field of prevention and mental health promotion. Life expectancy in East Europe is decreasing, especially in males. The dramatically increasing suicidality and stress-related mortality there, has to be seen in a greater context of other risk taking behaviour, such as violence, abuse and premature death, due to all sorts of sensation seeking and risk taking life-styles.

In the policy of the newly re-emerged Mental Health programme, as well as in its HEALTH21 paper, WHO/EURO has chosen to expose the problem of increasing suicide as one of the most important focuses in its mental health policy. The costs of depression and suicide are, in an increasing number of countries, identified as one of the most important burdens in health care, considering that suicidal behaviour represents an incommensurable amount of morbidity, mortality and suffering, not only in the suicidal individual, but also amongst relatives, friends, and other persons belonging to his social network.

Since its start, the European Multicentre Study on Parasuicide has developed into a most important and influential source of knowledge and scientific development in suicidology in Europe, with a strong and valuable network, where essential data collection and important research has been carried out. This network incorporates some of the most important European national centres on suicide research today.

This new WHO publication presents data mirroring the demographic, socioeconomic, psychosocial and health care situation with respect to suicidality, in different and diverse countries of Europe. It reflects the need for comprehensive and holistic thinking as above and is most welcome as a basis for the dissemination of relevant knowledge and the development of feasible suicide prevention strategies in the European region.

The last WHO publication on “Suicide in Europe in the mid-90’s”, published in 1998, reviews the state of the work being done and reveals the substantial epidemiological knowledge developed by the group here. We strongly hope that the ultimate interest of WHO, to further improve the suicidal situation throughout Europe and to counteract the dramatic developments in some of its countries, can be facilitated with the help of this work.

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## **INTRODUCTION**

When carrying out collaborative multinational research - or studying results from such research - it is often useful to have at hand some general information on the areas and nations involved in the study and also some general knowledge on relevant conditions in those areas. It is the aim of this publication to provide those interested in the WHO/Euro Multicentre Study on Parasuicide with such information.

### **THE BACKGROUND OF THE WHO/EURO MULTICENTRE STUDY ON PARASUICIDE**

In 1977, the World Health Organization and its Member States adopted as their goal the attainment of health for all by the year 2000. The Member States of the European Region of WHO turned this very broad goal into 38 specific targets, which the Member States accepted in September 1984. One of these targets, namely target 12, concerns suicidal behaviour and states that "By the year 2000, the current rising trends in suicides and attempted suicides in the Region should be reversed".

Increasing rates of suicide and attempted suicide had for long caused great concern in most European countries, and already in May 1985 an informal meeting was held at the WHO Regional Office in Copenhagen to discuss how to approach the target. A group of experts in suicidology was asked to act as a provisional planning group of advisers and to prepare a meeting for a Regional Office Working Group on Preventive Practices in Suicide and Attempted Suicide.

The Working Group met in September 1986 in York, the United Kingdom, with 31 participants representing 15 European countries. Important contributions to the arrangement of the meeting were made by John Henderson, Niels Juel-Nielsen, Peter Kennedy, René Diekstra, and Stephen Platt.

Given that the incidence of attempted suicide increased dramatically in the 1970s, and as people who attempt suicide are known to be at especially high risk of future suicidal behaviour, the Working Group advocated that the effort be concentrated on the prevention of suicide attempts. A Planning Group (which eventually consisted of one representative from each of the participating research centres) was constituted; its task was to develop first a strategy and then detailed plans for carrying out a coordinated multicentre European research project. It was decided that the project should cover two broad areas of research:



- monitoring of recent trends in the epidemiology of parasuicide, including the identification of risk factors (The Monitoring Study); and
- follow-up studies of parasuicide populations as a special high risk group for further suicidal behaviour, with a view to identifying the social and personal characteristics predictive of future suicidal behaviour (The Repetition-Prediction Study).

The detailed planning, including working out the instruments to be used, was assigned to a Steering Group. The Steering Group was also made responsible for facilitating progress during the preliminary phases, ensuring uniformity of methods and closely controlling and supervising the research in progress.

The general administration was originally ensured by Dr. John Henderson at the WHO European Regional Office in Copenhagen; later the study fell under the responsibility of Dr J.G. Sampaio Faria, and at present the study falls under the responsibility of Dr Wolfgang Rutz.

The Steering group consists of Unni Bille-Brahe (technical coordinator of the study), Centre for Suicidological Research, Odense, Denmark; Diego De Leo, University of Padua, Italy; Ad Kerkhof, Vrije University, Amsterdam, The Netherlands, and Armin Schmidtke, Würzburg University, Germany.

The Steering Group is responsible for arranging annual meetings where representatives of the centres discuss and agree on research policies, programmes of work, publications to be issued, and scientific coordination matters, and also at regular intervals workshops dealing with technical, methodological and scientific problems.

A Publication Group has been appointed to coordinate and ensure high quality of publications presented on results from the study.

## **PARTICIPANTS OF THE MULTICENTRE STUDY**

From the beginning, 16 centres from 13 different countries were participating in the study.

Berne, Switzerland  
 Bordeaux, France <sup>1)</sup>  
 Emilia-Romagna, Italy <sup>1)</sup>  
 Guipúzcoa, Spain <sup>1)</sup>  
 Helsinki, Finland  
 Innsbruck, Austria <sup>1) 2)</sup>  
 Leiden, The Netherlands <sup>1) 2)</sup>  
 Odense, Denmark  
 Oxford, United Kingdom  
 Padua, Italy  
 Pontoise, France <sup>1)</sup>

Szeged, Hungary <sup>1)</sup>  
 Stockholm, Sweden  
 Sør-Trøndelag, Norway  
 Umeå, Sweden  
 Würzburg, Germany.

For various reasons (most often because of lack of national funding), 6 centres (marked<sup>1)</sup>) dropped out during the first wave of the study; however, two (marked <sup>2)</sup>) have later been able to rejoin the study. In addition, 15 new centres are now taking part in or are in the process of joining the WHO/Euro Multicentre Study on Parasuicide:

Cork, Ireland  
 Dresden, Germany  
 Gent, Belgium  
 Holon and Bat-Yam, Israel  
 Kiev, Ukraine  
 Ljubljana, Slovenia  
 Mamak, Turkey  
 Novi Sad, Yugoslavia  
 Odessa, Ukraine  
 Pecs, Hungary  
 Rennes, France  
 Riga, Latvia  
 Tallinn, Estonia  
 Vilnius, Lithuania

For more information on the multicentre study, its material and methods, and some preliminary results, see the enclosed list of reference.

The catchment areas under study by these in all 28 centres differ to varying degrees as a result of differences in political and economic factors, in culture, traditions, lifestyles and so forth. Each centre has therefore been asked to describe its catchment area - its demography, history and other general and specific characteristics. The characteristics of the centres participating in the first wave of the study were described in the first version of Facts & Figures (WHO, 1993). In this edition, the new centres are included and information on the 'old' centres is updated.

The following is based on reports from the individual centres. The first section describes the catchment areas and their most essential demographic data; the second section provides information on social conditions and indicators of social instability; the third section covers more comprehensively health and health care, and the fourth section discusses the data on suicidal behaviour and on treatment of suicidal behaviour in the various areas.

Fig. 1. Participating centres in the WHO/EURO Multicentre Study on Parasuicide.



## **A GENERAL DESCRIPTION OF THE AREAS UNDER STUDY**

The 28 areas under study by the 25 centres that by now are participating in the WHO/Euro Multicentre Study on Parasuicide represent a variety of cultural patterns throughout Europe. Each area has its special ethnic, historical, and political features, and varying forms of social and economic development. Tables 1 - 3 show some basic socio-demographic characteristics of the areas under study.

As some of the areas under study are entirely urban and others cover a whole county comprising both urban and rural areas, the sizes of the catchment areas vary widely, but generally they represent only a small proportion as to the space of their country; exceptions are Umeå in Sweden, and the two Irish centres Cork and Limerick with very low population densities.

As to the size of the population in the areas, all catchment areas were supposed to comprise at least 200 000 inhabitants, and as can be seen from table 1, all centres but one of the German centres (Weisseritz County), the two Austrian centres, and the centre in Hungary have been able to meet the standard. The Hungarian centre is, however, very close to the fixed figure, and as Weisseritz county is going to be covered together with Dresden city, and the two Austrian areas will also be covered by the same centre, these exceptions have been accepted. On the average, the study covers 10.5 million people, but - as can be seen from the table - the populations under study constitute different percentages of the total population of the countries.

Ten of the areas under study are in cities, the rest comprise both rural and urban areas. Consequently, the density of the population in the catchment areas varies widely. With the exception of the Turkish and the Irish areas as well as the Oxford area, there was a slight overweight of women; the sex ratio m/f varying between 0.85 and 1.10. Also the age distribution was rather even - in most areas 40-49 per cent of the population were more than 40 years old. In the Israeli area, however, only one third of the population (34%) were that old, and in Mamak, Turkey not even one fifth.

Table 1. Area and size of the population in the 28 catchment areas.

	Year of census	Area in km <sup>2</sup>	Area as a percentage of total area of country	Population of centre catchment area	Population as a percentage of total population of country
<b>Northern Europe</b>					
Helsinki, Finland	1995	686	0.10	525 031	10.1
Odense, Denmark	1996	3 485	8.10	471 422	8.9
Stockholm, Sweden	1994	360	0.10	254 262	2.9
Sør-Trøndelag, Norway	1994	18 831	6.00	256 266	6.0
Umeå, Sweden	1995	55 430	13.50	260 124	2.9
<b>Mid-Western Europe</b>					
Bern, Switzerland	1990	325	0.80	304 173	4.5
Cork, Ireland	1991	12 180	17.70	532 263	15.1
Limerick, Ireland	1991	7 967	11.40	310 728	9.0
Dresden City, Germany	1995	226	0.10	469 110	0.6
Weisseritz County, Germany	1995	732	0.20	114 960	0.2
Gent, Belgium	1995	156	0.50	227 483	2.2
Innsbruck/Stadt, Austria	1997	105	0.10	110 454	1.4
Innsbruck/Land, Austria	1997	1 990	2.40	151 857	1.9
Oxford, England	1991	2 582	1.80 <sup>1</sup>	598 354 <sup>2</sup>	1.2 <sup>1</sup>
Leiden, The Netherlands	1998	241	0.70	380 941	2.4
Rennes, France <sup>3</sup>	1995	3 850	0.70	521 668	1.0
Würzburg, Germany	1995	1 056	0.30	281 570	0.3
<b>Central Eastern Europe</b>					
Kiev, Ukraine	1997	48	0.01	296 000	0.6
Ljubljana, Slovenia	1995	272	1.30	270 000	13.6
Novi Sad, Yugoslavia	1991	699	0.70	265 464	2.5
Odessa, Ukraine	1996	186	0.03	1 046 400	2.0
Pecs, Hungary	1993	163	0.20	190 012	1.9
Riga, Latvia	1995	307	0.50	839 700	33.2
Tallinn, Estonia	1997	158	0.40	420 470	28.8
Vilnius, Lithuania	1995 <sup>4</sup>	287	0.40	575 700	15.5
<b>Southern-Mediterranean Europe</b>					
Holon & Bat-Yam, Israel	1995	27	1.30	306 200	5.4
Mamak, Turkey	1990	254	0.03	410 359	0.7
Padua, Italy	1991	93	0.03	215 137	3.8

<sup>1</sup> England & Wales<sup>2</sup> 1995<sup>3</sup> Updated from 1990 census in 1995<sup>4</sup> 1994-1995

Table 2. Demographic characteristics of the areas under study

	Average population density (per km <sup>2</sup> in the whole country)	Average population density (per km <sup>2</sup> in the catchment area)	Urban/rural distribution in the catchment area (%)	Sex ratio	Percentage aged over 40 years
<b>Northern Europe</b>					
Helsinki, Finland	17	2 785	100 / 0	0.85	46.0
Odense, Denmark	123	135	56 / 44	0.97	47.7
Stockholm, Sweden	22	706	99 / 1	0.96	44.3
Sør-Trøndelag, Norway	14	14	72 / 28	0.98	43.6
Umeå, Sweden	22	5	74 / 26	0.99	47.3
<b>Mid-Western Europe</b>					
Bern, Switzerland	172	936	49 / 51	0.92	47.2
Cork, Ireland	51	44	52 / 48	1.00	36.8
Limerick, Ireland	51	39	42 / 58	1.02	36.3
Dresden City, Germany	225	2 078		0.92	49.5
Weisseritz County, Germany	225	157		0.95	47.9
Gent, Belgium	332	1 457	75 / 25	0.93	46.9
Innsbruck/Stadt, Austria	96 <sup>6</sup>	1 053 <sup>3</sup>	42 / 58 <sup>5</sup>	0.88 <sup>3</sup>	45.1
Innsbruck/Land, Austria	96 <sup>6</sup>	76 <sup>3</sup>	42 / 58 <sup>5</sup>	0.97 <sup>3</sup>	39.3
Oxford, England	180	232	55 / 45	1.00	42.4
Leiden, The Netherlands <sup>7</sup>	462	1 580	34 / 66	0.96	42.8
Rennes, France	107	144	62 / 38 <sup>1</sup>	0.95 <sup>1</sup>	37.1 <sup>1</sup>
Würzburg, Germany	229	267	45 / 55	0.93	45.4
<b>Central Eastern Europe</b>					
Kiev, Ukraine	85	6 166	100 / 00	0.90	41.7
Ljubljana, Slovenia	98	992	51 / 49 <sup>6</sup>	0.87	47.1
Novi Sad, Yugoslavia	103	380	81 / 19	0.92	44.0
Odessa, Ukraine	86	5 626	100 / 0	0.91	44.8
Pecs, Hungary	110	998	90 / 10	0.89	45.9
Riga, Latvia	39	2 692	98 / 02	0.85	44.0
Tallinn, Estonia	34	2 657	100 / 0	0.85	46.8
Vilnius, Lithuania	57	2 006	100 / 0	0.90	40.5
<b>Southern-Mediterranean Europe</b>					
Holon & Bat-Yam, Israel	255	11 216	100 / 0	0.95	34.0 <sup>4</sup>
Mamak, Turkey	73	1 616	98 / 2	1.10	18.9
Padua, Italy	190	2 317	99 / 1	0.88	40.3 <sup>2</sup>

<sup>1</sup> Data only available for the whole county (département)<sup>2</sup> Over 45 years<sup>3</sup> 1997<sup>4</sup> Over 44 years<sup>5</sup> Innsbruck/Stadt and Innsbruck/Land together<sup>6</sup> National figures 1996<sup>7</sup> 1998

Table 3. Economic activity in the areas under study

	Workforce as a percentage of the total population			Distribution of economic activity (% of total)		
	Male	Female	Total	Agriculture, forestry and fishery	Construction and manufacturing	Trade transport and services
<b>Northern Europe</b>						
Helsinki, Finland	71.2 <sup>1</sup>	65.8 <sup>1</sup>	68.3 <sup>1</sup>	0.2	14.5	83.5
Odense, Denmark	60.0	50.9	55.4	5.0 <sup>2</sup>	22.0 <sup>2</sup>	60.0 <sup>2</sup>
Stockholm, Sweden	74.0 <sup>3</sup>	67.0 <sup>3</sup>	70.0 <sup>3</sup>	0.1	22.5	77.4
Sør-Trøndelag, Norway	56.6 <sup>4</sup>	47.9 <sup>4</sup>	52.2 <sup>4</sup>	8.0	20.0	72.0
Umeå, Sweden	75.0 <sup>5</sup>	75.8 <sup>5</sup>	75.5 <sup>5</sup>	3.3	22.6	74.1
<b>Mid-Western Europe</b>						
Bern, Switzerland	63.0	43.8	53.2	3.0	28.0	69.0
Cork, Ireland <sup>8</sup>	52.0	27.0	39.0	12.5	27.0	60.5
Limerick, Ireland <sup>8</sup>	52.0	27.0	39.0	12.5	27.0	60.5
Dresden City, Germany	50.8 <sup>9</sup>	36.1 <sup>9</sup>	56.4	0.3	28.8	71.6
Weisseritz County, Germany	50.8 <sup>9</sup>	36.1 <sup>9</sup>	33.4	7.8	40.6	51.6
Gent, Belgium	45.1	30.6	37.6	0.7	23.9	68.9
Innsbruck/Stadt, Austria <sup>17</sup>	54.8	38.3	46.0	0.7	23.0	76.3
Innsbruck/Land, Austria <sup>17</sup>	59.1	37.0	47.9	3.2	31.5	65.4
Oxford, England	61.4	44.6	52.9	4.3	20.8	58.8 <sup>6</sup>
Leiden, The Netherlands <sup>4</sup>	78.0	53.0	66.5	10.2	8.3	81.5
Rennes, France	25.0	21.0	46.0	6.0	23.0	71.0
Würzburg, Germany	60.3	41.4	50.6	4.0	34.5	61.4
<b>Central Eastern Europe</b>						
Kiev, Ukraine	40.2	38.6	65.2	-	25.0	55.0
Ljubljana, Slovenia <sup>14</sup>	36.2	27.9	31.9	1.8	44.2	54.0
Novi Sad, Yugoslavia	33.0	32.0	65.0	10.5	4.4	17.1
Odessa, Ukraine	68.6 <sup>15</sup>	55.5 <sup>15</sup>	61.5 <sup>15</sup>	NA	NA	NA
Pecs, Hungary	49.3	36.8	42.8	15.4	31.1	53.6
Riga, Latvia	53.0	43.0	47.0	2.0	33.0	65.0
Tallinn, Estonia	55.2	43.7	49.1	10.0	31.0	26.1
Vilnius, Lithuania	49.9	50.1	58.1 <sup>16</sup>	24.0 <sup>16</sup>	20.0 <sup>16</sup>	NA
<b>Southern-Mediterranean Europe</b>						
Holon <sup>10</sup> , Israel	54.0 <sup>11</sup>	49.0 <sup>11</sup>	51.0 <sup>11</sup>	0.9 <sup>12</sup>	22.0 <sup>12</sup>	74.0 <sup>12</sup>
Mamak, Turkey	48.1	7.1	28.2 <sup>7, 13</sup>	NA	NA	NA
Padua, Italy	52.8	29.0	40.2	0.9	23.8	75.2

<sup>1</sup> 15-74 years<sup>8</sup> National figures<sup>13</sup> 1990<sup>2</sup> November 1993<sup>9</sup> Figure for all of Saxony<sup>14</sup> National figures 1996<sup>3</sup> 16 years and over. 1992<sup>10</sup> Data from Bat-Yam very similar to those of Holon<sup>15</sup> 16-60 years<sup>4</sup> 1997<sup>16</sup> 1996<sup>5</sup> 20-64 years<sup>11</sup> Wage earners only as a percentage of the total population aged 15 years and more. 1994<sup>17</sup> 1991<sup>6</sup> Transport and other services<sup>12</sup> Tel Aviv County. 1995<sup>7</sup> Over 12 years

Due to the differences between countries in their compilation of statistics on economic activity, direct comparisons cannot be made, and the reader is obliged to study the details of the table. As to the distribution of the various kinds of economic activity, the figures reflect the urban/rural characteristics of the areas under study. Agriculture, forestry and fishery are most common in the two Irish areas, in Novi Sad, Pecs and especially in Vilnius, while industry (constructing and manufacturing) is high in all the German and Austrian areas under study and in the Slovenian area.

## **THE AREAS UNDER STUDY IN THE VARIOUS PARTS OF EUROPE**

Geographically, the centres are dispersed rather evenly all over Europe, but to facilitate an overview, the catchment areas under study by the individual centres are divided into four groups: the northern European areas under study; the mid-western European areas; the central eastern European areas, and the southern European areas.

### **The Northern European Centres**

Starting from the north of the map shown in the introduction, five of the centres are in the Nordic countries: Helsinki in Finland, Odense in Denmark, Sør-Trøndelag in Norway, and Umeå and Stockholm in Sweden.

The Nordic countries have many features and characteristics in common. Except for most of the population of Finland, which is of Ugri origin, and a small minority in the Northern parts of the countries of Lapps of Mongolian origin, the populations of the Nordic countries are of the same Norse origin. The languages are - again but for Finnish - of the same root and generally understood across the borders. The countries were christened in about the year 1000, and then converted from Catholicism to Protestantism during the Reformation in the sixteenth century. Today most people are members of the State Church, although the level and the strength of religiousness differ between - and within - the countries. In all countries, women can now be ordained priest.

In all Scandinavian countries, the population began to grow rapidly from the late 1800s. At the same time a general industrialization took place, but at a somewhat different speed in the various countries. For example, even though industrialization started early in Norway, the country remained in general a farming society up to the 1930s, and also in Finland industrialization penetrated rather late.

The age structure of the populations has changed considerably during this century, but according to a similar development in all the countries. The common trend is towards fewer young and more elderly people.



The political history of the countries is highly entwined. Norway was bound to the Danish crown for several centuries, and then in union with Sweden for almost 100 years. The system of government and administration remained, however, mainly Danish, and even after Norway became a monarchy in 1905, much of the administrative system was retained from the 'Dane-period'. Finland was part of the Kingdom of Sweden for several centuries, although it had considerable independence. In 1809, Finland was ceded to Russia, but up to 1917, when Finland became an independent republic, the country retained Swedish law and methods of government, and Swedish was the official language. Swedish language and Swedish administrative systems continued, however, to be highly influential up to the Second World War.

Today, Denmark, Norway and Sweden are monarchies and Finland is a republic, but the political climate is very similar, as all the countries are representative democracies dominated by centrist tendencies. Primary education (usually 6-16-year-olds) is compulsory and free of charge. Secondary schools and education at other institutions such as universities are also free of charge. During the 1960s and early 1970s all the Nordic countries experienced an explosive development in affluence and welfare that only gave way to a somewhat weaker economy beginning in the late 1970s. All in all, the Nordic countries have to be described as the peaceful and affluent corner of Europe.

Since 1945, the collaboration between the Nordic countries has been intensified under the auspices of the Nordic Council of Ministers. The internal borders between the countries can be crossed without a passport, and capital and labour can move freely from country to country. There is a network of cooperative organizations and various working committees constituted for special tasks. Today, Denmark, Finland and Sweden are members of the EU.

### ***Helsinki***

The catchment area of the Helsinki centre covers the metropolitan area of Helsinki, which is the capital of Finland and its largest city, situated in southern Finland on the Baltic Sea.

Helsinki is a relatively young city. It was founded in 1550, but not made capital until 1812, and only in the twentieth century did it develop into a real city. The development was especially fast during the 1960s and 1970s, when the Finnish economy changed markedly; the transformation from an agricultural society to an industrialized one was the fastest among the member states of OECD.

It was during this period that Helsinki became the cultural and educational centre of Finland. The University of Helsinki is the largest university in Scandinavia, and there are also seven other institutions on university level, and theatres, concerts, art exhibitions and other

cultural amenities are abundant. Life in Helsinki differs in many ways from life in the countryside or in the smaller towns, and the catchment area is therefore not representative of Finland as a whole.

Migration into the area has been considerable since the turn of the century when Helsinki started to industrialize. After the Second World War, migration was accelerated by Karelian refugees, and a second wave of migration took place in the 1960s and especially in the 1970s, as many young people left the northern provinces to get work and/or education in the Helsinki area. As a result the population of Helsinki doubled in three decades. Despite an effort to disseminate economic activity more uniformly all over Finland, three quarters of the net increase in jobs in the early 1980s was in the Helsinki metropolitan area.

In the last five years, the population of Helsinki has increased by nearly 33 000 persons. The growth is due to inland migration, both also from abroad. Today, people moving into the city from the provinces are now mostly highly educated people or skilled workers who could easily find suitable jobs in their home towns, but who prefer the city life. Those moving from abroad are mainly people from the area of the former Soviet Union, especially from Estonia. The proportion of foreign people has increased more than threefold in these five years and now constitutes about 4 per cent of the population of the city.

Helsinki suffered from a shortage of labour until the beginning of the 1990s. During a deep depression since the beginning of the 1990s, the unemployment rate in Helsinki has increased to the same level as the unemployment rate in the whole country (17,8 in 1995/96). Thus within a few years, unemployment became a serious problem in Helsinki, and although the increase seems to have stopped, no improvement on the labour market is in sight. About 36 % of the economically active people in the catchment area are employed in public administration.

As mentioned above, most of the Finns are of another ethnic origin than the other Scandinavians, and the population is also a bit less homogeneous. For centuries they have had strong cultural contacts eastwards with Russia and westwards with Sweden. Helsinki is still a bilingual city: according to the constitution, cultural and social services must be provided in both Finnish and Swedish. Today, however, only few have Swedish as their mother tongue and most of them speak also Finnish.

## **Odense**

The catchment area of the Odense centre comprises Funen county, which is one of the 16 administrative regions in Denmark with an area and population almost 10% of that of the whole country. The county comprises the main island of Funen and several smaller islands, many of them inhabited.

More than one third of the population live in Odense which is the main city of the county and the third largest city in Denmark. Several other towns are scattered throughout the county, mainly along the coastline. They are, however, relatively small; the largest has about 40 000 inhabitants.

Funen was settled rather early, and its known history goes back to before the Stone Age. This early period and the period of the Vikings are well documented by numerous excavations and archaeological findings. The early part of its history seems to have been rather peaceful; Funen was sheltered by Jutland from the impact of the Great Migration, and by Sealand from the warfare in the east. As a result of this and its geographic position, Funen, and especially the city of Odense became from several points of view the centre of Denmark. Odense, that celebrated its millennium in 1988, was during the early Middle Ages an important ecclesiastical centre, and later played an important role during the Reformation, that took place in Denmark in 1536. Trade and commerce also prospered from this early period, and but for the wars with Sweden in the mid-1600s, warfare has been rare in the region. Because of its strategic position, conditions were strained both during the First and the Second World war, but no actual battles took place.

Throughout the centuries, Funen has played an important part in Denmark's political and cultural history. Today, Odense is one of the leading centres for art and theatre. The educational services have been extended and comprises today the University of Odense (established in 1966) with about 11 000 students, and several colleges of advanced technology, commerce and theatre, etc. There are also several institutions for adult education such as the Open University.

The population of Funen has always been and still is rather homogeneous, although in recent years an increasing number of refugees and immigrants have settled in the county. The population grew rapidly during the first half of this century, but has now stabilized with a growth of less than 0.1% per annum during the last decade.

Agriculture, fishery and shipping have traditionally been the main industries on Funen, but industrialization started early, as the first factories were set up about 1750. Trade and commerce have also played an important role. Especially after the Second World War, many big enterprises have been established in the area, and Odense is by now one of the most heavily industrialized cities in Denmark. Farming and especially market gardening are, however, still very important in the rest of the county, as about 70% of the land is farm- and woodland.

For many years it has been presumed that Funen is a kind of mirror of the whole country. Statistical analyses of various socio-demographic, cultural and health characteristics have now proved that the population of Funen county constitutes a representative sample of the total Danish population.

## **Sør-Trøndelag**

The catchment area under study by the Sør-Trøndelag Centre comprises Sør-Trøndelag county (one of the 19 counties in Norway), located in central Norway and comprising about 6% of the area and the population of Norway. More than half the population live in Trondheim, which is the only large city in the area. The rest of the area consists mostly of rural districts and extremely sparsely populated areas (mountains and forests). About 8% of the population work in agriculture and fishery; 20% in construction and manufacturing and 72% in trade and services.

Trondheim (founded AD 997) is the third largest city in Norway. It is also one of the oldest, its history dating back to the Vikings. During the Middle Ages, pilgrims from all over Europe visited the Cathedral of Nidaros, and the city has been an educational centre for centuries. Today, Trondheim has one of the four universities in Norway (about 18 000 students) and also schools for engineering, economics, trade and education.

The population of Sør-Trøndelag County is ethnically very homogeneous, with less than 3% non-Norwegian citizens; of these 50% are from other European countries. The population is rather stable; 4% of the population move into, out of or within the county each year. More than 90% belong to the Norwegian Church which is Lutheran Protestant. Judging by the amount of regular churchgoers, religious activity is rather low. However, religion and congregations play a relatively more important role in the Norwegian society than in the other Nordic countries.

As to the age distribution, the population density and various socioeconomic characteristics, Sør-Trøndelag is fairly representative of Norway as a whole.

## **Umeå and Stockholm**

The two Swedish centres represent quite different aspects of the country; one is a mostly rural and sparsely populated area in the northern province, the other a section of the metropolis of Stockholm, the national capital sited in the lowlands of central Sweden. Nevertheless, both areas also have some common national characteristics.

Because of the Mid-Scandinavian highlands, Sweden was for centuries cut off from foreign influence from the west and it has therefore been more open to continental currents with strong relations with Germany and France. For example, the French Field Marshal Jean Bernadotte and his wife Desirée were elected King and Queen of Sweden in 1810.

The choice of religion is free, but the vast majority of the population belong to the state church, which is Evangelical Lutheran. Only about 2% of the population belong to the Catholic Church, the second most important congregation.

**Stockholm.** The catchment area of the centre in Stockholm includes one of the nine sections under Stockholm Health Care District, i.e. the districts of Huddinge and Borkyrka with more than 250 000 inhabitants, or almost one seventh of the total population of the city of Stockholm, that has about 1.7 million inhabitants.

Stockholm, the capital of Sweden since AD 1620, is located on several islands and the adjacent mainland between the Baltic Sea and Lake Mälaren. Stockholm - called the Venice of the North - is one of the most picturesque cities in northern Europe, and the archipelago east of the city and the city itself offer unique facilities for recreation - one can go swimming, and fishing salmon in the canals of the city. Stockholm is the cultural and educational centre of Sweden, Stockholm University and other university institutions having about 40 000 students.

The catchment area, which as late as during the first decade of the century was a quiet, rather sparsely populated area on the outskirts of the main city, has since developed from being a sleepy countryside into a densely populated suburban community in the shadow of the metropolis - a dynamic transformation with all the concomitant problems. Nevertheless, the area has retained its easy access to nature and outdoor activities, as some parts still consist of woodlands, hills, lakes and meadows. The most important employers are the City of Stockholm and the Stockholm County Council, with public services and administration providing about 65% of all job opportunities. Manufacturing, construction, trade and transport account for most of the remaining employment. Several large international companies such as SAAB-Scania, Alfa Laval, and L.M.Ericsson are located in the area.

**Umeå** is the northernmost of the centres participating in the multicentre study. It is located in northern Sweden; the catchment area comprises Västerbotten County, which is a huge area covering about 14% of Sweden, but with less than 3% of the Swedish population. The area under study is thus totally different from the area under study by the centre in Stockholm. Although there are some variations, most of the area is sparsely populated, e.g. part of it consists of the mountainous part of western Lapland along the border with Norway where the population density is 1 per km<sup>2</sup>. In the centre of the county are vast forests and along the coastline to the Baltic Sea farming land. Here also the two main towns of the county, Umeå and Skellefteå, are located.

Northern Sweden is an attractive and exciting area for tourists, with world-class skiing resorts, lakes and rivers for fishing, and a fascinating folklore. The oldest livelihood in Västerbotten is reindeer herding, an activity of the Lapps going back thousands of years. The Lapps were the original settlers of the region, but today they constitute only a small minority of the population. In general, Sweden has been transformed from a mainly agricultural

society into a modern industrialized country, and this has brought great changes to an area like Västerbotten. People have moved from the inner parts of the county to southern Sweden or - in recent years to the Umeå area that has become the expanding economic and cultural centre of the county. The University of Umeå with about 25.000 students is the northernmost university in Sweden. Umeå also hosts the Royal College of Forestry, the Research Institute of the Swedish Defence, and the National Board of Occupational Safety and Health.

Consequently, today the county offers very diverse milieus: traditional farming and forestry, a modern university city, highly technically developed industrial production in forestry and mining, a thriving engineering industry and small companies producing everything from caravans to computer components.

There is still a strong religious tradition in Västerbotten. Most people are members of the State Church, but there are also a number of conformist congregations, some very active. In later years, Västerbotten has started to accommodate a significant number of refugees, and most of these are Moslems.

### **Centres in mid-western Europe**

Twelve mid-western European countries are represented in the multicentre study. The centres are located in: Berne in Switzerland, Cork and Limerick in Ireland, Dresden, Weisseritz and Würzburg in Germany, Gent in Belgium, Innsbruck Stadt and Land in Austria, Oxford in England, Leiden in the Netherlands, and Rennes in France.

In contrast to the Scandinavian areas under study, the catchment areas in mid-western Europe are extremely diverse ethnically, historically and socio-economically.

### **Berne**

The Berne centre covers the city of Berne and its surrounding municipalities with about 300 000 inhabitants. The city was founded AD 1191. In 1848 it became the capital of Switzerland and the seat of the federal administration and is said to be the city of office clerks and administrators. The surrounding areas are still mostly rural. Over half of the inhabitants of the area are in the labour force; many of them live in the countryside and work in the city. Some 3% are employed in agriculture and forestry, 28% in construction and manufacturing and 69% in trade, transport and services.

Relative to its size, Berne offers a rather wide range of cultural activities as well as many opportunities for sports and outdoor activities. The University of Berne has about 8500 registered students.

The demographic and most socio-economic characteristics of the Berne catchment area can be considered representative of Switzerland as a whole. However, Switzerland has three major ethnic, linguistic and cultural divisions: German, Italian and French (plus a fourth national language, Romanch). Berne is located in the German-speaking part: 86% of the population speak German, and most of the rest speak French. Two thirds of the population are Protestant and one quarter Catholic. As in the rest of Switzerland, there are many non-Swiss citizens - 13% of the population of the city of Berne - plus a large number of refugees from different countries, above all former Yugoslavia and Turkey. Migration in and out of the area are each about 8% of the population per year. One quarter of the moves are by non-Swiss citizens.

### **Cork and Limerick**

Ireland is divided into eight Health Board areas, and the two Irish areas under study, Cork and Limerick each cover one of these Health Board areas.

**Cork** is situated in the southern part of Ireland, and the area under study covers Cork city and county and also Kerry. A little more than half of the population live in the urban parts, most of them in Cork City, while the remainder live in towns such as Tralee, Killarney in Kerry, and Bandon, Mallow, Fermoy and Cobh in the County Cork.

Cork city, with its first charter dating back over 800 years, is a small city by international standards, but it has a considerable suburban population and remains the second city of the Republic of Ireland. A strong sense of identity is felt among its people, who often refer to their city as 'the real capital' or the 'capital of the south'.

Since 1845 Cork has been a university city with a population of 15,000 students. It is the home of the National Microelectronics Research Centre and now also hosts an Institute of Technology (7,000 students) among other advanced educational facilities. Renowned for long-standing port activities, Cork's industry has recently been boosted by the growth of both the pharmaceutical and computer industries. Further economic activity in the area is associated with agriculturally based industries such as brewing and distilling as well as dairy farming, and fishing and tourism, particularly in West Cork and Kerry. As with the country in general, the catchment area is largely homogeneous in terms of both race and religion, the Republic of Ireland is officially 94 per cent Roman Catholic.

**The Limerick area** under study covers the area of the Mid-Western Health Board. The catchment area comprises Limerick city, which is the only 'county borough', i.e. city, in the area, as well as Limerick County, Clare and Tipperary (North). Contrary to the Cork

catchment area, the Limerick area is sparsely populated. Despite the sparse population, the urban/rural split is 42:58, which can be explained by the development of industrial centres along the river Shannon, in particular in Shannon town itself, as well as the thriving airport of the same name, often the first stopover for transatlantic flights. Towns in the area include Templemore where the Garda Síochána (Irish Police Force) training college is based, and Ennis that recently became Ireland's 'information age town' in a state-sponsored competition.

The building of Limerick, dating back to the 9th century, is attributed to the Danish Vikings. However, some settlement by Celts is thought to have preceded the coming of the Danes. It is the third city of the Republic of Ireland and it is the fastest growing commercial centre in the country besides the capital, Dublin. The rural hinterland incorporates the rich pasture land of the 'Golden Vale' and thus it follows that much of the industry in the area is still related to agriculture including bacon curing, grain milling and the manufacture of milk products. This area too is largely homogeneous in terms of race and religion, 94 per cent being Roman Catholic. The University of Limerick was founded in 1972 and is in the forefront of developing new faculties, such as aeronautical engineering, molecular and computer sciences. The main centre for the training of infant and first level teachers in Ireland is also situated in Limerick.

### **The German centres**

Germany is now represented by three centres, where two of them, namely Dresden and Weisseritz are in Saxony in the former GDR.

The **Dresden** catchment area comprises the city of Dresden, that after the redrawing of the county lines in 1995 - 1996 covers 1.22 per cent of the Free State of Saxony and 0.1 per cent of Germany.

The old German-Slavic settlement of Dresden, located at the widening of the valley of the Elbe river, was chartered as a city almost 800 years ago, and it was the residence of the Saxon princes and kings since the end of the 15th century. The cultural and economic highlights experienced by Dresden in the Baroque period and again during the period of industrialization in the 19th and 20th centuries met with a sudden end in the almost complete destruction of the city on the 13th of February in 1945. During the following 40 years being part of GDR, Dresden remained a wounded city, only partially rebuilt and characterized by old ruins and ongoing dilapidation.

The impulses vital to the political and social changes in Eastern Europe that in 1989/90 culminated in the reunification of Germany, radiated from Dresden, and Dresden is now the capital of the Free State of Saxony, refounded in 1991. The somewhat euphoric state of mind then prevalent has by now given way to a more sober view on daily life and the future.



An economic upturn, political stability and a comparatively low rate of unemployment is the background for Dresden to reestablish itself as a cultural and educational centre and a place of interest to tourists, offering highlights such as the 450-year-old Saxony State Orchestra and other world-famous orchestras, choirs, art exhibitions and a lovely setting in the proximity to Meissen and the sandstone mountains along the Elbe river. The city also hosts 6 universities with about 40 000 students, and several other research and education institutions.

The **Weisseritz** catchment area comprises the county of Weisseritz, ranging from the edge of Dresden to the Czech border. A greater part is within the Osterzgebirge, the eastern range of iron mountains close to the Elbsandsteingebirge, an area known as the 'Sächsische Schweiz'. The population structure has been influenced by the century-old coal and iron mining industry. Dippoldiswalde, the main city of the county, is the gate to the Erzgebirge, once a flourishing mining area, but today characterized by frugal agricultural activities. The population is generally poor, down-to-earth, disciplined and deeply religious.

Saxony is, as a part of the Saxon-Thuringian and of the royal Anhalt estate of the House of Wettin, regarded as the cradle of the Reformation. The cultural tradition of the population of Dresden and Weisseritz County is largely protestant (Evangelical-Lutheran), but during the past 40 years under the communist indoctrination, religious affiliation receded strongly.

## **Würzburg**

The catchment area of the Würzburg centre comprises the city of Würzburg and the surrounding Würzburg County with more than 280 000 inhabitants. The city of Würzburg is the governmental seat and centre of the administrative district of Lower Franconia, which is located in the northern part of Bavaria in southern Germany. The river Main, which flows through the city, is often informally regarded as the border between northern and southern Germany. Because of its central location, Würzburg is an important intersection of motorways and railways from all directions. The city is a trade and economic centre of a region of several thousand square kilometres but, in general, the surrounding county has maintained a rather rural character.

Compared with other German cities, Würzburg is a city of white-collar rather than blue-collar workers. The University of Würzburg is the biggest employer, and there is relatively little manufacturing industry. Mainly because of its many historical sites and buildings, tourism is also an important economic factor. Some 40% of the people living in the city of Würzburg are in the labour force; the corresponding figure for the county is 51%. In the catchment area, 4% work in agriculture or forestry, 35% in construction and manufacturing and 61% in trade, transport and services.

Würzburg is also the cultural centre of a wide region. The city has a very active cultural scene, with its own municipal theatre, 12 small theatres and cabarets, several museums and

galleries, and numerous pop, rock and classical concerts throughout the year. The many historical sites include the Residence and the Fortress of Marienburg, which attract visitors from all over the world. After the city was almost completely destroyed in 1945, it was rebuilt in traditional style.

Würzburg is a city of schools and universities. The University of Würzburg, the Technical University and the College of Music have more than 20 000 students, and over 30 000 pupils are being educated in some 100 schools (including vocational schools). The catchment area is predominantly Catholic. Würzburg has been a bishop's seat since 742.

Today about two thirds of the population belong to the Roman Catholic Church and less than one third are Protestant. The population is rather stable: each year close to 3% move into the city, 3% move within the city and another 3% leave it. About 3% leave the county and 3% move in. Almost half of the changes of residence take place within the administrative region of Lower Franconia. The number of foreigners is small (4% in the city, 2% in the county), mostly Italians, Yugoslavs and Turks.

The area is representative of Germany as a whole in terms of demographic data, but seems to be more wealthy, Catholic and conservative and it has more social stability than the rest of the country.

## **Gent**

The catchment area of Gent is a highly urbanized area comprising the centre of the city and 10 suburban areas. Gent is the provincial capital of East-Flanders, which is one of the ten provinces in Belgium, located in the north-east of the country. The two big rivers Leie and Schelde merge in Gent, and in ancient time this made Gent a city of great economic and cultural importance; the many canals and beautiful old houses still remind of the glory of that period.

Half of the population live in the city centre, half in the suburbs. For the last couple of years there has been a slightly negative migration trend into the area. 7 per cent of the inhabitants are of an ethnic minority group, more than half of this group being Turks or North-Africans living mainly in the centre of the city.

Gent is an important industrial area and it also hosts a university with about 20 000 students and several cultural activities. Today the city has the third largest harbour of the country. It has nevertheless been able to keep its provincial character and charm.

## **Innsbruck**

The catchment area of the Innsbruck centres covers the two central districts of the province of Tyrol: the city of Innsbruck and the surrounding Innsbruck County. The area extends from the German frontier in the north to the Italian border in the south and covers more than 2000 km<sup>2</sup>, of which only 304.75 km<sup>2</sup> are permanently inhabited.

The city of Innsbruck is the capital of the province and the intellectual, cultural, political and administrative centre of Tyrol. It is becoming increasingly attractive to immigrants and commuters alike. Due to changes in the official method of registering permanent and temporary residents, estimation of growth in the population is difficult; in Innsbruck County the increase from 1981 to 1991 was about 12 per cent. As an affluent country, Austria is of special interest to workers from southern Europe, but the catchment area is also popular among non-Austrians for recreation or retirement. In Innsbruck County, 9% and in Innsbruck City, close to 12% of the population are non-Austrian citizens; of these, about one third are from Yugoslavia, 25% from Turkey and 14% from Germany.

The economic activity in the catchment area is characterized by small and medium-size enterprises and a lack of large-size industrial undertakings. Most enterprises are involved in the wholesale or retail trades or related to tourism. 46-48% of the population participate in the labour force.

Tyrol is predominantly Catholic (87%). The vast majority of the population speak German; only a small minority have Slovene, Croat, Hungarian or Czech as their mother tongue.

## **Leiden**

The catchment area of the Leiden centre is located on the coast of the North Sea in the centre of the western part of the Netherlands called the Randstad. The Randstad is a highly urbanized area with a very high population density, a high level of economic activity and a comprehensive infrastructure. The characteristics of this region are not very representative of the Netherlands as a whole. However, part of the catchment area is relatively rural (although it is rapidly developing more urban characteristics) and, generally speaking, the findings for the catchment area are therefore supposed to be representative of the national figures.

The catchment area has two districts: the Leiden area (approx. 120 000 inhabitants) and the Bulb district (approx. 260 000 inhabitants). Together they constitute a very attractive area, combining sites of historical interest and the cultural milieu in the city of Leiden with the wide sandy beaches along the North Sea and pleasant rural bulb-growing districts. The city of Leiden is located on the river Oude Rijn. It is a very old city and the regional centre for trade, industry, education and health services. Although the cultural importance of Leiden cannot be compared with that of such cities as Amsterdam or The Hague, various major theatre and music performances, exhibitions and festivals take place there and the city

also houses a large number of museums, most of them originally founded as divisions of the university.

The State University of Leiden (20 000 students) is the oldest university in the Netherlands, founded in 1575 shortly after the liberation of the city from the Spaniards. Another educational institution of importance is the Reinwardt Museum Academy. 66.5% of the population in the area participate in the workforce: 10% are employed in agriculture or fishery, 8% in construction and manufacturing and 82% in trade, transport and services.

Official statistics in the Netherlands do not include information on ethnicity. People who were born, or whose parents were born, in former Dutch colonies (Indonesia and Surinam) or in the Netherlands Antilles (still colonies) form definite (and large) ethnic minority groups, but they are not registered as such, as they are all born as Dutch citizens. Other large minority groups include Turks and Moroccans; a growing number of them are being given Dutch citizenship. The population in the area is rather stable: in any one year one person out of ten changes address.

## **Oxford**

The Oxford centre catchment area lies in the centre of England on the boundary between southern England and the Midlands and has a population close to 600 000. The city of Oxford, with 115 000 inhabitants, lies in the southern part of the area, approximately 60 miles north-west of central London and a similar distance south of Birmingham. Its history dates back to the eighth century, when the first municipal charter was granted by Henry the First. It has been a cathedral city since 1541.

Although Oxford is internationally renowned for its university, the city economy largely depends on one single industry, namely automobile production. Tourism, electronics and other small industries are, however, becoming increasingly important. The original central residential area of the city was demolished almost 30 years ago, and many of the inhabitants moved to local authority estates on the periphery.

Oxford University was founded in the twelfth century and is the oldest university in the United Kingdom. It has a student population of 12 000. The University is based on the college system (unique to Oxford and Cambridge Universities); each college is a self-contained institution, although students attend lectures centrally. The majority of the colleges are based in very attractive, historic buildings.

The inner-city area includes areas with a socially and ethnically mixed and rapidly changing population; areas of greater social stability inhabited predominantly by working-class and white-collar workers, and areas inhabited predominantly by senior university staff.

The rest of the catchment area consists of mixed urban and rural localities. Oxford is surrounded by satellite towns, of which Abingdon, Witney, Bicester and Thame are the largest. There is also extensive farmland and many small villages populated by people working locally and commuters to Oxford. In the western part of the catchment area lies part of the Cotswolds, a picturesque region of low hills and attractive old villages.

## **Rennes**

France is divided into 22 regions, each region being divided into 'départements', both concepts having historical significance. Each department is again divided in administrative districts called cantons, comprising a number of 'communes'. The catchment areas of the centre in Rennes comprises 26 cantons within the department of Ille et Vilaine which is part of Brittany in the far west region of France. The 26 cantons constitute the '*employment area*', one of the entities described by the National Institute of Statistics (INSEE), comprising close to 1% of the total population of the country. The area covers less than one per cent of the total space (0.70%).

Nearly half of the population in the catchment area live in the main city, Rennes, which has about 245 000 inhabitants. The rest of the area is rural with a scatter of small towns. About 6% of the population work in agriculture and fishery, 23% in construction and manufacturing, and 71% in trade and services.

Rennes is the tenth largest city in France with a long history and the city has kept its medieval characteristics. With about 50 000 students, 2 universities, a high-technology research centre and various high schools, Rennes is one of the largest student towns in France. Rennes is the cultural centre for art, theatre and opera and also a vital centre for rock music.

The catchment area is located in a traditionally highly Catholic region, but the religious activity is fading. Ethnically, the catchment area is very homogeneous: less than 8% are non-French citizens. Politically, the area is divided; the urban areas vote mainly to the left (e.g. Rennes has been a socialist city since 1977), whereas the rural areas tend to vote to the conservative right. In the mean time, the scores of the extreme right party (Front National) are in both urban and rural areas much lower than the national average.

## **Centres in Central-Eastern Europe**

The centres in the central-eastern part of Europe are spread from the Balkans in the south (representing former Yugoslavia and Slovenia) to the Baltic States in the north

(representing Estonia, Latvia and Lithuania). Included are also centres representing Ukraine and Hungary. Ethnically, the whole region still bears the impress of the great migrations which took place during the 5th century A.D. and of later movements of various tribes. In the southern parts, some of the invaders, e.g. the Magyars, coming from the east near the Ural Mountains brought with them and retained their own culture, while others came under the influence of e.g. Latin-speaking people and, after the early 14th century, in particular the Turks. At the height of its power, the Ottoman Empire came to include not only all Asia Minor and most of the Middle East and Northern Africa, but also the countries of the Balkan Peninsula, the island of the eastern Mediterranean, and parts of Hungary and Russia. The region of Slovenia has never been under Turkish influence, but was part of the Austrian-Hungarian Empire until 1918, while its western part was annexed to Italy between 1919 and 1945. Also in the northern parts the populations are stamped by diverse ethnical origins, the Estonians being, as the Finns, of the Ugri race, while the populations of Lithuania and Latvia have strong sprinklings from eastern and south-eastern tribes. Culturally, however, the Swedes and the Danes, too, have had some influence in all three countries.

The history of the eastern-central part of Europe, and in particular the middle-southern part, has been one of tribe fighting, invasions, and wars. After the 2nd World War, the Communists seized power in all the areas under study, and eventually all areas, with the exception of the Yugoslavian and the Slovenian ones, became parts of the USSR. Since the fall of the Wall in 1988, all countries in the region have been moving towards democracy and market economy. Although they are all at very different stages of development, a common stamp - with the possible exception of Slovenia - is their being what we may call *societies in transition* with all the problems that go with it.

### **Kiev and Odessa**

The two Ukrainian centres - Kiev in the northern part and Odessa in the southern part of the country - differ from each other in several respects, but they also have a lot in common - among other things a pride in their very old history that predates the independent state of Ukraine by some 1500 years. The march of successive civilizations from prehistoric time, the Scythians, the Greeks, and the Varangians, Slavic and Turkish people have all left their mark all over the country. The Kievan-Rus Slavic state flourished a thousand years ago, but the hall-mark of Ukraine was through the years tribe fighting, invasions - by Tartar-Mongols, Poles, Lithuanians, Russians, Germans and others - and uprisings against the invaders. In 1648, a treaty with Russia was signed, and for a long period, Ukraine was dominated by the Russian Empire. After the revolution in 1917, the Bolsheviks seized power. The country experienced a short period of independence in 1918, but was shortly thereafter defeated and overrun by Poland. Eventually, Russian Bolsheviks took power, and to control the population, all grain was confiscated with the result that during the Great Famine of 1932-33 nearly ten million people were starved to death.

After the Second World War, where Ukraine was one of the major battlefields, the country was held in a firm grip by the communist party as part of USSR. The grip lessened somewhat after the Chernobyl accident in 1986, but it was not until after the disintegration of USSR, that Ukraine in 1991 became an independent state. Since then it has worked on establishing a democratic society now based on the new Constitution of Ukraine, which was adopted in 1996. However, the country is still meeting with severe political and economical difficulties.

Christianity was introduced in 988 as the official religion of Kievan-Rus. During the Soviet period, however, the church was separated from the state, religious education was forbidden and the official philosophy built on atheism. Today, people are returning to religion and to the church; approximately 85 per cent of the Ukrainian population are Orthodox Christians, 10 per cent are Catholics of the Byzantine rite, the rest being Protestants (mainly Baptist) and Jews.

**Kiev** is the capital of Ukraine, situated on both banks of the Dniepr, and the biggest city in Ukraine with a population of more than 2.6 million. Kiev is an old city which for centuries has been central to European trade routes. In ancient times Kiev was the capital of Kievan-Rus, and all north-east Slavonic lands were under the protectorate of the Kiev Prince.

The catchment area under study is the Minsk district, a rather new part of the city built about 1975 and one of the biggest dwelling and industrial areas of Kiev. The population counts close to 300 000 people - i.e. there are more than 6000 people per km<sup>2</sup> - and within its 48 km<sup>2</sup> the area is crowded by 59 big industrial enterprises and 92 kilometres of highway.

The main nationalities of the ethnic structure of the population of the city and of the Minsk district are Ukrainians (73%) and Russians (21%), the rest being Jews, Belorussians or others. The official language is Ukrainian, but many people speak Russian.

The catchment area of the centre in **Odessa** is situated in the South of Ukraine on the coast of the Black Sea. Odessa, which is one of the biggest cities in the country, is the regional centre of the Odessa region, one of the 25 administrative regions in Ukraine. Nearly half of the population of the region live in Odessa city. The known history of the Odessa region goes back to the Stone Age, and remnants of palaeolithic and neolithic settlements have been excavated in the suburbs of the city. During its history, people of different cultures and tribes as Cimmerians, Scythians, Slavonic tribes, Romans, Goths and Huns and Tartar-Mongolians have moved into the area.

The city of Odessa was founded in 1794 by Tsarina Katherina II. The city developed quickly into an extraordinarily well designed place, displaying many classical buildings designed by well-known architects from all over the world. Also characteristic of the city are its many trees and avenues. Today, the city has a most important sea port and it is the industrial, scientific and cultural centre of the area and it is also a popular sea resort. There

are many educational institutions and a number of secondary, professional and technical schools, an Academy of Sciences and several research institutes. There are also several theatres and concert halls - especially The Odessa Opera Theatre is well-known both nationally and internationally. Due to the many nationalities attracted to Odessa, the city is very cosmopolitan, although the majority of the population are Russians or Ukrainians. Also in Odessa the official religion is the Orthodox Russian Church. Since the change of the political and economical system, Odessa has experienced economical problems, but lately industry and commerce seem to pick up.

### **The centre in Novi Sad**

Novi Sad is located in the Federal Republic of Yugoslavia, Republic of Serbia, and it is the capital of the Autonomous Province of Vojvodina, situated on the Pannonian Plain on the banks of the Danube in the north of the country. It is the second largest town in present Yugoslavia after Belgrade.

The city was founded 300 years ago by decree from the Austrian empress Maria Theresa to function as an important strategic post on the border between Austria-Hungary and the Ottoman Empire. Until the end of the First World War it was a part of Austria-Hungary, then it became a part of the newly formed kingdom of Yugoslavia.

After the Second World War, when Yugoslavia became a republic, Novi Sad became the capital of Vojvodina. It is a university town, strongly industrialized, but also a centre for agriculture. The predominant religion is Orthodox, but nearly all other churches are represented.

Novi Sad has always been a place attractive to migrants, and its ethnic composition is very varied: the majority of the population are Serbs (approx. 65%) followed by Hungarians (approx. 8%), while approx 12 per cent declare themselves as Yugoslavs. Other ethnic groups are Croats, Slovaks, Montenegrins, Moslems, Gypsies, Romanians and others. As the political situation used to be stable in the region, and it was also always known for a high degree of ethnical tolerance, Novi Sad received since 1991 nearly 50 000 refugees from various parts of former Yugoslavia (Croatia and Bosnia). Today, the situation in Novi Sad and the future of the centre participating in the WHO/EURO Multicentre Study on Parasuicide is unknown.

### **Ljubljana**

The Slovenian catchment area covers Ljubljana, the capital of Slovenia. The country is situated at the foot steps of the Julian Alps, bordering Austria, Italy, Hungary, and Croatia. The landscape shows great variety, comprising high Alpine peaks, plains, hills with vineyards,



lakes and the seashore along the Adriatic coastline. The population counts about 2 mill. people, including two minority groups of Hungarians and Italians. There are also around 100 000 economical immigrants and also still some Bosnian refugees.

The history of Ljubljana dates back to 2000 BC. The first inhabitants in the place where Ljubljana now spreads were various Stone Age tribes. Later, in the 5th century BC, the Romans built a city called Emona - and a lot of remains from this period (city walls, houses, mosaics etc.) have been found. In the sixth century, however, Emona was attacked by the Huns and the inhabitants disappeared. The first mentioning of Ljubljana (Laibach, Luwigana) dates back to 1144, when the old castle on the hill was built. In 1335 the city came under the rule of the Habsburg monarchy of which it remained part until 1918.

The quick development of the city started in the period of reformation in the 16th century, when the first books in Slovenian language were published and Ljubljana got its first public library, its first printing house and its first Slovenian (not Latin or German as previously) secondary school. In 1693, *Academia Operosorum* was established, an institution with great influence on the cultural and scientific development of the city. The national pride and self-esteem increased further during the short period of French supremacy (1809-13) when the first high school with Slovenian language was established, and cultural life flourished.

Today, Ljubljana is a modern European city seated within and outside its old baroque city centre, which is still the main tourist attraction. Fortunately, there is no polluting industry; its progress is based predominantly on trade and banking, and many ties to the west (Slovenia being an associated member of EU) and to the east have been developed. Since the country gained its independence in 1991, Ljubljana has served as a natural link between Eastern and Western Europe.

The city is a very vivid place with many schools and a university (more than 20 000 students enrol each year). There are also several institutes and international centres of science in Ljubljana, and an abundance of cultural events. Especially music performances have rich traditions; musicians as Haydn, Paganini, Brahms, and Mahler used to conduct in Ljubljana's concert halls.

## **Pecs**

The city of Pecs is the capital of Baranya county in Hungary - a 2000 year-old town situated on the rising ground at the southern foot of the Mecsek hills and close to the Danube and Drava rivers 200 km south of Budapest. Pecs was founded by the Romans as

the northern outpost of the Mediterranean world. During the Middle Ages, Pecs was a centre of western culture, while the Turkish mosque, that still dominates the main square, continued to recall the magic of the East. During the past decades, Pecs has grown into one of the biggest cities in the country. It is a city of schools and universities, and a centre for science, culture, and tourism alike.

The catchment area of the centre in Pecs covers the whole area of Pecs, i.e. it includes the city and the suburban areas as well as the surrounding municipalities with a total population of 190 000 inhabitants. The economic activity is characterized by small and medium-sized enterprises, although parts of the area are relatively rural. The region is predominantly Catholic.

## **Riga**

Latvia is the middle of the three Baltic countries on the eastern coastline of the Baltic Sea. The catchment area under study covers the city of Riga, the capital of the country and situated in the Coastal Lowlands on the banks of the Daugava river. Its origin can be traced back to the beginning of the 11th century, but Latvia came into de facto existence only in 1918. In 1940 Latvia was occupied and incorporated into the USSR and the state was called the Soviet Socialist Republic of Latvia (Latvian SSR). However, Latvia was still recognized de jure as a subject to international law by more than 50 countries all over the world. In May 1990, the Supreme Soviet of the Latvian SSR readopted the former name, and declared the Republic of Latvia an independent, democratic state.

More than one third of Latvia's population live in Riga as many, especially young people, are leaving the provinces to get work and/or education in Riga. The high level of urbanization leads to particular social, economic and ecological problems both in the city itself and in the country as a whole. In Riga one finds the University of Riga and thirteen other institutions of higher education with more than 32 000 students. Riga is also the cultural centre of the country offering an abundance of theatres, concerts, exhibitions, etc. Of special interest is the national Song Festival, first held in 1873.

Ethnically, too, Riga differs from the rest of the country; in Latvia as a whole, more than half of the population are Latvians, while one third are Russian - in Riga, close to one half are Russian and only 38 per cent Latvians. The predominant religion in the country is the Lutheran Church, but especially in Riga, Roman Catholicism is common. Latvia is poor in natural resources, and today the principal branches of Latvian industry are electronic, chemical and pharmaceutical industries, and also some textiles and food.

## **Tallinn**

Tallinn is the capital of Estonia, the northernmost of the Baltic countries. The country, being the size of The Netherlands, is on a low rolling plain, surrounded by the Baltic Sea in the north and the west and by Lake Paipus and Narva River in the east. Originally, the Estonians were farmers, living dispersed in smaller communities. At the beginning of the 9th century, however, Russia tried to expand to the Baltic Sea by conquering Tartu, the second biggest city, and to build a fortification there. For the next 200 years, numerous raids by Russians, Swedes, and Danes were fought off. In 1202, the pope declared a holy crusade to christen Old Livonia (now Latvia and Estonia), and shortly after, Germans and Danes succeeded in conquering Livonia. During the following centuries, the area was governed successively by Swedes, Danes, Poles, and Russians. In 1710, Estonia was made a part of the Russian Empire and remained so until it was declared an independent republic in 1918. In 1940 Estonia too was incorporated in the USSR. Through all these years, the Estonians maintained their language and national culture, and during the Second World War, an attempt was made to restore the Republic of Estonia. Independence, however, was not reached until 1991.

Today, close to two thirds of the population are Estonians, close to one third Russians, the rest being mostly Ukrainians, Belorussians, or Finns. The religion is mainly Protestant, but the Russian groups belong to the Russian Orthodox Church. Music, especially religious music and folk song, is of great importance to the Estonians, and their struggle for freedom has been known all over the world as the 'singing revolution'.

Estonian economy is based on a few local resources and agricultural products. The most important products are chemicals, textiles, wood, and food. Because of the long coast-line fishing and shipping too are of importance.

## **Vilnius**

The catchment area of the Vilnius centre is the metropolitan area of Vilnius, the capital of Lithuania, situated in the south-eastern part of the Baltic. The name Lithuania goes back a thousand years AD. Until the 13th century, the area consisted of smaller districts ruled by local princes; then a confederation was formed that subsequently was reorganized into the Lithuanian Grand Duchy. Through marriage, an agreement was made with Poland in 1385 to establish the Union of Krewo - reaching from the Baltic Sea to the Black Sea. The union lasted for 400 years until the Lithuanian territories were divided between Russia and Prussia. After the First World War, Lithuania was an independent republic until the country together with the two other Baltic states in 1940 was occupied by and incorporated into the Soviet Union. Towards the end of the 1980s the national front *Saudis* was formed and in 1990 Lithuania was again declared independent.

Vilnius was founded in 1323 AD, and from the very beginning the city has been the major centre and stronghold of Lithuania. It has always been characterized by an ethnic

diversity; 50 per cent of the population are Lithuanian (while in the whole country 80 per cent), 40 per cent are Russian or Polish, the rest being Belorussian, Ukrainian, Jews, etc. Vilnius thus stands at the crossroad of Catholic, Orthodox, and Judaic cultures, and this interaction creates a specific identity for the city by opening up to the influence of other cultures and shaping its socio-cultural and ethno-cultural surroundings. Since the establishment of Christianity, however, Lithuania has been developing into a mainly Catholic country, and today most of the inhabitants belong to the Catholic Church. Vilnius University, founded in 1579, is one of the oldest universities in the eastern part of Europe and the biggest one in the country, having about 10 000 students.

## **Southern-Mediterranean Europe**

### **Holon and Bat-Yam**

The Israeli centre is the easternmost of the centres participating in the multicentre study. Israel is one of the smaller countries in the Middle East, bordering Syria and Lebanon in the north, Jordan in the east, Egypt in the south, and the Mediterranean Sea in the west. There are two official languages in Israel, namely Hebrew and Arabic, but English is taught at all schools, and many other languages are spoken by Jewish immigrants from all over the world. Politically, Israel is a democratic republic. In recent years the economy has experienced a marked upturn. Important activities are mining and agriculture, and furthermore Israel has large incomes from tourism as well as from donations from individuals and organizations around the world. The Israeli have one of the highest living standards in the Middle East, and a high spending power. Yet, the cost of living is high, and large proportions of the population live under very modest conditions, often being reduced to seeking public support.

The catchment area of Holon and Bat-Yam comprises two cities in Tel-Aviv county, which is one of the seven counties in Israel. The two neighbouring cities are located in central Israel, near the coast-line south of Tel-Aviv city. The county of Tel-Aviv is mostly urban - only about 1 per cent of the population work in agriculture or fishery.

The first Jewish settlements came to Holon in 1931, by 1950 it was established as a city and today it is the fourth largest city in Israel. Bat-Yam was founded in 1926 by a group of wealthy merchants from Jaffa. In 1948, the year of independence, only 1000 people were living in Bat-Yam, but it grew rapidly and was established as a city in 1958. Today it is the sixth largest city in Israel.

In both cities, the majority (approx. 98%) of the population are Jewish, many of them - about 50-60 per cent - are born in Israel. The catchment area seems to be more densely populated, more wealthy and with more social stability than the rest of the country.

## **Mamak**

The Turkish area under study comprises Mamak, a county within Ankara, the capital and second largest city of Turkey. Ankara is believed to be one of the first inhabited places in Anatolia with archaeological findings back to prehistoric time. The known history dates back more than 3000 years to the ages of the Hittites and the Phrygians and their famous king Midas. Being located on the passway from the east to the west, Ankara has through the ages been the centre of trade and commerce - and warfare; the city was in turn invaded by Lidians, Meds, Persians, Galats, Macedonians (led by Alexander the Great), and Romans. After the Roman invasion in 189 BC Ankara became the capital of Galatia State in the Roman Empire, and for the next more than five hundred years, the city flourished. From the downfall of the Roman empire and until the invasion by the Seljuk Turks in the 11th century, the city was ruled by Byzantines, and since then the city has been Turkish. After the First World War, Ankara became the capital of the new Turkish Republic in 1923 under the leadership of Mustafa Kemal Atatürk. Since then, the population has grown from a mere 40 000 to 3 mill. people, and the city is a centre of education, health, and cultural activities with 7 universities and many famous museums.

With the ever-growing economical opportunities, Ankara is attracting people from all over - and around - Turkey. Mamak is one of the leading counties of Ankara in this respect. Especially since the 1960s, there has been many immigrants and the county is growing fast into one of the most heterogeneous and colourful parts of Ankara. To some extent, however, this mirrors the heterogeneity of Turkey as a whole. Officially, less than half of the adult population is registered as economically active, but many have unofficial and unregistered jobs. The main activities are industry and small production facilities.

## **Padua**

The Italian catchment area covers the city of Padua and its 18 surrounding municipalities, which together constitute one of the health districts of the Veneto region. Padua, which is located 30 km west of Venice, was originally founded as a Roman colony (89 BC). The city prospered throughout the Middle Ages and became a famous centre of painting (the Paduan School).

The University of Padua was founded in 1222 and is the largest university in the Veneto region with 47 000 students. The city has many cultural activities such as museums, exhibitions and theatre performances, and the area is very popular among tourists from all

over the world. During recent decades suburban towns have developed. The urban structure is usually good, and there are few examples of poor urban development.

Padua's economy is linked to business, services and the university. Numerous medium-sized industrial plants are located on the outskirts of the city. In the suburban areas the main activities are arts and crafts, and small or medium-sized industrial enterprises. Only three of the 18 municipalities have some farming. Of the economically active population, less than 1% are employed in agriculture, 24% work in manufacturing and construction and 75% in trade, transport and services.

As in the rest of Italy, almost all inhabitants are Catholic. Most of the (few) migrants to the region come from other parts of Italy. The population of Padua decreased by about 7% during the 1980s.

The sociodemographic characteristics of the catchment area are similar to those of the rest of Italy, but the economy, the labour market and the social stability of the area are not representative. Padua is, however, representative of northern Italy, which is more economically developed and far more affluent than southern Italy.

## INDICATORS OF SOCIAL CONDITIONS AND SOCIAL INSTABILITY

The catchment areas studied by the research centres participating in the study vary from densely populated metropolitan districts to regions where most people live scattered over vast areas. Consequently, social conditions vary and also often differ from the national averages. Social problems tend to accumulate in big cities, and we would therefore expect, for example, crime or drug abuse to be more frequent in the Helsinki catchment area than both in Finland as a whole and in most of the other catchment areas in the multicentre study, which usually include both urban and rural communities. To compare information on social conditions and social instability, the socio-demographic characteristics of the various areas must therefore be kept in mind (cf. tables 1 - 3).

Describing and comparing the social conditions in the various catchment areas produce several difficulties. National statistics, which are usually the basis of the data presented by the centres, are not always directly comparable: data may be compiled and statistics calculated in different ways, or the validity of the national statistics may vary.

## HOUSING CONDITIONS

Some of the catchment areas are totally or almost totally urbanized (cf. Table 2); some include both urban and rural areas, but none of them comprise only rural areas. It seems that the catchment areas of the Central Eastern and the Southern centres in particular are highly urbanised. The population density varies markedly, however, e.g. in Holon and Bat-Yam, where the catchment area is totally urbanized, the population density is more than 11 000 per km<sup>2</sup>; in the Stockholm area, where the urban/rural distribution is 99/1, the average density is only 706. On the other hand, the population density in Umeå, the other Swedish area under study, is only 5 per km<sup>2</sup>, although 74 per cent of the area is urbanized whereas in Würzburg, the density is 267 per km<sup>2</sup> but only 45 per cent of the area is urbanized.

The housing conditions may or may not reflect the urban/rural characteristics of the area and the density of the population, but it may also be a question of culture and traditions.

In **Helsinki**, more than half of all dwellings are owner-occupied. Because of a shortage of dwellings, housing prices more than doubled in the late 1980s. Since 1990 prices of owner-occupied dwellings have gone down, but still renting an apartment has become more common. Some 12 per cent of the population live in overcrowded dwellings (more than 1 person per room).

In **Odense**, about three quarters of the population live in owner-occupied dwellings, mostly one- or two-family houses. Most dwellings are roomy (98% of the population have more than one room each) and 85% comply with modern standards.

More than one third of all dwellings in the **Stockholm** catchment area are in detached houses; 70% have more than two rooms plus kitchen and bathroom.

In **Sør-Trøndelag**, half the population live in owner-occupied one- or two-family houses, and one fifth in blocks of flats. About 45% of the total number of dwellings were built after 1960. Most have one occupant or less per room.

In the **Umeå** area, more than two thirds of the population live in owner-occupied one-family houses and 28% in multiunit blocks. About three quarters of all dwellings consist of more than two rooms plus kitchen and bathroom. The average number of persons per room is 0.52.

Within the city of **Berne**, 90% of the population live in rented accommodation and 10% own their houses (the national percentage is 30%). In the rural areas, most of the population live in their own dwellings. In some parts of the city blocks of flats predominate; these areas are densely populated and mainly inhabited by underprivileged people.

In both **Cork and Limerick**, the average number of people per household is very high - despite the high percentage of single people, and the fact that approximately one fifth of all households in the areas consist of one person only. 17% of the private dwellings are using oil-fired central heating, while the same percentage still rely solely on the traditional open fire for heating. The figures illustrate the significant gap in living standards in the catchment areas.

The housing conditions in **Dresden City and Weisseritz County** are rather similar, although the population is a little bit better off in the city than in the county: the average available space per resident is 33m<sup>2</sup> in Dresden and 31 in the county; in both areas almost all houses are equipped with modern heating facilities, and 58 per cent of the dwellings in Dresden and 43 per cent in Weisseritz with toilet and bath/shower.

In **Gent**, twelve per cent of the households in the area live in social dwellings. In general, however, the dwellings are a bit more roomy in Gent (35m<sup>2</sup>) than the national average (34m<sup>2</sup>). Close to one third of the dwellings are described as very comfortable, more than one third are reasonably comfortable, while the rest have very little or no comfort.



In **Innsbruck Stadt & Land**<sup>1</sup> 62.3% of the population live in owner-occupied dwellings. 73.3% of residences contain the highest standard of equipment with only 1.7% containing the lowest standard, and most dwellings are quite roomy. In 1996 the average monthly expenditure per dwelling was 309.1 Euro.

Housing in **Oxford** is extremely varied, ranging from densely populated areas of council supported housing, some of which suffer considerable socio-economic deprivation, through areas of 'average' housing, to extremely wealthy areas with very large houses, some of which are now subdivided into student accommodation. Student accommodation outside campus, while having improved, is at a premium because of the increasing student population.

In **Leiden**, about half of the dwellings are privately owned and about one third were built after 1945. No overcrowding is reported, but there are some housing shortages, especially for students.

More than half the population in **Rennes** live in individual houses and more than half of them are privately owned. Most flats are rented and 4 per cent of the population have free accommodation. Sixty per cent of the dwellings have more than 3 rooms, and there is no housing shortage.

Most of the buildings in **Würzburg** were rebuilt after 1945. Most dwellings have 3-4 rooms. The inner city is fairly densely populated, but there is no real overcrowding. It is, however, rather difficult to find housing within the city, especially for students.

In **Mamak**, 95.8% live in houses and flats and the rest in hotels, dormitories, hostels, etc. The proportion of ghettos is generally unknown, but as with the other immigrated areas it is supposed to be high. These ghettos are, however, somewhat different from their western counterparts: they are built rather quickly and unofficially and are called 'night-settlers'. The houses remind people of the houses they used to live in in their villages with small gardens for planting vegetables; consequently these areas belong to the most green parts of Ankara. Almost every municipality in Turkey provides electricity, water and telephone to these houses. The average number of occupants per house in Mamak is 4 or 5.

Most households in **Kiev** and in the **Minsk** district are living in blocks of flats. On the average, there are 3-4 persons living in one flat. Many of the dwellings are well equipped with modern facilities such as refrigerator and washing machines. The housing standard is above the national average, but many dwellings still lack modern amenities.

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<sup>1</sup> Results from the 1996 Austrian micro census. Only data for Tyrol are available.

In the catchment area of **Ljubljana**, people live quite comfortably, three quarters owning their dwelling facilities. The data for Slovenia show an average of 22 square meters of dwelling space per person or 68 square meters per household. More than two thirds (67%) of the population live in private houses, while the rest of the population live in apartment blocks.

The population in **Odessa** live in state-owned blocks of flats (61.4%), where the average available space per resident is 16.5m<sup>2</sup>, and in private flats and houses (38.6%), where the average available space per resident is 19.5m<sup>2</sup>. The *living* space per resident is approximately half the size of the average *available* space per resident in both kinds of dwellings. Each state-owned flat, which consists of two rooms plus kitchen and bathroom, houses an average of 3-4 persons. Almost all of the dwellings (98%) are provided with cold water, whereas only 40% have hot water as well. 40% are using central heating and the same percentage of flats use autonomic gas heating. The remaining part of the dwellings, particularly private houses (20%), rely on stove heating. Many of the dwellings are equipped with such facilities as refrigerators and washing machines. The average number of telephones is 0.63 per family.

Most dwellings in **Riga** are in blocks of flats, and about three quarters of all dwellings consist of more than two rooms plus kitchen and bathroom. The average number of residents per dwelling is 2.7 and the total living floor space is 12.3 m<sup>2</sup> per city dweller.

In Estonia, housing is in the process of being privatised. People, who inhabit the living areas, are given a possibility of buying flats from the state at a low price. The flats generally consist of 2-4 rooms plus kitchen and bathroom. Private property dating back to the first period of Estonian independence is being returned to the heirs. In **Tallinn**, green areas are being settled with owner-occupied one-family houses. There are no statistical data on housing because of the rapid changes in this field, including the building of numerous new houses and the renovation of older houses.

In **Vilnius**, most dwellings are in blocks of flats, and many of them are overcrowded (more than one person per room). Only few people own their houses.

About two thirds of the total number of dwellings in **Padua** were built between 1946 and 1981. Blocks of flats predominate. 61.5% of all dwellings are owner-occupied. The average dwelling surface is 102.7m<sup>2</sup> with an average number of rooms of 4.7. The average number of persons per room is 0.6 (38.8m<sup>2</sup> per person).

The catchment areas of **Holon & Bat-Yam** are totally urbanized and the population density is extremely high. Most of the population live in blocks of flats. However, no information about the housing condition in the catchment areas is available but in urban populations in Israel the average number of occupants per room is 1.06.

## **FAMILY LIFE**

The problems of comparing different areas are especially pronounced with regard to family life. Statistics on civil status usually include the number of inhabitants that are unmarried, married, separated, divorced or widowed. These categories are, however, not unequivocal: a person may be registered as unmarried because he or she has never been married or is not married at the time (but divorced or widowed). The main problem with the statistics on civil status is, however, that more and more people are cohabiting without being legally married. Some countries register people living in common-law marriage as legally married; other countries register them as unmarried or single. The problem is complicated by the fact that the prevalence of common-law marriages and how they are registered depend on the cultural and religious attitudes in each country. The invalidity of the statistics on civil status then affects information on the incidence of divorce. Little is known about how often common-law marriages break up, but it seems reasonable to suppose that the dissolution rate is even higher than that of legally registered marriages.

The figures presented in Table 4 should thus be considered with great caution. However, most centres stress that both the incidence of divorce and the number of single-parent families have increased dramatically, indicating that family stability and family support are declining all over Europe.

Table 4. Family life

	Number of people per household	Single people as a percentage of the total population	Single-parent families as a percentage of all families	Divorced people as a percentage of the total population
<b>Northern Europe</b>				
Helsinki, Finland	2.0	31.9	16.8	12.7 <sup>8</sup>
Odense, Denmark	2.2	16.3	18.6	7.0
Stockholm, Sweden	2.2 <sup>1</sup>	17.7 <sup>1</sup>	5.4 <sup>1</sup>	9.9 <sup>12</sup>
Sør-Trøndelag, Norway	2.2	22.0	6.3	5.5
Umeå, Sweden	2.2 <sup>1</sup>	15.1 <sup>1</sup>	3.6 <sup>1</sup>	4.8 <sup>1</sup>
<b>Mid-Western Europe</b>				
Bern, Switzerland	2.2	12.9	NA	4.0
Cork, Ireland	3.4	5.9	18.0	1.0 <sup>2</sup>
Limerick, Ireland	3.4	5.7	14.0	1.0 <sup>2</sup>
Dresden City, Germany		38.7		6.6
Weisseritz County, Germany		37.1		4.3
Gent, Belgium	2.2	16.6	15.5	5.6
Innsbruck/Stadt, Austria	2.2 <sup>13</sup>	47.7 <sup>3</sup>	16.4 <sup>10</sup>	6.3 <sup>3</sup>
Innsbruck/Land, Austria	2.9 <sup>13</sup>	46.3 <sup>3</sup>	16.4 <sup>10</sup>	3.6 <sup>3</sup>
Oxford, England	2.5	41.7	2.6	4.6
Leiden, The Netherlands <sup>1</sup>	2.4	46.0	10.0	3.0
Rennes, France	2.6 <sup>4</sup>	10.3 <sup>4</sup>	8.9 <sup>5</sup>	4.1 <sup>5</sup>
Würzburg, Germany	23.4	8.3	4.8	
<b>Central Eastern Europe</b>				
Kiev, Ukraine	3.4	6.8	16.0	1.8
Ljubljana, Slovenia <sup>10</sup>	2.7	18.0	3.7	
Novi Sad, Yugoslavia	4.0	NA	9.9	
Odessa, Ukraine	3.2	8.0	NA	8.1
Pecs, Hungary	2.5	9.1	16.9	9.0
Riga, Latvia	3.0	46.0	7.2	3.1
Tallinn, Estonia	3.1 <sup>7</sup>	11.0 <sup>7</sup>	NA	8.4 <sup>7, 8</sup>
Vilnius, Lithuania	3.0	7.7 <sup>9</sup>	9.0 <sup>11</sup>	0.3 <sup>9</sup>
<b>Southern Europe</b>				
Holon & Bat-Yam, Israel	3.1	8.2 <sup>8</sup>	3.2	4.9 <sup>8</sup>
Mamak, Turkey	4.5	NA	NA	0.6 <sup>6</sup>
Padua, Italy	2.6	9.3	10.6	2.3

<sup>1</sup> 1990<sup>2</sup> *Separated* people as percentage of the total population<sup>3</sup> 1991 - Marital status<sup>4</sup> 1990<sup>5</sup> Only the county (département)<sup>6</sup> Over 12 years<sup>7</sup> 1989 Population census data<sup>8</sup> Aged 15+<sup>9</sup> 1995<sup>10</sup> National figure 1997<sup>11</sup> 1996<sup>12</sup> 1993<sup>13</sup> 1991

## STANDARD OF LIVING

The standard of living is not only a question of material assets. Nevertheless, data on economy and business cycles have traditionally been used as indicators of living conditions. Table 5 shows three of these indicators.

The unemployment rate varies markedly from about 2% in the Italian and the Israeli areas under study to close to 17% and 18% in Gent and in Helsinki, respectively. The combined rate for the two catchment areas in Austria is reported to be 3 per cent.

The proportion reported as receiving public assistance varies considerably too, but some of the variance may be due to differences in definitions, e.g. the (very high) figure for Tallinn includes 'all pensioners, child and family benefits for mothers, unemployment benefits, contingent of other subsidies', while in Germany it includes only social security benefits. However, the variation may also be due to differences in the national level of welfare and the number of people in need in the individual areas.

## SOCIAL SECURITY AND WELFARE

The social welfare systems in the catchment areas differ in various ways; one main difference is how benefits and subsidies are financed. In all areas unemployment benefit is based on insurance. Social support in the Nordic countries is paid via taxes, whereas in other countries most benefits are based on the principle of insurance.

The welfare systems in **the Nordic countries** are similar. In addition to benefits in the event of sickness, the Nordic welfare systems comprise unemployment benefit, old-age pension, early-retirement pension and ordinary public assistance.

Unemployment benefit is based on the principle of insurance, usually administered by the unions and conditional on previous employment. The benefit is payable for only 1 - 2 years.

Table 5. Some indicators of the standard of living

	Unemployment*	Percentage receiving social assistance	Per capita income in US \$
<b>Northern Europe</b>			
Helsinki, Finland	17.8 <sup>1</sup>	15.8	22 235 <sup>2</sup>
Odense, Denmark	8.9	18.8	28 772
Stockholm, Sweden	5.2	10.1	16 700
Sør-Trøndelag, Norway	5.0	3.9	10 743 <sup>4</sup>
Umeå, Sweden	7.4 <sup>5</sup>	9.3 <sup>6</sup>	15 470 <sup>7</sup>
<b>Mid-Western Europe</b>			
Bern, Switzerland	4.5	11.7	30 080
Cork, Ireland	5.9	24.8 <sup>8</sup>	12 668 <sup>8</sup>
Limerick, Ireland	6.2	24.8 <sup>8</sup>	12 668 <sup>8</sup>
Dresden City, Germany	11.3	1.5	NA <sup>3</sup>
Weisseritz County, Germany	15.1	1.3	NA
Gent, Belgium	16.9 <sup>9</sup>	1.3 <sup>9</sup>	12 333
Innsbruck/Stadt, Austria	3.2 <sup>15</sup>	24.6 <sup>11</sup>	27 101 <sup>8,9</sup>
Innsbruck/Land, Austria	5.3 <sup>15</sup>	15.4 <sup>11</sup>	27 101 <sup>8,9</sup>
Oxford, England	3.9	NA	NA
Leiden, The Netherlands <sup>12</sup>	6.0	1.4	13 512
Rennes, France	10.1	NA	14 008
Würzburg, Germany	9.1	2.7	NA
<b>Central Eastern Europe</b>			
Kiev, Ukraine	NA	20.5	801
Ljubljana, Slovenia <sup>10</sup>	6.5	21.3	9 471
Novi Sad, Yugoslavia	9.9	4.5	520
Odessa, Ukraine	NA	22.9	288 <sup>9</sup>
Pecs, Hungary	11.6	NA	2 800
Riga, Latvia	2.9	2.1	888
Tallinn, Estonia	10.1	44.3 <sup>16</sup>	1 325 <sup>9</sup>
Vilnius, Lithuania	14.0 <sup>9</sup>	NA	1 110 <sup>19</sup>
<b>Southern Europe</b>			
Holon & Bat-Yam, Israel	2.1 <sup>5</sup>	7.9 <sup>13</sup>	456 <sup>14</sup>
Mamak, Turkey	11.4 <sup>17</sup>	NA	3 976 <sup>18</sup>
Padua, Italy	2.0	4.6	NA

\* Usually calculated as per cent of the adult work force, see however below

<sup>1</sup> 1995/1996

<sup>2</sup> 1991 - 1993

<sup>3</sup> NA = Not available

<sup>4</sup> Over 17 years

<sup>5</sup> 1995

<sup>6</sup> 1994

<sup>7</sup> Sweden

<sup>8</sup> National figure

<sup>9</sup> 1996

<sup>10</sup> National figures 1996

<sup>11</sup> Pensioners, unemployment benefits, etc.

<sup>12</sup> 1990

<sup>13</sup> 1994. Population at all ages

<sup>14</sup> 1993. Monthly per capita income

<sup>15</sup> Annual average 1996

<sup>16</sup> 1996 (Pensioners, child and family benefits for mothers, unemployment benefits, contingent of other subsidies)

<sup>17</sup> Unemployed people seeking a job, 12 years and over

<sup>18</sup> Ankara 1996

<sup>19</sup> 1997

Other pensions and assistance are paid for through taxes. The normal retirement age is 65 - 67 years, at which everyone is entitled to old-age pension, regardless of income. In some countries, however, one may retire at the age of 60 with a reduced pension. Civil servants are usually entitled to a special pension as part of their contract. In addition, private and union-owned insurance companies offer various private pension schemes. Most people are entitled to an early-retirement pension if their working capacity is permanently reduced by at least 50%. Public assistance is the last resort in the welfare system. It is usually administered and financed by local authorities (municipalities), but the expenses are reimbursed by the government in accordance with specific and detailed rules. In addition, there are several special schemes and various systems of subsidies: for example, grants to families with children and especially to single parents, and grants to students. Care, counselling and support is often offered by agencies run by volunteers, especially in Norway (such as church congregations or the Norwegian Red Cross). The government then reimburses some of the expenses.

In **Switzerland**, unemployed people receive relatively generous unemployment benefit for up to two years in accordance with the duration of previous employment. People whose income is insufficient to cover the cost of daily living can get financial assistance from the municipality.

In **Ireland** the social welfare system is a statutory system administered by the Department of Social Welfare. It can be divided into three separate categories: a) *Social insurance*: contributory social insurance benefits are made on the basis of a pay related social insurance record (PRSI). Each benefit requires a certain number of PRSI contributions to have been paid, so an individual must have worked and paid PRSI for a certain period of time; b) *Social assistance*: non contributory payments are made on the basis of an individual satisfying a means test. If a claimant does not have enough PRSI contributions or if they have never worked and never paid PRSI, they may qualify for social assistance. In general an individual will qualify for social assistance if his/her means are less than the rate of payment for which he/she is applying; c) *Universal payments*: in addition to social insurance and social assistance, Ireland also has a range of payments, which do not depend on PRSI or means testing such as Child Benefit and Free Travel Allowances for the elderly.

Supplementary Welfare System: The Department of Health administers an additional welfare system known as the Supplementary Welfare System where all payments are means-tested. It provides interim payments for people while their social insurance or social assistance claims are being processed. It also administers a rent supplement scheme for individuals on low incomes who are unable to meet the cost of renting or buying accommodation.

The welfare system in **Germany** is statutory and highly organized. In addition to sickness benefit, the employees' insurance covers unemployment benefit and retirement pension.

People whose income is below a certain limit may get public assistance. In addition, there are other subsidy schemes; for instance, students may receive loans, depending on their parents' income.

In **Belgium**, a state service takes care of all welfare benefits (RSZ). Employees, employers and the state pay their contribution to the RSZ, who redistributes the money to the individual services in charge of the various benefits, i.e. unemployment benefits, children's allowance (available to all parents), health and disability insurances and pensions. All employees meeting certain criteria are entitled to unemployment benefit, usually administered by the unions. The amount of money depends on the family structure, on age, and duration of unemployment. All employees are entitled to old-age pension after the age of 60 years for women and 65 for men. Early retirement, financed by employers and the state, is possible from the age of 55. In addition, there are other systems of subsidies as grants to single-parent families and to students.

In **Austria**, almost every economically active person is a member of the public social insurance scheme, which provides health insurance, unemployment benefit and old-age pension.

In **England** most basic welfare benefits are available to everyone. The standard retirement age is 65 for men and 60 for women. Many people also have private pension schemes (a strategy encouraged recently by the Government) and/or employers' pension schemes. Sickness or disability allowances are available to people whose work capacity is badly affected by health problems. Private charities also run support schemes for individuals with certain health problems.

The welfare system in **the Netherlands** bases social benefits on insurance. However, there are several supplementary acts for people whose income is below a certain minimum. For instance, under the Supplementary Benefit Act the income of those receiving unemployment, sickness or disability benefit, plus that of any partner, is supplemented up to a certain (legal) minimum. In addition, the welfare system in the Netherlands comprises a variety of nongovernmental or quasi-governmental agencies providing counselling and support, some run by volunteers.

The welfare system in **France** is based on an obligatory financial contribution paid monthly by both employees and employers (general regime), or through obligatory individual contracts for self-employed people. In addition to health insurance, social security includes a family allowance, unemployment benefit, disability pension due to occupational illness and industrial injury, and old-age pension. Private insurance completes the social security system.

In **Turkey**, there are three basic welfare systems: one for workers, one for civil servants and one for 'others', i.e. housewives, artists, and self-employed merchants, farmers, etc. For



the workers, health services and pensions are paid for by the employees, for the civil servants the government pays, and for the rest the services are based on self insurance. About 72 per cent of the population are covered by a welfare insurance. Retirement age is 50 years (after 20 years of work) for women, and 55 years (after 25 years of work) for men. Obligatory retirement is requested at age 65, and the state provides pension to people over 65 years of age. Dependants of those receiving welfare benefits are entitled to continued support. People whose working capacity is reduced with 40 per cent are entitled to permanent pension.

In **Ukraine**, social insurance for employees is administered directly by the state which provides sickness or disability benefits, unemployment benefits and old-age pensions proportional to the number of years people have been on the labour market (retirement age is 55 years for women after 20 years of work and 60 years for men after 25 years of work). The average amount of pension now in Ukraine is from US\$ 9 to US\$ 20 per month with the exception of former state officials who receive from US\$ 75 to US\$ 200. Unemployment benefits are paid for a limited period of time in accordance with the duration of previous employment; the sum paid amounts to half the former salary. In addition, there are other subsidy schemes such as grants to families with children, to single mothers, and to students. People with low income may get public assistance from the local municipalities. The economic and social situation in Ukraine started to undergo many changes after 1991. Since 1996, the welfare system has started to transform slowly into an insurance system.

In **Slovenia** there is a social and health insurance system - all the employed and all the employers (private and public) have to pay a contribution for the health (6% of the income) and social and retirement insurances (15% of the income). Besides this there is an extra part that is voluntary and covers the higher standard health services.

The unemployed get the support for a certain period of time, depending on the length of previous employment. Everybody is paying into the fund for maternal leave. Every mother can be absent from work with a full salary the whole first year after the child is born, while the fathers get an extra 45 paid days of paternal leave. Everybody is entitled to the minimum children's allowances, while the higher amount depends on the level of family income.

Slovenia is currently undergoing crucial changes in the retirement system. Till now, the age for full retirement pension was 40 years of work and 58 years of age for men and 35 years of work and 53 years of age for women. The reformed retirement policy will require older age of retirement for all.

The social welfare system gives temporary or permanent support to the underprivileged: to those, who have nobody to support them, who cannot work, and who have no property and no other income.

As most of the population in **Hungary** was formerly (permanently) employed by the state, a welfare contribution to cover sickness benefit and old-age pensions was automatically deducted from salaries. The system is now being changed into an insurance system, and people may take out pension-improving policies.

After the restoration of independence in 1991, the economic and social situation in **Latvia** started to undergo dramatic changes. Since 1994-95 the welfare system is slowly being transformed into an insurance system, where social and disability pensions, old-age pensions (retirement age 60 years for women, 65 for men), and sick benefits are provided directly by the state. The unemployed receive unemployment benefits for a limited period of time (6-12 months). In addition, there are other subsidy schemes such as grants to families with children, and to students. Also people whose income is below a certain limit may get public assistance from the local municipalities.

In **Estonia**, social security is financed by purpose-oriented social tax (pension and health insurance) and by the state budget (grants to families with children, unemployment benefit and other subsidies).

In **Lithuania**, social insurance is administered by a state agency which provides sickness or disability benefits, unemployment benefit and old-age pension proportional to the number of years people have been on the labour market. Unemployment benefit is paid for a limited period of time in accordance with the duration of previous employment.

In **Italy**, social insurance for employees is administered by a state agency that also provides an old-age pension proportional to the number of years people have worked. Social and disability pensions are provided directly by the state, but people may purchase insurance from private companies.

In **Israel**, the welfare system is statutory and paid for through taxes. It comprises unemployment benefit, old-age pension, children's pension (a monthly payment for all children under the age of 18 years), disability pension, etc. and is administered by a state agency, 'The National Insurance Institute'.

Unemployment benefit is conditional on previous employment, and payable for a period of up till 6 months at a time. The normal retirement age is 60 for women and 65 for men, at which anyone is entitled to old-age pension (a certain percentage of the average income). In addition, private and union-owned insurance companies offer various pension schemes, paid for by employers and employees or through individual contracts for the self-employed.

Another governmental welfare system is under the portfolio of the Minister of Work and Welfare, providing social workers' services, hostels for women and children suffering from domestic violence, and so on.

## SOCIAL PROBLEMS: CRIME AND SUBSTANCE ABUSE

Using various statistics to estimate differences in magnitude and types of social problems between the various catchment areas is also a rather questionable enterprise, and the data shown in Tables 6 and 7 therefore only intend to give a sketchy overview.

During the last decade, alcohol consumption has decreased slightly in most countries. Only in Denmark, Ireland, and Turkey a small increase has taken place. Information on the yearly consumption is available only for a few of the Central Eastern European countries.

Table 6. Litres of pure alcohol consumed per capita for the entire population.<sup>1</sup>

	1988	1996	Change (in litres)
<b>Northern Europe</b>			
Finland	7.3	6.7	- 0.6
Denmark	9.7	10.0	+0.3
Sweden	5.5	4.9	- 0.6
Norway	4.2	4.0	- 0.2
<b>Mid-Western Europe</b>			
Switzerland	11.0	9.3	- 1.7
Ireland	6.9	9.1	+2.2
Germany	10.4 <sup>2</sup>	9.8	- 0.6
Belgium	10.0	9.0	- 1.0
Austria	10.1	9.8	- 0.3
England	7.8	7.6	- 0.2
The Netherlands	8.3	8.0	- 0.3
France	12.6	11.1	- 1.5
<b>Central Eastern Europe</b>			
Ukraine	3.2	1.0	- 2.2
Slovenia	10.9 <sup>3</sup>	11.4 <sup>3</sup>	NA
Yugoslavia	NA	NA	NA
Hungary	10.7	9.5	- 1.2
Latvia	NA	NA	NA
Estonia	NA	2.3	NA
Lithuania	5.1	9.5	+4.4
<b>Southern Europe</b>			
Israel	1.1	0.9	- 0.2
Turkey	0.4	0.9	+0.5
Italy	9.4	8.2	- 1.2

<sup>1</sup> Source: World Drink Trends 1997. International Beverage Consumption and Production Trends. NTC Publications Ltd. United Kingdom, 1997.

<sup>2</sup> Federal Republic of Germany

<sup>3</sup> Not official data

Table 7. Social problems

	Crimes reported per 1 000 inhabitants per year <sup>a</sup>	Abusers of alcohol per 1 000 population	Users of prescription tranquilizers per 1 000 population	Drug abusers per 1 000 population
<b>Northern Europe</b>				
Helsinki, Finland	137.7 (8.3) <sup>1</sup>	NA	59.9	NA
Odense, Denmark	102.6 (2.5) <sup>2</sup>	11.4 <sup>3</sup>	38.1 <sup>4</sup>	2.4 <sup>5</sup>
Stockholm, Sweden	176.5 <sup>24</sup>	94.6 <sup>25</sup>	NA	27.1 <sup>26</sup>
Sør-Trøndelag, Norway	47.8 <sup>6</sup>	NA	NA	NA
Umeå, Sweden	86.0 <sup>1</sup>	~3	~32	NA
<b>Mid-Western Europe</b>				
Bern, Switzerland	50.0 (4)	9.5 <sup>2,7</sup>	NA	4.3 <sup>8</sup>
Cork, Ireland	21.4 <sup>9</sup>	1.2 <sup>10</sup>	NA	0.5 <sup>11</sup>
Limerick, Ireland	21.4 <sup>9</sup>	2.4 <sup>10</sup>	NA	0.3 <sup>11</sup>
Dresden City, Germany	125.4	-	-	-
Weisseritz County, Germany	75.5	-	-	-
Gent, Belgium	100.0	NA	NA	NA
Innsbruck/Stadt, Austria	62.6 <sup>20</sup>	60.0 <sup>21</sup>	NA	8.4 <sup>22</sup>
Innsbruck/Land, Austria	62.6 <sup>20</sup>	60.0 <sup>21</sup>	NA	8.4 <sup>22</sup>
Oxford, England	NA	NA	NA	NA
Leiden, The Netherlands <sup>4</sup>	79.2	7-28	100.0	1.0
Rennes, France	2.2 <sup>1</sup>	NA	NA	0.5 <sup>1</sup>
Würzburg, Germany	88.6	NA	NA	NA
<b>Central Eastern Europe</b>				
Kiev, Ukraine	11.8 (4.8)	10.2	NA	1.2
Ljubljana, Slovenia	24.0	40.0 <sup>15</sup>	324.0	4.0 <sup>16</sup>
Novi Sad, Yugoslavia	-	51.0	-	0.4
Odessa, Ukraine	13.2 (0.4)	26.0	-	6.6
Pecs, Hungary	1.7 <sup>18</sup>	103.0	NA	9.0
Riga, Latvia	21.6 (0.9)	14.0	NA	NA
Tallinn, Estonia	24.1 (0.9) <sup>23</sup>	NA	NA	NA
Vilnius, Lithuania	20.5 (5.7) <sup>27</sup>	NA	NA	0.2
<b>Southern Europe</b>				
Holon, Israel <sup>19</sup>	39.0 (3)	NA	NA	1.0 <sup>2, 17</sup>
Mamak, Turkey	6.5	9.0	NA	NA
Padua, Italy	38.9 <sup>12</sup>	189.0	280.0 <sup>13</sup>	4.8 <sup>14</sup>

<sup>a</sup>Figures in brackets indicate violent crimes reported per 1 000 population.

<sup>1</sup> 1994

<sup>2</sup> 1995

<sup>3</sup> Addicted

<sup>4</sup> 1990

<sup>5</sup> Estimate

<sup>6</sup> *Investigated* crimes (1993)

<sup>7</sup> WHO definition

<sup>8</sup> Hard drugs only

<sup>9</sup> Only available for the area of Limerick, Cork and Kerry which incorporates parts of both catchment areas

<sup>10</sup> Based on admissions to psychiatric hospitals and units for alcohol disorders

<sup>11</sup> Number of cases, not individuals

<sup>12</sup> Crimes occurred in Padua municipality, 1991

<sup>13</sup> GP population (psychotropic drugs users, 1995; unpublished data)

<sup>14</sup> Heroin abusers (unpublished data)

<sup>15</sup> No official data

<sup>16</sup> Opiats

<sup>17</sup> The number is taken from statistics of police records reporting the use of drugs. It does not necessarily indicate drug abuse.

<sup>18</sup> Violent crimes

<sup>19</sup> Holon only, no data available for Bat-Yam

<sup>20</sup> Tyrol 1996

<sup>21</sup> National estimate 1992

<sup>22</sup> Percentage of all drug related Austrian discharges with psychiatric diagnosis in 1995

<sup>23</sup> 1996

<sup>24</sup> All types of reported crimes, Stockholm County 1994

<sup>25</sup> Stockholm County. High consumers 18-54 years

<sup>26</sup> Stockholm County. Drug *users* 18-54 years

<sup>27</sup> 1997

Social problems usually accumulate in cities, and this is definitely true in **Helsinki**. For instance, the incidence of assault in Helsinki is 2.5 times the incidence in smaller towns in Finland (less than 10 000 inhabitants). Nevertheless, the number of offenses committed by juveniles (under 21 years), which comprises about one fifth of all offenses, is below the national average. Most of the juvenile delinquents come from the suburbs, where socioeconomic status is not uniform. The number of assaults in Helsinki was decreasing in 1994; many of these were carried out under the influence of alcohol. However, the most common offenses in Helsinki are fraud and robbery.

Alcohol has traditionally been the only intoxicant abused in Finland. In accordance with traditional drinking habits, large amounts of alcohol are consumed with the sole purpose of getting drunk. It is only very recently that urban culture has slowly begun to change these habits into drinking more wine and in the context of social events. The fourfold increase in overall alcohol consumption over 30 years was especially marked in the late 1960s and early 1970s. In the beginning of the 1990s during the economic depression, alcohol consumption diminished, but since 1995 the consumption is again increasing. Some 30% more alcohol is sold per capita in Helsinki than elsewhere in Finland. Some of this difference may be caused by the higher standard of living in Helsinki.

Compared with other European countries, the use of narcotics has been modest in Finland. The reasons are cultural and geographical. Narcotics have never been serious competitors to alcohol, and geographical isolation and strict control have prevented the spread of abuse; the use of narcotics is a criminal offence in Finland. However, in Helsinki drugs are now becoming more common. The number of drug offences has doubled from 1991 to 1994. Most common is the mixed abuse: alcohol is combined with psychopharmaceuticals or drugs.

In Denmark, the incidence of crime increased markedly since the late 1960s, and although a minor decrease has taken place through later years, still more than 500 000 offences (100 per 1 000 population) are reported each year. The incidence in the **Odense** catchment area is close to the national average. The increase in malicious damage, assault and other acts of violence has been especially steep among young men.

Alcohol consumption has increased markedly since the beginning of the 1960s; during the 1980s it seemed to stabilize, but then it started again to increase. This means that, on average, everyone in Denmark above the age of 14 years drinks 2.5 units of alcohol (15 ml of pure alcohol) each day. A special problem in Denmark is the heavy week-end drinking among the young - and that the young start drinking at an earlier and earlier age (10-11 years old). Affluent and well educated people consume the most, but it is the underprivileged people that are registered in the care system and thus labelled as abusers.

The use of narcotics is not illegal in Denmark, but possession of large quantities and selling narcotics are criminal offences. The first narcotics, from hashish to heroin and LSD, appeared in the wake of the youth revolt in 1968. The results of several studies indicate that almost half of all young people aged 19 - 29 years have had some experience with narcotics, usually with hashish. There are no exact statistics on the number of *abusers*; estimates vary from 4000 to 12 000 at national level. Another type of narcotic, speed agents such as amphetamines and cocaine, have entered the market recently, and new types of designer drug, such as fentanyl, are on the way. A special type of abuse popular among very young people is sniffing lighter fluid, cellulose thinner, petrol, etc. Another problem in Denmark is the increasing use of medicine - especially psychoactive drugs. The consumption of psychoactive drugs is 113.1 defined daily doses per 1 000 population, which is 50% more than in the second-ranking Nordic country, corresponding to more than one in ten persons in Denmark each day getting one full dose of sedatives or sleeping pills. It is difficult to distinguish between ordinary use and addiction, but an increasing number of people are probably addicts. The situation in the Odense catchment area is similar to the national average.

The prevalence of social problems differs markedly in the two Swedish centres. In **Umeå**, the crime rate has been stable and low for decades compared with other counties in Sweden and with the national average. Alcohol consumption has traditionally been low and lower than in Sweden as a whole. However, during the 1970s drinking increased considerably, and the mortality rate from alcohol-related diseases, although still low, nearly doubled during the decade. Drug abuse is relatively infrequent.

In **Stockholm**, however, alcohol and drug abuse and crime are above the national average. Exact figures are not available for the catchment area, but for the whole city of Stockholm the number of crimes per year is 176 per 1 000 inhabitants (national average 142). The number of heavy consumers of alcohol in Stockholm is estimated to be 140 per 1 000 for men and 57 per 1 000 for women. The number of persons who have used narcotics during the last year is estimated to be 27 per 1 000. This data is based on a population survey in the age group 18-54 years.

In **Sør-Trøndelag**, the annual incidence of crime is 48 per 1 000. The annual incidence of violent crime, however, is 1 per 1 000. In Norway, as in Sweden, the distribution of alcoholic beverages is restricted by a state monopoly, and wine and alcohol can only be bought at special government shops or at specially licensed restaurants. Alcohol consumption in Sør-Trøndelag is relatively low; according to official statistics, the per capita consumption (above 15 years of age) is 5.4 litres per year. However, illicit distilling is not at all rare in Norway. The rate of reported drug abuse is approximately 10 per 100 000, which is close to the national average.

There were 14 932 criminal cases reported for 1987 in the city of **Berne** (50 per 1 000 population), and apparently this figure has been rather stable since then. There was only one case of homicide and one case of manslaughter. The majority of cases were crimes against property, followed by violations of the controlled drug law (629); 149 of the latter were committed by people under the age of 20 years.

Most cases of alcoholism are referred to the Sociomedical Service of the City of Berne, which in 1987 treated 423 people. The number of abusers per 1 000 is now estimated to about 10. Most abusers are aged 30 - 40 years and are working in industry or the service sector. The total number of drug addicts is not known, but the number of persons addicted to hard drugs is 4.3 per 1 000.

A special problem in Berne is that many young people often find it difficult to adjust to society and strongly oppose the pressure to conform. Conflicts have resulted in young people occupying certain areas or buildings and proclaiming them as autonomous areas, which has led to various harsh and sharply criticized police actions.

January 1996 saw the introduction of regionalisation in the organisation of the Garda Síochána (Irish Police Force), and Ireland is now divided into six regions. The Southern Region comprises the catchment area of the **Cork** centre as well as part of the **Limerick** centre (i.e. Limerick city and county).

In 1995, the number of crimes reported in the Southern Region was 16 573. The following year this number fell by 9% to 15 020. This has to be seen within the context of a national reduction in crime of 2% during the same period. The national murder rate in 1996 was 1.19 per 100 000 population. Even though 40% of all murders were recorded in Dublin Region, the murder rate there is only 12% higher than in the Southern Region.

In 1997, the Department of Public Health published the results of a survey on Smoking, Alcohol and Drug Use in the Cork centre catchment area. This survey showed that 78% of people were current drinkers. Eighty-nine per cent of young people in the 20-24-year age group were current drinkers. The rate for women was only 6% less than for men. Under the age of 18, 44% were current drinkers - 50% of boys and 20% of girls.

In terms of alcohol abusers, the rate in the Limerick centre catchment area was 2.4 per 1 000 population. In the Cork centre it was 1.2 per 1 000 population. This figure is based on admissions to psychiatric hospitals and units for alcohol disorders.

According to the Garda Report 1996, the highest drug use regionally was in Cork City. In 1996 there were 2 885 proceedings nationally under the Misuse of Drugs Act. Of these, 551 were in Cork and 314 in Limerick (city and county in both cases). Ecstasy proceedings accounted for 21% of the total in the Southern Region while it contributed less than 10% to

the total proceedings in all the other Regions. Cannabis, LSD and Ecstasy are the main drugs used and are widely available.<sup>2</sup>

The number of crimes is rather high in **Dresden** city and much higher than in the surrounding county of **Weisseritz**. Through the last years, however, rates of crime have been increasing both in the city and in the county. Survey figures are not available for the number of alcohol-dependent persons in the area. Estimates for Germany as a whole suggest that some 3 per cent of the population are alcoholics in need of treatment. As to drug abuse, there are extreme differences between the various regions, and the average figures for Saxony as a whole cannot be used to say anything about the problem in e.g. Dresden.

Data on abuse are not available for the **Gent** catchment area, and the figure for crime reported in table 7 is only an estimate.

Data on crime and abuse are not available for the **Innsbruck** catchment area; the figures for crime are for the region of Tyrol and the figures for abuse are national estimates based on general population surveys in Austria.

Drug abuse in the **Oxford** area has increased markedly in recent years, school surveys showing that approximately half have used drugs of some kind at some time. There has also been a rise in alcohol abuse among the young, especially girls.

Information on crime rates in the **Leiden** area has to be gathered from statistics on the rates in the provinces and for cities with more than 50 000 inhabitants. In the South Holland province, 249 586 crimes were reported to the police in 1984: 228 961 for violations of the Criminal Law Act, 18 336 for violations of the Traffic Law Act and 1 322 for violations of the Narcotics Law Act. The number of crimes per 100 000 inhabitants was 7 919 against the national average of 7 409. Only the province of North Holland (which includes Amsterdam) had a higher crime rate. Of the 228 961 violations of the Criminal Law Act, 28 469 were violent crimes, 2 558 sexual and 197 441 crimes against property. In South Holland, 13 933 (21%) of the 66 818 suspects in crimes reported to the police were aged under 18 years; this percentage is only slightly higher than the national average of 18 per cent.

In the Netherlands, alcoholism and drug abuse are considered alarming phenomena. A nationwide campaign against alcohol abuse was started recently. Between 100 000 and 400 000 people are dependent on alcohol (0.7% to 2.8% of the population, according to the definition used). Alcoholism seems to be spread fairly uniformly all over the country, and the estimate is therefore probably also valid for the catchment area. Drug abuse (especially of

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<sup>2</sup> An Garda Síochána. Annual Report, 1996.

Smoking, Alcohol and Drug Use in Cork and Kerry. Southern Health Board. Department of Public Health, 1997.



such hard drugs as heroin and cocaine) is, however, concentrated in the metropolitan areas of Amsterdam and Rotterdam.

In **Rennes**, the annual incidence of crime is much lower than in the country as a whole, namely 2.2 per 1 000 inhabitants. As for drugs, the catchment area is also less touched than the rest of France (0.5 per 1 000 versus 1.2), and it is generally acknowledged that violence is rather rare in the area.

Rennes is located in a region that is known traditionally to have a high consumption of alcohol, but the habits are rapidly changing. The consumption of alcohol has been decreasing in France for the last 30 years, and in particular in Brittany. As a result the number of alcohol related diseases, and in consequence deaths, are also going down.

In **Würzburg**, the police recorded 11 319 criminal offences in 1987, i.e. 43 per 1 000 inhabitants. Today the incidence is 89 per 1 000, which is a doubling over the last ten years. In the city, one quarter of the offences were committed by people below 18 years; in the surrounding areas only about one tenth of the suspects were that young. Juvenile delinquency was clearly concentrated in two specific areas within the city.

No data on alcoholism and drug abuse are available for the catchment area, so older statistical information from a wider area covering two other counties is therefore used. In 1987 more than 300 people with alcohol dependence or abuse contacted the Caritas Welfare Centre, which specializes in alcohol problems in the region. Most of the clients were between 30 and 50 years of age. The Municipal Drug Welfare Centre saw 650 clients, of whom 40 per cent were heroin addicts. Every year there are about 100 new heroin-addicted clients. The police estimate that there are about 1 500 drug addicts within the region (the three counties). One of the reasons for the relatively high number of addicts in the area is that it is close to Frankfurt, a centre of the international drug trade. No separate data for the city and the countryside are available, but it is known that the drug problem is not restricted to urban areas.

In **Mamak**, the number of crimes reported per 1 000 inhabitants is about 6.5; the figure is based on police records of reported crimes. The number of abusers of alcohol per 1 000 inhabitants was found to be 9.0 in a part of Mamak which is representative of the region. Alcohol consumption in Turkey is quite low, but it is more prevalent in metropolitan cities. Data on substance abuse is available neither for Ankara nor for the whole country. However, an increasing trend has been observed in substance abuse, particularly the use of inhalants, among adolescents.

In **Kiev**, close to 12 crimes per 1 000 were reported during 1997; of these close to five were crimes of violence. The frequency of alcohol abuse is measured by the number of

*patients* with chronic alcoholism which is about 10 per 1 000. Drug abusers comprise 1.2 per 1 000 inhabitants.

Criminal offences have increased in **Slovenia** in the last few years. For the year 1997, the police reported 32.313 cases, which is a 2.2% increase from the previous year (24 per 1 000 inhabitants).

Alcoholism and medicine abuse are long lasting problems in Slovenia, while drug abuse is a relatively new problem (for the last twenty years) for this society. All drugs are prohibited in Slovenia, but the number of young and very young users (below 15 years) is increasing every year. The official data concerning the use and abuse of and the addiction to alcohol are not available, but the unofficial figures are very high (11.4 litres of pure alcohol per year per inhabitant!). The estimated number of alcohol abusers in Slovenia is 140.000 (7%) and the Slovenian figure of liver cirrhosis (31.9 per 100.000 in 1996) is one of the highest in Europe. The largest consumption of alcohol is recorded in the vineyard regions, where the unofficial production (and consumption) of brandy takes place (no official data available). In these regions suicide and alcohol abuse are very tightly connected.

In **Novi Sad**, social conditions have worsened a great deal since 1991 due to the well-known happenings in the former Yugoslavia. Although new statistics are not yet available, it is evident that unemployment has risen very much, that per capita income has dropped significantly and the social welfare system is falling apart due to insufficient funds. Crime has been on the rise, as well as drug abuse, although drug abuse is not yet as widely spread as alcohol abuse, which has always been a significant problem in the area.

In **Odessa** more than 13 crimes per 1 000 were reported during 1997; of these close to 1 per 1 000 was a crime of violence. The rate of alcohol abuse is measured by the number of patients with chronic alcoholism, which is 26 per 1 000. According to registration of death caused by alcohol poisoning there has been a continuous increase the last 10 years - for instance from 5.6% in 1990 to 12.0% in 1998 of the total numbers of deaths. Drug abusers comprise 6.6 per 1 000 inhabitants. Odessa is now the most vulnerable city in Ukraine in this respect. Opiates, particularly home made, have become widely used among drug abusers.

In **Riga**, the incidence of crime has increased and it is now 21.6 per 1 000 inhabitants. Eighteen per cent of the offenses were committed by people below the age of 18 years.

Alcohol is practically the only intoxicant abused in Latvia and alcoholism has become a serious problem throughout the country. Analyses on sales of alcoholic beverages in litres could indicate a decrease in the consumption since the 1980s, but the picture changes if home made and illegally imported beverages are included. According to registrations of death caused by alcohol poisoning, there has been a continuous increase during the last 10 years. Data on substance abuse are not yet available for Riga.

In Estonia, the incidence of crime increased after 1989, reached a maximum in 1994, and then decreased. Approximately half of the offences are committed in **Tallinn** although the city only houses one third of the Estonian population. The number of offences committed by juveniles comprises about one fifth of all offences.

Alcohol is the main intoxicant widely used in Estonia. In 1995, the number of registered deaths by alcohol intoxication was 23. Drug abuse is a new and very rapidly increasing problem among the young, and all kinds of narcotics have become available on the black market during the last three years.

In **Vilnius** the annual incidence of crime is about 20 per 1 000 inhabitants; the incidence of crime of violence is about 6 per 1 000. Over the past 10 years the general crime level has gone up by more than 350%. Nearly half of all convicted criminal offenders are between the ages of 14 and 24.

Alcohol consumption nearly doubled during the decade. Data on substance abuse are not yet available for Vilnius.

In **Padua**, the police reported 1 170 arrests in 1988. The incidence of crime in Padua (39 per 1 000 population per year) is less than half the national average. There are 189 abusers of alcohol per 1 000 population per year, and the Veneto region has the second highest per capita alcohol consumption in Italy. Drug abuse seems to be an increasing problem: each year about 150 - 180 new drug addicts are treated at the centre for drug addiction. The number of deaths from overdose almost doubled in one year, from 14 in 1987 to 27 in 1988 (7 per 100 000 population per year). There are 4.8 heroin abusers per 1 000 population.

In **Holon & Bat-Yam** the annual incidence of crime is about 39 per 1 000 inhabitants; the incidence of crime of violence is only 3 per 1 000, which is lower than for Israel as a whole. Drugs - also including marijuana and hashish - are forbidden by law. Consumption of alcohol is known to be lower than in Europe. However, alcohol consumption has been increasing in the last years, partly because of the youngsters spending more time in pubs and discos, partly because of the large immigration waves from countries with different drinking habits, such as the former USSR.

## HEALTH AND HEALTH CARE

Some general indicators used to describe health conditions are presented in Table 8. The figures on life expectancy show the familiar pattern that women live 6 - 8 years longer than men. Life expectancy varies among the centres, however, by about 10 years for both men and women. It is lowest in Riga (60.7 years for men, 72.9 for women) and highest in Innsbruck (75.5 years for men, 81.6 for women). The low life expectancy in Riga may be related to the high infant mortality. The mortality rates vary, but comparison is difficult as the rates are not standardized. All centres report cardiovascular diseases as the most frequent cause of death, followed by malignant neoplasms. Little information is available on the prevalence of mental disorders, but most centres say that the number of psychiatric patients is increasing.

Being healthy or feeling well are very personal feelings that are affected by the prevailing social conditions, habits and norms. Perceptions and endurance of pain and suffering may differ, not only from person to person but more systematically over time and from place to place. For instance, recent studies in Denmark indicate that the threshold of pain tolerance is declining and that most people are becoming more insistent on being treated for even minor ailments and handicaps. Neither the information in Table 8 nor the registration of various diseases do therefore in themselves of necessity portray adequately the general health conditions as they are experienced and perceived by the people involved.

In most European countries, health care services are provided free of charge or at reduced cost, and a national or regional administrative body is responsible for the services. Compensation for loss of income due to sickness, accident or disability is usually regulated by law and provided by public insurance. In this respect, all the centres participating in the study represent their national standard. This may not, however, be the case for the quantity of services. Table 9 shows that there are considerable variations in the quantitative level of services available.

Health care in **Finland** is mainly a public service under the responsibility of the municipalities. However, most towns also have private practitioners and clinics. The health care system is hierarchical. People go first to the local health centre, which, according to the Primary Health Care Act of 1972, is responsible for all primary care in a district, including primary treatment, screening, mother and child health care, dental care, health education, ambulances, occupational health care, medical rehabilitation and the first-aid set-up in the area.

Table 8. Health indicators.

	Life expectancy at 0 years of age <sup>a</sup>	Total mortality rate per 100 000 per year <sup>a</sup>	Total fertility	Infant mortality per 1000 live births <sup>a</sup>	Percentage of population receiving disability pension
<b>Northern Europe</b>					
Helsinki, Finland	75.5 <sup>1</sup>	927/1028 <sup>2</sup>	46.4 <sup>2</sup>	4.0/2.4 <sup>2,3</sup>	5.6 <sup>2,4</sup>
Odense, Denmark	71.9/77.6	1 210 <sup>5</sup>	1 807 <sup>5,6</sup>	5.0 <sup>5</sup>	8.1 <sup>5</sup>
Stockholm, Sweden	74.0/80.1	886	1.62 <sup>25</sup>	4.6	5.8
Sør-Trøndelag, Norway	73.1/79.5 <sup>7</sup>	1 025	56.6 <sup>26</sup>	7.7 <sup>7</sup>	5.5
Umeå, Sweden	75.5/80.8 <sup>8</sup>	1 000 <sup>5</sup>	1.3 <sup>2</sup>	4.9/4.0 <sup>2</sup>	7.7 <sup>9,10</sup>
<b>Mid-Western Europe</b>					
Bern, Switzerland	75.1/81.6	900	1.5 <sup>11</sup>	4.7 <sup>26</sup>	6.0 <sup>26</sup>
Cork, Ireland	73.2/78.7 <sup>12</sup>	962	59.7 <sup>27</sup>	6.2	4.1 <sup>12</sup>
Limerick, Ireland	73.2/78.7 <sup>12</sup>	941	61.4 <sup>27</sup>	5.1	4.1 <sup>12</sup>
Dresden City, Germany	71.1/78.8 <sup>13</sup>	1 258 <sup>13</sup>	782 <sup>13</sup>	6.2/6.0 <sup>14</sup>	6.3 <sup>13,15</sup>
Weisseritz County, Germany	71.1/78.8 <sup>13</sup>	1 258 <sup>13</sup>	782 <sup>13</sup>	6.2/6.0 <sup>14</sup>	6.3 <sup>13,15</sup>
Gent, Belgium	74.6/80.7 <sup>16</sup>	1060/1066	1.7	7.3	1.3
Innsbruck/Stadt, Austria	75.5/81.6 <sup>23</sup>	800 <sup>23</sup>	1.4 <sup>23</sup>	6.4 <sup>17</sup>	5.2 <sup>24</sup>
Innsbruck/Land, Austria	75.5/81.6 <sup>23</sup>	800 <sup>23</sup>	1.4 <sup>23</sup>	5.3 <sup>17</sup>	5.2 <sup>24</sup>
Oxford, England	73.8/79.2	825/904	56.1 <sup>18, 25</sup>	4.4/3.1	NA
Leiden, The Netherlands <sup>21</sup>	73.1/79.6	900/1770	NA	7.6	5.4
Rennes, France	73.3/81.1	840/746	1.8	6.6 <sup>19</sup>	6.6
Würzburg, Germany	72.8/79.3 <sup>20</sup>	1160/852	1345.3 <sup>29</sup>	5.7/6.7	NA
<b>Central Eastern Europe</b>					
Kiev, Ukraine	63.0/72.0	904/864	26.4	12.8	3.8
Ljubljana, Slovenia	69.4/77.3	844	32.3 <sup>28</sup>	3.4	4.9 <sup>28</sup>
Novi Sad, Yugoslavia	66.7/74.1	1 090	45.9	11.0	
Odessa, Ukraine	65.5	795/735	2.6	15.9	2.9
Pecs, Hungary	65.3/74.5	1723/1276	40.06	10.7/9.3	7.9
Riga, Latvia	60.7/72.9	1878/1433	1.4	15.9/14.4	5.0
Tallinn, Estonia <sup>26</sup>	64.5/75.5	1408/1196	1.3	12.4/8.2	3.9
Vilnius, Lithuania <sup>26</sup>	65.0/76.1	1310/1020	1.4	10.0	3.6
<b>Southern Europe</b>					
Holon & Bat-Yam, Israel	75.5/79.5 <sup>12</sup>	786	47.4 <sup>18</sup>	6.2 <sup>22</sup>	2
Mamak, Turkey	65.9/70.5	650	2.1 <sup>30</sup>	6.2 <sup>12</sup>	NA
Padua, Italy	73.5/80.2 <sup>12</sup>	991	30.5	11.3	NA

<sup>a</sup> Two numbers indicate males/females.<sup>1</sup> 1991-1994<sup>2</sup> 1994<sup>3</sup> Under 1 year<sup>4</sup> Ages 15 - 64<sup>5</sup> 1995<sup>6</sup> Rate per 100 000<sup>7</sup> 1986-1990<sup>8</sup> 1993<sup>9</sup> Ages 16 - 64<sup>10</sup> Jan. 1996<sup>11</sup> Mean number of children per \_ 15 - 49<sup>12</sup> National figures<sup>13</sup> All of Saxony - 1993<sup>14</sup> Provincial Administrative District Dresden<sup>15</sup> Severely handicapped (% of the total population)<sup>16</sup> Gent District (487 220 inhabitants), 1994<sup>17</sup> Average from 1991-1997.<sup>18</sup> Live births per 1000 women aged 15-44 years.<sup>19</sup> Data only available for 19 cantons out of 26<sup>20</sup> From year 1992/1994<sup>21</sup> 1990<sup>22</sup> 1991-1993<sup>23</sup> Tyrol 1997<sup>24</sup> National figure 1995<sup>25</sup> 1997<sup>26</sup> 1996<sup>27</sup> 1991<sup>28</sup> National figure 1997<sup>29</sup> Bavarian figure<sup>30</sup> Ankara, 1990

Table 9. Health care facilities in the catchment areas.

	Number of general hospitals	Number of beds in somatic departments per 1000 inhabitants	Number of psychiatric hospitals	Number of beds in psychiatric departments per 1000 inhabitants	Number of patients per general practitioner
<b>Northern Europe</b>					
Helsinki, Finland	13	9.1	2	1.6	2 173
Odense, Denmark	9 <sup>1</sup>	5.4 <sup>2, 14</sup>	3	1.1 <sup>2, 14</sup>	1 432 <sup>2, 14</sup>
Stockholm, Sweden	1	5.2	0	1.0	2 100
Sør-Trøndelag, Norway	3	3.7	1	1.6 <sup>1</sup>	1 341 <sup>9</sup>
Umeå, Sweden	3	6.2 <sup>3</sup>	0 <sup>4</sup>	1.0 <sup>3</sup>	2 500
<b>Mid-Western Europe</b>					
Bern, Switzerland	7	6.1 <sup>5</sup>	2	1.7 <sup>5</sup>	710
Cork, Ireland	7	3.5	3	1.4	2 000
Limerick, Ireland	6	2.6	2	1.3	2 000
Dresden City, Germany	7	7.5	4 <sup>7</sup>	0.7	NA
Weisseritz County, Germany	3	4.5	0 <sup>8</sup>	NA <sup>8</sup>	NA
Gent, Belgium	8	13.2	4	3.5	790
Innsbruck/Stadt, Austria	1 <sup>12</sup>	3.0 <sup>11,12</sup>	1 <sup>6, 12</sup>	1.3 <sup>12</sup>	966 <sup>12</sup>
Innsbruck/Land, Austria	3 <sup>10,12</sup>	3.0 <sup>12</sup>	1 <sup>12</sup>	1.8 <sup>12</sup>	1 776 <sup>12</sup>
Oxford, England	4	2.8	3	0.5	1 933
Leiden, The Netherlands <sup>15</sup>	3	4.5	3	3.1	2 550
Rennes, France	7	4.2	2	2.5	720
Würzburg, Germany	21	9.8	2	0.6	1 000
<b>Central Eastern Europe</b>					
Kiev, Ukraine	5	12.1	1	0.8	2 780
Ljubljana, Slovenia	1	9.6	1	1.8	1 503
Novi Sad, Yugoslavia	0	4.4	1	0.6	5 486
Odessa, Ukraine	10	10.7	2	2.9	2 750
Pecs, Hungary	3	15.5	2 depts.	0.4	1 354
Riga, Latvia	13	12.4	1	1.1	
Tallinn, Estonia <sup>13</sup>	19	6.4	1	1.2	1 619
Vilnius, Lithuania	18	13.8	2	1.3	NA
<b>Southern Europe</b>					
Holon & Bat-Yam, Israel	1	1.5	1	1.3	NA
Mamak, Turkey	2	3.4	1	0.3	1 602
Padua, Italy	3	15.0	3 <sup>6</sup>	0.3	1 280

<sup>1</sup> 1991<sup>2</sup> 1994<sup>3</sup> 1993<sup>4</sup> Last ward closed 1996<sup>5</sup> Switzerland<sup>6</sup> Psychiatric Wards<sup>7</sup> Care also provided by 1 hospital outside the city<sup>8</sup> Complete care by hospital in neighbouring county<sup>9</sup> 1997<sup>10</sup> Including two hospitals for specialized treatment.<sup>11</sup> The University Clinic of Innsbruck has to provide basis and specialized medical care for the whole of the Tyrol. Thus, the ratio is misleading.<sup>12</sup> 1999<sup>13</sup> 1996<sup>14</sup> National figure<sup>15</sup> 1990

Mental health care is provided according to the same principle: people's primary contact if they have mental health problems is the local health centre, and from there people are referred to the mental health centre of the district.

Primary care developed strongly after the Primary Health Care Act was passed in 1972. The changes started in the northern and eastern parts of Finland, and gradually the reform was introduced in the southern part. However, resources ran out before the reforms could be implemented in the Helsinki area, and consequently private health care has played an important role in the health care system in Helsinki, as private treatment has often been the only way to see a doctor within a reasonable period of time. Sickness insurance, which is similar to the public insurance in the other Nordic countries, refunds 60 per cent of private practitioners' fees; in some cases, fees for laboratory tests and physiotherapy are reimbursed too.

**Helsinki** is divided into seven health care service districts with 25 local health care centres, each centre being responsible for about 20 000 inhabitants. Helsinki University Hospital is in the catchment area, as are several other general hospitals and two mental hospitals. Many health services are available, but a considerable proportion is private. Since the beginning of the 1990s, the resources for health care have been diminished. There is a tendency towards outpatient treatment, and hospital inpatient days have decreased, especially for psychiatric treatment. A total of 5 523 hospital beds were available in 1995, of which 834 were in psychiatric wards. There were 9.1 beds in somatic and 1.6 beds in psychiatric departments per 1 000 inhabitants.

The health service system in **Denmark** comprises almost entirely public or semi-public facilities, either paid directly or reimbursed by the public health insurance. The health service system has two levels: the primary sector and the hospital sector. The primary sector includes services by GPs, private specialists and pharmacies, and various municipality services such as home nursing, health visitors, nursing homes and old peoples homes. Access to GPs is easy in Denmark because they are evenly dispersed geographically and because there are relatively few patients per practitioner (on average 1 500). The private specialists mostly practise in the towns, but the distances to the nearest specialist are usually relatively short. Most specialists, however, have waiting lists. Psychologists mostly work at hospitals. A few operate in private practice, but as the public health care system does not pay for psychologists' services (as they do for GPs and specialists) except in special cases, these services are rather expensive.

The hospital sector comprises hospitals and other treatment institutions and is mostly run by the counties. All treatment is free of charge. During later years, private clinics and hospitals have been established; fees are here paid by private insurance.

In accordance with the rules of the public health insurance, all Danish citizens are entitled to free general practice consultations, provided that they are registered at a GP's practice (chosen for a period of at least one year). Tests, treatment, specialist services, home nursing and other services prescribed by the GP are partly refunded by the public insurance. In addition, many people have a private insurance that covers the part not paid by the public insurance, and also some specific extra services. People who do not want to be obligated to contact one particular GP only or who want to contact any specialist directly can do so by a special agreement at a charge of 25% of the fees (which can be paid by private insurance).

Employees have two days' sick leave (paid by the employer) without loss of income. Thereafter, loss of income is compensated by public insurance at 90 per cent of the usual income up to a certain maximum equal to that of the unemployment benefit. However, as part of their contract, many salaried workers are entitled to full pay during sickness for at least three months a year. Self-employed people are also entitled to public insurance in accordance with the same rules, but many are also covered by private insurance. Permanently disabled people are eligible for public pensions.

The main hospital in the **Odense** catchment area is Odense University Hospital, one of the biggest hospitals in Denmark with more than 7 000 employees. The catchment area of the hospital covers almost half the population of Funen county; in addition, people from the rest of the county and from neighbouring counties are referred to it for specialized treatment. The area also has eight small hospitals, two of these having departments of psychiatry. The total capacity at the departments of psychiatry is 506 beds, 1 per 1 000 inhabitants. Elderly with mental health problems are usually referred to other special institutions or to sheltered homes. Psychiatric treatment is also offered at well developed outpatient clinics, and for mentally retarded people there is a home with 228 beds. In addition, special clinics for alcoholics are affiliated with the various departments of psychiatry. During the last decade, centres for community psychiatry have been established. These centres are formally part of the hospital sector but operate at the primary level.

In the county there are also several small private recreation centres or homes and other institutions for which the public health insurance fully or partly reimburses the fees. The most important ones are a sanatorium for people with neurotic disorders (located in a neighbouring county) in which Funen County has 10 beds and an alcohol treatment centre with a capacity of 54 patients. The Odense catchment area has 317 GPs; the number of patients per GP varies from below 1 000 to just above 1 500 (average 1 432). Most people's GPs are within 10 km of their homes.

Most of the health care in **Sweden** is governed by national legislation and provided under the responsibility of the county councils. Each municipality constitutes a primary health care district with clinic(s) staffed by district GPs and nurses serving the needs of the local



population. Each health care district also has a nursing home. As in Norway, personal costs connected with treatment are mostly paid for by public means. Compensation for income lost because of sickness is covered by public insurance, and permanently disabled people are entitled to a pension.

In the **Umeå** catchment area (Västerbotten County), the hospital services are centred at the university hospital in Umeå and at two smaller hospitals in the two other towns in the area, Skellefteå and Lycksele. Up till the '80s, psychiatric care was concentrated in Umeå at the Umedalen Mental Hospital or at the University Psychiatric Clinic, but care has been decentralized with the establishment of psychiatric clinics at all the hospitals and, after closing the mental hospital, psychiatric outpatient units (community psychiatry) in various parts of the area. Only a few doctors in the area work as private practitioners (specialists), and all hospitals are public.

Västerbotten County is one of the largest counties in Sweden, comprising both densely and sparsely populated areas with highly different features. The health care system therefore provides a very broad variety of services, from advanced treatment at the university hospital to primary care by district nurses. The amount of care provided is higher than in the rest of Sweden for somatic treatment, but not for psychiatric inpatient treatment.

In the **Stockholm** catchment area, the main hospital is Huddinge University Hospital, one of the largest hospitals in Sweden. Some residents of the district receive psychiatric care in hospitals outside the area. The area also has numerous district health care centres. The range of health services available is by usual Swedish standards.

The health care system in **Norway** is mostly publicly financed. The counties run nearly all hospitals and are also responsible for specialist services. The municipal councils are responsible for general practitioners' services (including night-duty services), nursing and physiotherapy. The task may be accomplished by employing health personnel or by contracting with self-employed health workers. Formally, the municipalities are responsible for the costs, but the expenses are paid by subsidies granted by the national government (block grants and reimbursement).

Public insurance (the National Insurance Scheme) pays most of the personal costs connected with sickness and accidents, and individuals or private insurance pay a minor part. Only expenses exceeding NOK 800 per year are refunded. In the event of sickness, all employees receive a benefit equal to their regular income up to a maximum of six times the basic amount of the national insurance. The National Insurance Scheme administers this scheme through its local offices. The employers pay for the first two weeks of absence. Self-employed people are not compensated for the first two weeks; thereafter they receive a benefit equal to 65% of their regular income. In general, people can receive sick benefit for

one year. After that, further benefits may be granted in connection with a need for special medical treatment and/or vocational rehabilitation or the patient may be referred to disability pension or early-retirement pension. A person is entitled to early retirement pension if his or her capacity to work is permanently reduced by at least 50% because of sickness, injury or disability. People who are born disabled or lose at least half their capacity to work before the age of 21 years also receive a supplementary pension.

The largest hospital in **Sør-Trøndelag** is the Regional Hospital, a university hospital situated in Trondheim. Two small hospitals are located in Orkanger and Røros. Sør-Trøndelag has 3.7 beds in somatic departments per 1 000 inhabitants. Psychiatric departments or institutions have 1.6 beds per 1 000 inhabitants. For each health service employee, there are 317 inhabitants in the county. The population/health personnel ratio and the number of beds in hospitals per capita are close to the national average; the number of physicians per capita is, however, somewhat lower in Sør-Trøndelag than in Norway as a whole.

Medical services in **Switzerland** are basically private, although most hospitals are heavily supported by the state. People are requested to belong to private sickness insurance schemes that cover outpatient and inpatient care. There is a free choice of doctors and hospitals, and many patients consult more than one doctor. Patients are free to make appointments with medical specialists (such as psychiatrists). The GPs of Berne offer a 24-hour emergency service covered by a duty scheme in which all the practitioners participate. Practitioners in the suburban areas have their own on-call schemes.

The main hospital in the **Berne** catchment area is the University Hospital of Berne with 1 072 beds. The hospital includes all relevant somatic departments and a psychiatric department that also provides outpatient care, liaison services and community care. There are two other public hospitals in the city and six private hospitals in the catchment area.

The psychiatric services comprise one psychiatric hospital with 486 beds, which admits 1 800 people per year, a social psychiatric clinic, which provides community-based outpatient services and has a crisis-intervention ward (1 000 outpatients and inpatients per year); one outpatient and liaison service that treats 3 500 patients per year, and one psychiatric service for children and adolescents with 320 outpatients and 17 inpatients per year. The catchment area has a small psychiatric service for drug addicts. Berne has a high number of practising private psychiatrists (ca. 130). The psychology department of the University of Berne has a counselling service, and 90 psychologists practise in the area.

The health services in **Ireland** are provided and administered under the provisions of various Acts and Regulations by a wide range of bodies and institutions, which are under the general control and direction of the Minister for Health and his Department. The control is

exercised by the Minister mainly by way of general guidelines and budgetary controls, whereas the departments are more oriented towards policy formulation and forward planning for health services in the overall context of social and economic developments.

A number of special bodies were established under the Health Act 1970 and were given specific functions relating to the co-ordination and control of developments in the health services in both voluntary hospitals and hospitals managed by the health boards. The body with the most significant role as far as health boards are concerned is the Hospitals' Council, which is a national body. Its primary function is to regulate the number and type of consultant and medical staff in health board and voluntary hospitals. It also advises the minister on questions on hospital services.

Both the Mid-Western and the Southern Health Boards were established on 1971. They have responsibility for the administration and provision of health services in Limerick city and county, and Cork city and county (and the counties Clare, Kerry and Tipperary North Riding). Outside the cities of Cork and Limerick there are several community hospitals serving the rural parts of the catchment area - but these are not included in the figures in Table 9.

Health care in **Germany** is based on insurance, with a mixture of public, cooperative and privately run health insurance schemes. Almost everyone is required to belong to one of these schemes. Most employed people are members of regionally organized public insurance schemes, the insurance covering family members with no income as well. Health insurance usually covers the costs of most services, but to reduce increases in insurance rates, patients are increasingly being required to pay a share of the cost of services. For people who receive social welfare support, the welfare office also pays the cost of medical treatment.

The health insurance schemes have contracts with the suppliers of medical services, which are also either public or private. Hospitals are run by various public agencies, non-profit organisations or as private enterprises. Physicians work in private practices, and people usually have their own GPs, who refer patients to a specialist or to a hospital if necessary.

In the city of **Würzburg** there are 10 hospitals with close to 3 000 beds. The county also has an additional hospital with 170 beds. The psychiatric hospital of the University of Würzburg has an average of 1 300 inpatients per year. About the same number of patients are seen on an outpatient basis or in a liaison service. Two other psychiatric hospitals just outside the county treat many of the patients from the catchment area. The University also has a psychiatric hospital for children and adolescents: about 200 children per year are treated as inpatients and 200 as outpatients.

**Dresden** has 8 hospitals with a total of 3 740 beds, and in **Weisseritz** county there are 2 hospitals with 512 beds, organized in accordance with the 3rd stage of the Hospital Plan for the Free State of Saxony. Included in this plan is also the multiple-speciality, privately operated AHB-Hospital Bavaria Kreischa with 50 acute neurology beds. Psychiatric treatment is offered at several hospitals, including the University Psychiatric Hospital of Dresden. In Weisseritz county, complete inpatient psychiatric care is available only at the Saxon Hospital Arnsdorf.

Social psychiatric services have been established in both the city of Dresden and in Weisseritz county.

In **Belgium**, every inhabitant is legally obliged to have a health and disability insurance with an insurance company. These insurance companies are partly supported by the state and different from other types of insurance companies (such as for cars or fire). All inhabitants are entitled to medical service and to choose their own GP and specialist. People have to pay about 25 per cent of the cost themselves - usually, more than half the cost for medical service is paid via the insurance. Sick benefits amounting to a certain percentage of the salary are also paid by the insurance companies. After one year of sickness, disability benefit is granted. This amounts to 40-45 per cent of the salary for singles and 65 per cent for heads of family.

The somatic and health services and facilities in the **Gent** area include eight general hospitals, four psychiatric hospitals, and 288 GPs. The University Hospital is the largest hospital and it also has a psychiatric department with 90 beds. Besides the University Hospital, there is another general hospital with a psychiatric department (30 beds). The psychiatric hospitals are founded by religious institutions; these institutions still have a big influence on the management of the hospitals.

For outpatient mental health care there are specialized centres (DGGZ). A payment is charged in accordance with the patient's salary. There is also a network of private psychotherapists, psychologist, and psychiatrists, but these are more expensive.

In **Austria** almost every economically active person is a member of the public social insurance system, which includes health, accident, old-age and unemployment insurance. Health and accident insurance also covers family members. The insurance system usually covers the costs for all medical services and remedies. Several health insurance companies provide cash benefits. In the **Innsbruck** catchment areas the most important of these is the Tyrol Provincial Sickness Fund, but there are also special insurance companies for farmers, teachers, employees at the federal railways, etc. GPs provide medical care and can refer people to a specialist or a hospital.

The largest hospital in the catchment area is the University Hospital in Innsbruck, which is also the provincial hospital responsible for basic medical services in the Tyrol. Its catchment area extends to the neighbouring provinces and southern Tyrol. The hospital has 1 700 beds, the district hospital in Hall 235 beds, the provincial hospital in Natters 206 beds, and the provincial hospital in Hochzirl 120 beds. The provincial psychiatric hospital in Hall offers 830 beds for acute and chronic psychiatric patients. There are 2 sanatoria with 330 beds. In all 3 421 hospital beds are available in the Innsbruck catchment area. A number of psychiatric care services for different population groups are available. There are several public and private services for emergency care, such as outpatient departments and telephone services. The catchment area has facilities for the professional rehabilitation and social reintegration of mentally ill people, and homes and mobile services for old and disabled people (taxi service, home nursing, catering service and emergency alarm system). Public, private and church counselling services have been established for homeless people and for people who have been released from prison. During the past few years, several social occupational services have been established. There are counselling services and therapy centres for people with alcohol and drug problems (groups of Alcoholics Anonymous) and for people with AIDS. Further, there are counselling services for families, pregnant women and adolescents as well as women's shelters. The number of self-care groups (e.g. for homosexuals or people with bulimia, enterostomy, mucoviscidosis or cancer) is continually increasing.

The main health system in **England** is the National Health Service which is funded through taxation. Everybody in the population has the right of access to free health care. Nearly everyone is registered with a general practitioner. This care is provided free, except for the cost of medication which attracts a standard charge per item. The private health care system, often funded for individuals through private health schemes or company health schemes, is expanding. Increasing waiting lists for NHS hospital treatment is one factor in this trend. Hospitals are now run by trusts, each with its own management structure. The main policies for local health care are decided by local departments of public health, but from April 1999 there will be a major shift to primary care groups having this responsibility.

Health care in **the Netherlands** originated mainly from private initiatives, usually on a charitable basis. The sick were first cared for by monastic orders, and Catholic and Protestant hospitals, services and nursing homes still exist today. Health care facilities are, however, also provided by groups organized on nondenominational, Jewish or humanistic lines. Sectarianism has resulted in separate Catholic, Protestant and state hospitals, often situated close together. In recent years, however, such divisions have become considerably less marked and, in general, health services are no longer organized on a sectarian basis.

The history of health care reflects the changing relationship between the government and the private sector. Today, public health is part of the portfolio of the Minister of Welfare, Health and Cultural Affairs. The total cost of health care in the Netherlands amounts to 8.6% of the gross national product. The administrative and executive powers for health care are vested by legislation in both the municipal and provincial authorities. Thus there are municipal medical services and hospitals and provincial hospitals and mental institutions. The state administers and runs seven of the eight teaching hospitals. The municipal and provincial authorities are responsible for ensuring that the health services they provide comply with national standards.

The Health Care Charges Act is intended to achieve a balanced system of charges. The term 'charges' covers all payments made in return for any form of health care, such as surgery, hospital nursing or the services of a district nurse. The health system has both compulsory national health insurance and voluntary insurance. About 62 per cent of the population is covered by compulsory insurance under the 1966 Health Insurance Act. Health insurance is compulsory for people whose income is under a certain ceiling (the employee and employer each pay one half of the premium) and for people below the age of 65 receiving such benefits as disability pension, unemployment benefit or social assistance. Non-employed spouses and children are insured free of charge. People not insured under the Health Insurance Scheme can take out various private insurance policies.

The Exceptional Medical Expenses (Compensation) Act provides for a national scheme under which everyone is insured regardless of income. The Act covers expenses incurred because of long-term illness or serious disability that may be difficult to insure and for which the patient cannot pay. Care in hospitals (including psychiatric hospitals) for more than 365 days is covered by this Act, as are stays at nursing homes, institutions for mentally handicapped people, children's homes, hostels for handicapped people, etc. Part of the premium is graduated according to income. The employer pays the full premium for employees.

Every inhabitant of the Netherlands is entitled to free assistance from one of 59 regional institutes for outpatient mental health care (RIAGG). Psychotherapy is excepted, as a small charge is made. Each RIAGG has a catchment area of 150 000 to 300 000 inhabitants. RIAGGs are organizations with their own management, independent of the state, church or local authorities and funded under the Exceptional Medical Expenses Act. Besides the RIAGGs, many non- or quasi-governmental organizations provide specialized health care and social work assistance, such as treating alcohol- and drug-related problems, birth control and sexuality (the Rutgershuis), telephone hotlines and support for juvenile runaways, former psychiatric patients, non-citizens, etc. Some of these organisations are (partly) run by volunteers.

The somatic and mental health services and facilities in the **Leiden** catchment area include three general hospitals, three psychiatric hospitals and about 135 GPs. The average number of inhabitants per GP is 2550 (the national average is 2450). Being a state hospital with a psychiatric department, the University Hospital is the largest general hospital in the catchment area. The Diaconessenhuis is located close to the University Hospital. It was originally a Protestant hospital and is the smallest general hospital in the region. St Elisabeth Hospital in Leiderdorp, originally Roman Catholic, is the second largest general hospital. For educational and research purposes the University Hospital and the Jelgersma Clinic maintain close relationships with each other and with other university departments. The St Bavo Centre is located inside the catchment area, but many patients live outside the area (in Rotterdam and surroundings). As the health care system in the Netherlands is a national system, there are few interregional differences, and the situation in the catchment area is typical of the situation in the Netherlands at large, both regarding health insurance regulations and the number of GPs, hospital beds, etc. per inhabitant.

The **French** welfare system is based on obligatory financial contributions paid by employers and employees. The Social Security also pays totally or partially for most costs connected with old age, unemployment, disability, and sickness (70 per cent of the cost of service by GP, medicine and surgery) - however, some costs are not reimbursed.

France is divided in health zones different from the 'département' and the areas defined by the National Institute of Statistics (INSEE). One 'département' can comprise several health zones, and the **Rennes** catchment area does not correspond to Rennes' health zone.

The largest hospital within the region is situated in the catchment area, namely the university hospital, as well as 2 semi-public hospitals (private hospitals with contracts with the state) and 4 nursing homes.

The health care system in **Turkey** is rather complicated, comprising 5 different sub-systems. A small, but steadily growing one of these systems is based on private insurances. A second sub-system covers civil servants (active or retired), who can use university or state hospitals if referred by the physician at the workplace; if retired, he can go directly without referral. A third sub-system is for the self-employed, who can use almost exclusively state hospitals, and then there is the most common sub-system which is for employees, who have their separate hospitals, but who - if referred - may use university or state hospitals as well. People included in these four systems pay part of the cost of out-patient treatment, but not for tests etc, surgery and treatment in inpatient wards. Finally, there is a fifth and new system for people with very low income who are now treated free in state hospitals.

Since 1961, GPs have been working in small Health Clinics under the Ministry of Health whose aim it is to provide primary and secondary prevention on an outpatient basis. Treatment in these clinics are - regardless of type of insurance - free or at a very low cost. The same goes for Mother-and-Child Health Clinics and Mental Health Clinics. In addition, there are many private health clinics and doctors who have their private, usually specialized, practices. Both these two types of services have been increasing quickly during the 1990's, and also the number of family doctors are growing.

In **Mamak** itself there are two general hospitals, one is a state hospital, the other belongs to the University of Ankara; furthermore, there are 10 Health Clinics and also one Mental Health Clinic. However, as Mamak is integrated into the city of Ankara, people will have as easy access to most other hospitals and clinics as well.

In **Ukraine**, health care services are mostly provided free of charge or at a reduced cost. A national administrative body is responsible for the services. Compensation for loss of income due to sickness, accidents or disability is usually regulated by law. The main medical aid to the population is given in ambulatories, in polyclinics (out-patient clinics) or territorial-medical institutions at the places of dwelling.

There are 97 general hospitals and 3 psychiatric hospitals (with 2765 beds) in **Kiev**. In the Minsk district of Kiev there are five general hospitals and one psychiatric unit with 60 beds. In **Odessa** there are ten general hospitals and 2 psychiatric hospitals.

**Slovenia** has a public insurance which covers most of the costs for health care, sickness absences and accidents for the employed and unemployed citizens. As mentioned above, every employed person and every employer has to pay into the insurance fund. A minor part is paid extra on a voluntary basis. This covers the costs of any kind of health service otherwise not covered by the basic insurance.

In Slovenia, access to GPs is very easy; everybody can choose his/her own doctor (public or private, both covered by insurance), who refers the patient to the required specialist when necessary.

**Ljubljana** has a Clinical Centre with different departments. It is a teaching hospital, attached to the Medical School of the University of Ljubljana, and it has approximately 7 000 employees, 800 of them being physicians of different specialities. It provides the basic health service to the local citizens of Ljubljana and the highest specialized care for the whole of Slovenia.



The University Psychiatric Hospital used to be a part of the Clinical Centre but is now independent. The Clinical Centre is divided into three parts: the outpatient clinic, situated inside the area of the Clinical Centre where all other outpatient clinics are located as well; the Centre for Mental Health, a hospital treating emergency non-psychotic crisis patients - adults and adolescents; and the University Psychiatric Hospital, treating mainly psychotic patients. There is a special unit for drug detoxication and for alcohol treatment within it. The whole hospital has 589 beds and 3 869 admittances per year (1998). The average length of hospitalization is 46 days.

Slovenia has a very good network of outpatient mental health services (the majority being public and free - some are private and not covered by the insurance) available and accessible to everybody by the patient's own choice. In these facilities there are different professionals working in teams such as psychiatrists, psychologists, social workers, etc.

Slovenia has many different telephone crisis services, one of them being situated inside the Centre for Mental Health (working for 19 years already), while the others are spread around all major cities, some of them being specialized in certain problems (drug abuse, battered women, children, etc.).

Due to the economic crisis the quality of health care in **Yugoslavia** has gone down significantly during the last 6 years, the system is no longer able to provide free medication, and people are forced to turn to private pharmacies, which means that many people, in particular retired persons, are not able to get the drugs they need. At present the situation is unknown.

Under the provisions of an act that was put into force on 1st July 1992, health care services in **Hungary** are to be provided through an insurance scheme where every Hungarian citizen has the right to be insured. Employees are insured through the levy of a special tax; pensioners are covered automatically, and children and non-working spouses are also covered. Private companies also pay an insurance contribution. Unemployed people receive an insurance card from the same office that issues unemployment benefits. This applies for one and a half years, after which time the person will apply to the local government. The insurance scheme provides the basic level of care services. Extra services (such as a single room, telephone, etc.) are either paid for directly by the patient or through additional insurance coverage. Medicaments are reimbursed according to different groupings: life-saving medicaments are covered through the insurance scheme, whereas important, but non-vital medicaments are provided against a small financial contribution from the patient. "Luxury" medicaments, such as sleeping pills, which are not required as a result of illness are covered by the patient.

In **Pecs**, there are 3 general hospitals of which two have psychiatric departments.

While the **Latvian** welfare system is slowly transforming into an insurance system, the government continues to finance all health care by subsidies through special institutions in the municipalities, guaranteeing a health care minimum programme. The economic hardships of the country have led to the closing down of small, especially countryside hospitals, and to a significant reduction in the number of GPs.

People go first to the local health centre (polyclinic) that is responsible for all primary care in the district and for the reference of patients to treatment by a specialist or in hospital. Health insurance usually covers the cost of most services.

Psychiatric service in Latvia is separated from general medicine and provided only by specialized hospitals and out-patient institutions. The old regulations on mental health and acts and rules which are not contradictory to the existing laws in Latvia are still in use, but the re-organization of the field has started under the leadership of the Mental Health Care Centre of Latvia (MHCC), which was established in 1993. In 1994, the Cabinet of Ministers accepted a temporary act on health care regulation which includes a part for psychiatry, as well. The Network of Family Physicians has, however, developed only recently and is not yet ready to take over out-patient care of psychiatric patients.

The catchment area of **Riga** has 13 general hospitals and 1 psychiatric hospital with 1000 beds, treating approx. 6 800 patients per year. For child psychiatry there are 30 beds at the somatic hospital for children. The Mental Health Care Centre is seated in Riga. A branch of the MHCC of Latvia is the Crisis and Neurosis Treatment Hospital in Jurmala with 100 beds, including 20 beds for children.

Since restoring independence in 1990, the **Estonian** health care system has been in a process of change from a centralised and state controlled system towards a decentralised system based on health insurance. Health and social services are under the responsibility of the Ministry of Social Affairs. Health care is organised at three levels: primary health care organised at local government level (family physicians, general practitioners, and paediatricians with other assistant medical staff); specialised out- and inpatient care organised at local government level; and specialised out- and inpatient care organised at state level. The health care institutions are public, municipal, or private property.

Health care expenditure is financed by the state health insurance (82%), general taxation (16%), and user charges (2%) (data from 1996). All persons, who have paid social tax or for whom the social tax has been paid by their employers into the state health insurance budget, are covered by mandatory health insurance.

In 1996, there were 30.5 physicians, 47.3 nurses, and 76.5 hospital beds per 10.000 inhabitants.

The **Lithuanian** Law on State Social Insurance, passed in 1991, laid legal foundations for a social insurance system and integrated principles of health insurance into it. The Law on Health Insurance, which became fully effective from June 1997, states that all Lithuanian citizens and permanent residents are insured under mandatory health insurance. Health care institutions were funded in a variety of ways in 1997. Until 1st October funding came from the budget and after that from regional patient accounts. The state guarantees equal accessibility to medical services. Individuals with mandatory health insurance or those insured by the state do not have to pay for medical services. At the present time there is no clear or settled relationship between private and state health care institutions. With the introduction of health insurance and the re-organization of health care institutions into public non-profit facilities, it would be possible to pay both private and state institutions the same DPA rate. However, tariffs are too low and so patients should pay additionally for private services. Psychiatric service is provided by specialized hospitals and out-patient institutions. In 1997, 4.2 per cent of GDP was allocated to the health sector.

Within the **Vilnius** catchment area, there are now 18 general hospitals and 2 psychiatric hospitals.

In **Italy**, the National Health Service provides any required medical service free of charge to all residents of Italy. The country is divided into health districts. Each citizen selects his or her own GP, who is supposed to take care of up to 1 500 patients. Emergency house-call services are available at all times. Specialized outpatient services are also available. Each district has hospital facilities; big hospitals with more specialized departments, such as a university hospital, serve several health districts. There are also several private clinics, most of which cooperate with the National Health Service, and the service costs are reimbursed. **Padua** has 3 general hospitals with 3 psychiatric wards.

The health care system in **Israel** is a mixture of private and governmental activities. The Ministry of Health is in charge, but there are large funds that provide for cost of medical aid along with the funds provided by the Israeli government.

Health insurance is statutory and is paid for by the government and by insurance money paid by the inhabitants through "The National Insurance Company". There are four types of 'Sick Funds'; membership of one of these funds is obligatory, but the choice of fund is free

and can be changed once a year. The funds are obligated to provide most kinds of health care services free of charge.

Hospitals are run by the government, or by the Sick Funds, non-profit organizations or as private enterprises. Mental health care is provided by the Sick Funds in special clinics, mental health hospitals or mental health departments at general hospitals, but private services are also available. In the last two decades, there has been a decline in the number of mental health hospitalizations - probably because of the tendency to shorten psychiatric in-patient hospitalization and treat psychiatric patients in the community.

**Holon and Bat-Yam** catchment areas are being served by one psychiatric hospital and one general hospital which is a state hospital with no psychiatric department. Psychiatric counselling is provided by psychiatrists from the psychiatric hospital which is very close.

## **SUICIDAL BEHAVIOUR AND THE TREATMENT OF SUICIDAL PEOPLE**

The reliability and the comparability of national statistics on suicide have been discussed intensively for many years. Differences in religious and cultural attitudes towards suicide, various registration procedures and practices, and individual variations in determination of the manner of death (often linked to the profession of the investigator) have affected and may still affect the final statistics. According to studies initiated by WHO at the beginning of the 1970's on the reliability of the registration of suicide in a number of European countries, these differences were so great that "... to construct epidemiological or socio-demographic theories about suicide will remain a hazardous occupation until the statistics can be proved" (Brooke 1974). Others have voiced a more optimistic view on the question of reliability. For instance, based on results from several studies on the topic, Peter Sainsbury (1986) concludes that "... the mortality statistics are sufficiently accurate to warrant epidemiologists' using the data to see with which national, demographic, social or other characteristics and their trends they correlate; and thereby not only to test hypotheses about factors predisposing to suicide, but also to identify those groups in a population who are most at risk, and what implications they have for preventive action." And he continues: "Suicide is underreported for a number of reasons, and the rates are subject to many errors of a kind encountered in reporting mortality figures in general. Nevertheless, the findings from studies designed to settle the point indicate that these errors are randomized, at least to an extent that allows epidemiologists profitably to compare rates between countries, within them, and over time".

### **THE FREQUENCY OF SUICIDE**

Trends in the frequency of suicide in Europe gave cause for growing concern in the 1980's and the problem of suicidal behaviour was put on the agenda of the WHO European Regional Office.

Table 10. Suicide per 100 000 of the total population (all ages) by sex in the countries involved in the Multicentre Study according to WHO database, 1989 and the latest year available.

Country	1989			Year	Latest year			Sex ratio (male:female)	
	Male	Female	Total		Male	Female	Total	1989	Latest year
Northern Europe									
Finland	43	11	27	1995	41	11	26	3.9	3.7
Denmark	28	17	23	1996	30	12	21	1.6	2.5
Sweden	27	11	19	1995	21	9	15	2.5	2.3
Norway	22	8	15	1995	19	6	13	2.8	3.2
Mid-Western Europe									
Switzerland	27	11	19	1994	25	10	17	2.5	2.5
Ireland	13	4	8	1993	15	4	10	3.3	3.8
Germany	NA	NA	NA	1995	18	6	12	NA	3.0
Belgium	22	9	15	1992	22	9	15	2.4	2.4
Austria	29	10	20	1996	27	8	18	2.9	3.4
England and Wales	11	3	7	1995	11	3	7	3.7	3.7
The Netherlands	11	7	9	1995	11	6	9	1.6	1.8
France	25	9	17	1994	26	9	17	2.8	2.9
Central Eastern Europe									
Ukraine	33	7	19	1992	37	7	21	4.7	5.3
Slovenia	49	18	33	1995	45	13	28	2.7	3.6
Yugoslavia	NA	NA	NA		NA	NA	NA	NA	NA
Hungary	54	16	35	1995	42	11	26	3.4	3.8
Latvia	36	11	23	1995	69	12	39	3.3	5.8
Estonia	37	12	24	1995	67	13	39	3.1	5.2
Lithuania	46	10	27	1997	77	15	44	4.6	5.3
Southern Europe									
Israel	11	4	7	1994	11	3	7	2.8	3.7
Turkey	3	2	2	1997	4	3	3	1.5	1.4
Italy	8	3	5	1993	9	3	6	2.7	3.0

NA: Not available

Table 11. Data on suicide in the centre catchment areas, latest year available (1991-1997).

	Rates per 100 000 population				Suicide as a percentage of all deaths	Sex ratio male/female
	Year	Male	Female	Total		
<b>Northern Europe</b>						
Helsinki, Finland	1994	48.3	17.8	30.2	3.2	2.3
Odense, Denmark	1996	39.9	15.6	27.5	1.9	2.6
Stockholm, Sweden	1995	20.2	18.0	19.0	1.7	1.1
Sør-Trøndelag, Norway	1995	16.8	4.8	10.7	0.8	3.5
Umeå, Sweden	1994	17.8	7.7	12.7	1.3	2.3
<b>Mid-Western Europe</b>						
Bern, Switzerland	1994	39.2	17.6	27.9	2.4	2.0
Cork, Ireland	1995	26.2	5.6	15.8	1.1	4.7
Limerick, Ireland	1995	21.1	4.4	12.8	1.0	4.5
Dresden City, Germany	1995	28.4	8.6	18.1	2.6 <sup>1</sup>	3.1
Weisseritz County, Germany	1995	28.6	8.5	18.3	2.6 <sup>1</sup>	3.1
Gent, Belgium	1996	42.0	19.0	30.0	2.0	2.4
Innsbruck/Stadt, Austria	1996	41.1 <sup>8</sup>	11.8 <sup>8</sup>	25.6 <sup>8</sup>	2.4 <sup>3</sup>	2.2
Innsbruck/Land, Austria	1991	35.9	18.1	26.9	2.4 <sup>3</sup>	1.9
Oxford, England <sup>2</sup>	1995	16.7	8.0	12.4	1.4	2.1
Leiden, The Netherlands	1992	19.9	5.2	NA	NA	2.0
Rennes, France	1995	52.4 <sup>4</sup>	24.0 <sup>4</sup>	38.0 <sup>4</sup>	3.7	2.0
Würzburg, Germany	1995	22.9	10.9	16.7	1.7	2.1
<b>Central Eastern Europe</b>						
Kiev, Ukraine	1997	11.4	2.9	6.5	0.7	3.9
Ljubljana, Slovenia	1995	41.0	11.7	25.4	2.4	3.5
Novi Sad, Yugoslavia	1995	18.8	7.7	26.5		2.5
Odessa, Ukraine	1997	43.0	12.7	27.1	1.9	3.7
Pecs, Hungary	1994	39.0	17.0	32.2	2.3	2.3
Riga, Latvia	1995	51.4	13.5	31.0	1.9	3.1
Tallinn, Estonia	1996	48.2 <sup>5</sup>	12.7 <sup>5</sup>	29.0 <sup>5</sup>	2.4	3.2
Vilnius, Lithuania	1996	50.0	14.0	31.3	2.9	3.6
<b>Southern Europe</b>						
Holon & Bat-Yam, Israel	1995	14.9	9.7	12.2	1.2	1.5
Mamak, Turkey	1997	5.3 <sup>6</sup>	2.7 <sup>6</sup>	4.0 <sup>6</sup>	1.6 <sup>7</sup>	1.9
Padua, Italy	1991	8.9	6.1	7.4	0.8	1.3

<sup>1</sup> All of Saxony<sup>2</sup> Suicide + undetermined<sup>3</sup> Tyrol 1996<sup>4</sup> Data only available for the whole county (département)<sup>5</sup> Per *total* population<sup>6</sup> Ankara<sup>7</sup> Ankara 1995<sup>8</sup> Suicide victims with main residence in Innsbruck /Stadt. The suicidal act could have happened elsewhere in Tyrol.

Fig. 2 Rates of suicide in the catchment areas under study by sex, latest available data (1991 to 1997)

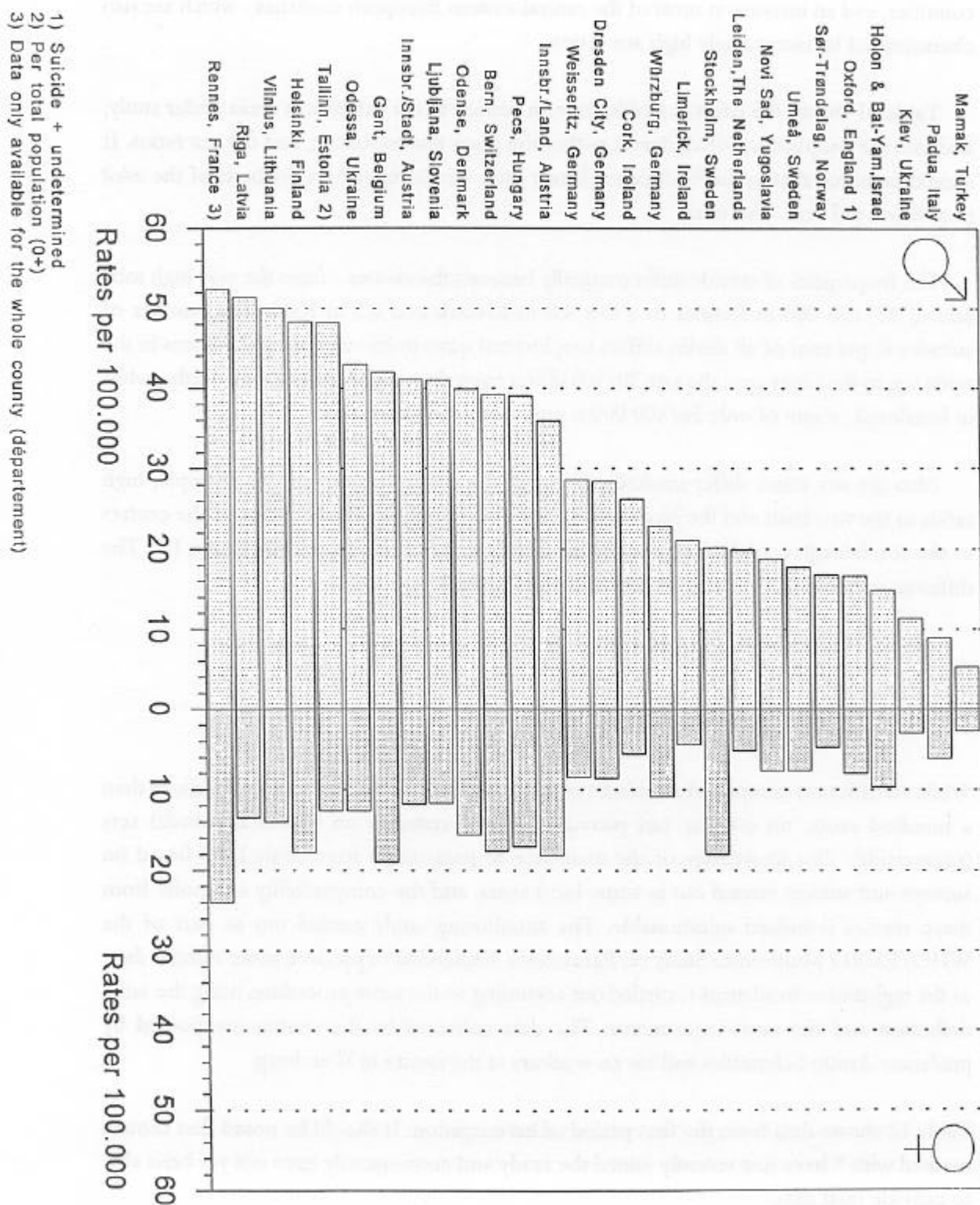




Table 10 shows the data on suicide according to the WHO database in the countries involved in the study for 1989 and for the latest available year.

The figures indicate in general a decrease in the frequency of suicide in most western countries, and an increase in most of the central-eastern European countries - which are also characterised by increasingly high sex ratios.

Table 11 shows the latest available data on suicide in the catchment areas under study, and also the proportions of all deaths within the areas due to suicide, and the sex ratios. It should be noted that in the Multicentre Study rates are calculated on the basis of the *adult* population (15 years and over).

The frequencies of suicide differ markedly between the centres - from the very high total rate of 38/100 000 in Rennes to a low 4.0 in Mamak and 6.5 in Kiev. The number of suicides in per cent of all deaths differs too, but not quite in line with the differences in the rates; e.g. in the Gent area, the rate 30/100 000 is equivalent to 2 per cent of all deaths, while in Innsbruck, a rate of only 26/100 000 is equivalent to 2.4 per cent.

Also the sex ratios differ markedly between the centres; there are, for example, high ratios in the two Irish and the Norwegian areas under study, while the ratios of the centres in the southern part of Europe (i.e. Padua and Holon/Bat-Yam) are just above 1:1. The differences in the frequencies are illustrated in Figure 2.

## THE FREQUENCY OF PARASUICIDE

While statistics on completed suicide have been available in most countries for more than a hundred years, no country can provide national statistics on non-fatal suicidal acts (parasuicide). Our knowledge of the incidence of parasuicide has mainly been based on surveys and studies carried out in some local areas, and the comparability of results from these studies is indeed questionable. The monitoring study carried out as part of the WHO/EURO Multicentre Study on Parasuicide is intended to produce more reliable data, as the registration in all areas is carried out according to the same procedure, using the same definition and the same instruments. The data collected by the centres are pooled by professor Armin Schmidtke and his co-workers at the centre in Würzburg.

Table 12 shows data from the first period of investigation. It should be noted that centres marked with \* have just recently joined the study and consequently have not yet been able to provide final data.

Table 12. Rates of parasuicide registered in the areas under study, 1989 - 1995.

	1989	1990	1991	1992	1993	1994	1995	Male/female ratio latest year
	M/F	M/F	M/F	M/F	M/F	M/F	M/F	
<b>Northern Europe</b>								
Helsinki, Finland	330/237	340/266	323/247	314/238	270/214	333/267	272/232	1.18
Odense, Denmark	188/233	175/200	152/173	159/175	167/205	145/185	124/177	0.70
Stockholm, Sweden	179/314	176/227	115/192	148/195	147/224	124/190	106/162	0.66
Sør-Trøndelag, Norway	147/210	145/210	151/177	142/169	113/163	118/112	92/117	0.79
Umeå, Sweden	94/148	104/145	92/143	77/144	61/120	54/103	61/97	0.63
<b>Mid-Western Europe</b>								
Bern, Switzerland	130/178	99/119	NA	NA	105/130	74/111	60/117	0.51
Cork, Ireland*							196/206	0.96
Limerick, Ireland*							202/209	0.97
Dresden City, Germany*								
Weisseritz County, Germany*								
Gent, Belgium*								
Innsbruck Stadt & Land, Austria	94/141	78/95	75/101	85/97	141/137	NA	NA	1.03
Oxford, England	277/384	273/363	271/364	239/363	261/310	311/376	NA	0.85
Leiden, The Netherlands	81/148	102/144	82/129	78/134	NA	NA	NA	0.59
Rennes, France*		370/540 <sup>1</sup>					380/544 <sup>2</sup>	
Würzburg, Germany	72/100	66/84	68/105	55/108	101/174	92/142	77/127	0.61
<b>Central Eastern Europe</b>								
Kiev, Ukraine*								
Ljubljana, Slovenia*							84/79	0.95
Novi Sad, Yugoslavia*								
Odessa, Ukraine*								
Pecs, Hungary*								
Riga, Latvia*								
Tallinn, Estonia*							278/188	1.48
Vilnius, Lithuania*								
<b>Southern Europe</b>								
Holon & Bat-Yam, Israel*								
Mamak, Turkey*								
Padua, Italy	71/117	55/90	55/93	63/94	45/82	28/66	51/86	0.60

\* Centres that just recently joined the WHO/EURO Multicentre Study on Parasuicide.

<sup>1</sup> The figures are for the town of Rennes.

<sup>2</sup> The figures are for the catchment area.

The table shows that the frequency of parasuicide, too, differs markedly between the centres: rates are extremely high for both men and women in Limerick (one of the two Irish areas under study) and extremely low in the Ljubljana area. The sex ratios do not show the usual unequivocal pattern with an overweight of female attempters. In Helsinki, Innsbruck and Tallinn there is an excess of men, and in the two Irish centres the ratio is close to one.

## TREATMENT OF SUICIDE ATTEMPTERS

The procedure for providing treatment to suicidal people differs according to the usual routines in the national or local health care system, but it is also to some extent influenced by the magnitude and the awareness of the suicidal problem *and* accessible resources.

In **Helsinki**, people who have attempted suicide are usually brought to the outpatient department of a general hospital. The person's somatic condition is assessed and first aid given, and then he or she may be sent home or insist on going home, or may be transferred to another somatic hospital (for surgery, for instance) or to a psychiatric hospital. Less than half the cases are given psychiatric consultation to assess the need for further treatment. Psychiatric treatment may be carried out in a hospital ward, as outpatient treatment or as noninstitutional care. Since 1973, most suicide attempters have been directed to Meilahti Hospital, a general hospital belonging to the Helsinki University Central Hospital. All cases are received in the outpatient department and are then transferred, if necessary, to other wards. In the main, ambulance personnel are ordered to bring people who have attempted suicide to Meilahti Hospital, but some suicide attempters are treated at another university hospital (Toolé Hospital) or at two local general hospitals.

In **Odense**, the two main gateways to the health service system are in general the GPs and also the emergency wards; from then on, various departments and/or institutions may be involved. Suicide attempters, however, are usually taken by ambulance directly to hospital, most often directly or immediately transferred to Odense University Hospital or to one of the two other main hospitals in the area that have departments of psychiatry. At Odense University Hospital (whose catchment area covers about half of the Odense study), an open psychiatric emergency ward and an observation unit were established in 1981, and people from the catchment area who attempt suicide are usually brought there. By long-standing tradition the great majority of suicidal people admitted to the hospital (for example, into intensive care units) are registered with the Department of Psychiatry. In principle, all suicide attempters brought to any hospital in Funen county are supposed to be seen by a psychiatrist, but in practice many people leave hospital very quickly before contact with a psychiatrist can be established or they refuse to see a psychiatrist. For the rest, treatment (beside medical treatment) is usually carried out during a short stay (median in 1989 = 2 days) at the Department of Psychiatry. Before discharge, arrangements for aftercare may be

made; usually this would be in outpatient units or at alcohol ambulatories or various agencies or institutions under the social welfare system. However, no data on compliance are available. Since 1992, suicide attempters, who are not abusers nor in need of psychiatric treatment, are offered aftercare at the Centre for Suicide Prevention in Odense.

In the **Stockholm** catchment area, most people attempting suicide are admitted to the accident and emergency units at Huddinge University Hospital. As hospital care in this area is easily accessible, few people attempting suicide contact or are brought to the district medical centres. The patients are examined and assessed at the hospital emergency unit, and then they may be admitted to a somatic department for observation, sent to an intensive care or medical ward, or referred to a psychiatric ward. Less than half of the people attempting suicide leave hospital after brief observation. Aftercare may be arranged, usually in the form of outpatient care at psychiatric treatment centres, district medical centres or social welfare offices or in nursing homes for psychiatric patients or alcoholics, but about 20% leave hospital after a short period of observation without making an appointment.

In **Sør-Trøndelag**, most parasuicides are now offered follow-up by the Psychiatric Outpatient Clinic Øya, established mainly to evaluate, treat, and refer suicidal patients coming to the University Hospital in Trondheim.

In **Umeå**, each of the three health districts has its own hospital where most people attempting suicide are received and treated in the acute phase. Only occasionally cases are treated by GPs exclusively, since most cases are transferred to one of the hospitals. About 10% leave hospital immediately after acute treatment at the emergency unit, and about 50% are admitted to a somatic ward. A total of about 60% are eventually admitted to a psychiatric ward. Appointments for aftercare are mainly arranged in psychiatric outpatient units.

In **Berne**, most suicide attempters are taken directly to emergency or intensive care units of one of the general hospitals. The psychiatric care system in the area offers several relevant services, such as a social psychiatric clinic that provides community-based outpatient services and has a crisis-intervention ward; an outpatient and liaison service; and a special psychiatric service (inpatients and outpatients) for children and adolescents.

In **Ireland**, an individual who is acutely suicidal or has engaged in an act of parasuicide may access appropriate medical and psychiatric intervention by attending a general practitioner (GP) who will arrange appropriate referral to the local acute psychiatric service or the local accident and emergency department. In 7% of cases of parasuicide the GP will retain the individual without referral. The majority (60%) are sent to accident and emergency and the remainder to the psychiatric services. A person may self-refer either to the local accident and emergency department where a psychiatric assessment will be carried out, or to the local acute psychiatric unit. Any acute medical condition, be it as a result of parasuicide or due to co-morbid presentation, is treated. This generally requires admission to a general medical ward in the case of overdose of medication, particularly paracetamol. Surgical

intervention may be required in the event of serious self-cutting. Some people refuse to see a psychiatrist or they leave hospital against medical advice before a psychiatric consultation can occur. Generally, most cases of parasuicide are seen by a psychiatrist, usually a junior psychiatrist under the supervision of a senior colleague. If the patient is medically fit for discharge they may be referred home, to the care of their family doctor, to a psychiatric out-patient department, to a psychiatric in-patient department or to the local substance misuse services. Children (i.e. those under 16 years) are referred to the child psychiatric services. If an individual is believed to be suffering from mental illness and is unwilling to enter hospital voluntarily, he or she may receive compulsory treatment made available under mental health legislation (1945 Mental Health Act).

In **Dresden and Weisseritz**, suicide attempters are admitted to various hospitals. Since 1967, the University Hospital in Dresden has run a care centre for suicidal patients, integrated into the University Psychiatric Hospital. The care centre offers treatment according to the rules of crisis intervention based on psychiatric-psychotherapeutic and suicidological principles. Along the lines of the basic model of a specialized liaison service particular emphasis is laid on inpatient-outpatient network. However, the University Hospital can provide care for only about 50 per cent of the entire intensive therapy admission capacity of the city of Dresden. Parasuicides, who remain at the admission wards overnight or during week-ends for only a few hours, are visited by on-call service on a liaison basis.

In **Gent** the majority of suicide attempters come in contact with the health system through the Accident & Emergency departments of the three general hospitals, among which the University Hospital is the largest. In this hospital, all attempted suicide patients are examined by a psychiatrist following assessment and treatment of somatic injuries, if necessary followed by transfer to the Intensive Care Unit. This psychiatrist will then refer the patient to in- or outpatient treatment. In the other hospitals, examination of mental health status and appropriate referral is taken care of by the doctors at the A & E department. If general practitioners are the first to see a suicide attempter, they refer approximately 50 to 60 per cent to a general hospital. The other patients are treated at home or referred to outpatient mental health care.

In **Innsbruck** there are no special procedures for treating suicide attempters, but a number of services are available for different groups of the population. For example, there are several public and private services for emergency care, such as outpatient units, telephone services and counselling services, and therapy centres for people with alcohol and drug problems, etc.

In **Oxford**, most of the catchment area is served by one general hospital, the John Radcliffe Hospital, to which all hospital-referred suicide attempters are sent. Just over 80 per cent of the patients are admitted to hospital beds, the rest being discharged from the accident and emergency department. Of the total group, 85 per cent are assessed by a member of the general hospital psychiatric service. This service is composed of five very experienced nurses, a social worker and two junior psychiatrists, who are supervised daily by

a senior psychiatrist. The team member who conducts the initial assessment usually makes aftercare arrangements, which can include outpatient care provided by that person (25%), inpatient psychiatric admission (5 - 10%), outpatient care at one of the local psychiatric hospitals (15%), referral to such agencies as social services and voluntary agencies (20%) and referral back to the GP (30 - 35%). There are close links between the alcohol abuse service and the general hospital. An early study showed that the proportion of people attempting suicide who are seen by GPs and not referred to the general hospital is low. However, many episodes do not come to medical attention at all.

In the **Leiden** area, most suicide attempters, who are brought to a general hospital, are referred to the University Hospital, which is the only general hospital in the area with a department of psychiatry. About 90 per cent of all people attempting suicide admitted to the University Hospital are seen by a psychiatrist. After medical recovery, 25 per cent are transferred to the Department of Psychiatry for further treatment. However, studies have shown that many of the parasuicides that take place in the area are not treated at hospitals. Some are treated by GPs only, some at various agencies or institutions such as the RIAGGs and many (according to the studies mentioned, the majority) do not come to the attention of health facilities at all.

In **Rennes**, people who have attempted suicide are usually brought to the outpatient department of the University Hospital (UHR). Its A & E admission ward receives patients from the city and its periphery on a 24-hour-basis. The person's somatic condition is assessed from a toxicological viewpoint by the Poisoning Treatment Centre (PTC) when necessary. People who have used other means are directed to physicians and surgeons on call. Severely injured patients are referred either to the surgery or to the Intensive Care Unit. An open psychiatric emergency unit has been created in 1987 to assess the severity of the suicidal act and to decide on the aftercare of the patients. In principle, every suicide attempter brought to the hospital is supposed to be seen by a psychiatrist before leaving the hospital or being directed elsewhere. In practice, the proportion of patients who meet a psychiatrist is variable, due to shortage of psychiatrists in the unit (no psychiatrist on duty during week-end and holidays) and various imponderables. After the psychiatric interview, arrangements for aftercare may be made: in-patients in the nearby psychiatric hospital, out-patients, ambulatory follow-up in various agencies or by a private psychiatrist in town. Compliance, then, is variable. The severely injured patients referred either to the surgery or to the Intensive Care Unit may not be counted as attempted suicides when the ward does not mention the act to the hospital medical archives. However, they might be known to the psychiatry unit when a psychiatrist has been called as soon as the patient's condition permitted it. It is estimated that about 10-15% of the suicide attempters do not receive any medical care in connection with their act.

In **Würzburg**, most of the people attempting suicide are admitted directly to the emergency or intensive care unit of one of the general hospitals. They are usually seen by a psychiatrist, who may recommend psychiatric or psychotherapeutic inpatient or outpatient

treatment. Many people are admitted directly, or after initial ambulatory somatic treatment, to the psychiatric hospital. It seems that a small percentage of all people having any contact with health facilities are treated only on an outpatient basis by a GP, psychiatrist or a counselling service.

In **Mamak**, as in Ankara as a whole, suicide attempters are usually taken to the emergency rooms of a general hospital. Only a few cases contact psychiatric clinics or the Crisis Intervention Center of the University of Ankara (CICUA)<sup>3</sup> directly by themselves. The patients initially undergo medical evaluation and treatment and are then interviewed by the police, whereafter a forensic report is prepared. About 10 per cent are referred to a psychiatric clinic or a crisis intervention centre, the rest are discharged, usually to their own home. Recently, a Crisis Intervention Room is opened at the emergency ward at the University Hospital of Ankara. Patients admitted or referred to psychiatric department or crisis intervention centres receive comprehensive and professional evaluation and intervention. The problem is, however, to prevent people from being 'lost' on their way to these institutions.

In **Kiev**, people who have attempted suicide are first taken care of by the ambulance service who also gives the first aid treatment. Most attempters are thereafter brought to the emergency hospital in Kiev, where the patients usually are consulted by a psychiatrist as well. Serious cases are thereafter transferred to the intensive care unit or to a relevant somatic department for somatic treatment and then to the department of psychiatry. Less serious cases are referred to out-patient departments. There are no special crisis centres or other institutions for suicidal people. Studies have shown that many attempters are not seen at the hospital, but are treated by GPs, or they do not come to the attention of the health facilities at all.

The suicide attempters in **Odessa** are treated in the same way as the attempters in Kiev.

In **Ljubljana**, there is an agreed policy that all suicide attempters who are treated in any kind of the medical facilities - be it in the out- or inpatient clinic for their somatic consequences of the event - should be seen, interviewed, assessed, and treated by a psychiatrist also. If a patient can walk by him-/herself, he is sent or accompanied to the attached psychiatric outpatient facility for the examination. If he/she is hospitalized on the emergency internal or surgical unit, the psychiatrist on duty is called to assess the patient and describe the necessary pharmacotherapy. The psychiatrist and the patient also try to agree on a further plan for where and how the patient should be treated - if necessary - in the future. There are many patients, however, who are not willing to see a psychiatrist in the first place, or who reject any further therapy proposed. If or when the national programme for suicide reduction and prevention will be approved by the Slovene parliament, it proposes that these

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<sup>3</sup> This project is supported by the Turkish Investigation Association (TUBITAK) in Turkey.

patients will be contacted regularly and informed that some psychological help is always available to them.

In **Novi Sad**, the usual procedure after a suicide attempt is to take the patient to the respective hospital depending on the method of the attempt; only if it is a case of an overdose of psychopharmaceuticals he is taken directly to a psychiatric hospital. At other hospitals, a psychiatrist may be (but is not always) called in for consultation. At the psychiatric hospital there is an outpatient follow-up service for suicide attempters where also attempters from other hospitals and wards can be referred to.

The vast majority of the people attempting suicide in **Pecs** are brought to the general or university hospitals, admitted and treated (detoxication) on emergency or intensive care units. They are regularly seen by a consultant psychiatrist. Generally, outpatient or inpatient psychiatric or psycho-therapeutic treatment is recommended. About one third of the suicidal patients are treated temporarily in the crisis ward of the university hospital. The majority of the outpatients are treated in another psychiatric outpatient facility. Unfortunately, there is a high drop-out rate in the outpatient treatment because the integration of the aftercare system is inadequate.

In the **Riga** area, most of the people attempting suicide are admitted immediately to the emergency or intensive care unit at the Riga City First Aid Hospital. They will usually be seen by a psychiatrist, who may recommend psychiatric or psychotherapeutic in- or outpatient treatment. About one third of the patients are admitted immediately after initial ambulatory treatment to the Riga Psycho-neurological Hospital. Psychiatric treatment may be carried out in a psychiatric hospital ward, at the Crisis and Neuroses Treatment Hospital in Jūrmala, or as outpatient treatment.

In **Tallinn**, patients who have attempted suicide are usually admitted by the ambulance service to one of the three general hospitals on duty, mostly to the respective departments of Mustamäe Hospital depending on the method and severity of the attempt. They could be seen by a psychiatrist and if necessary taken to Tallinn Psychiatric Hospital. Rehabilitation services are poor.

In **Vilnius**, people who have attempted suicide are admitted directly to the emergency or intensive care unit at one of the general hospitals. In case of self-poisoning, however, patients are directed to the Vilnius University Toxicological Center. Suicidal patients are assessed by a psychiatrist, who may recommend psychiatric or psychotherapeutic inpatient or outpatient treatment. There are no special crisis centres or other institutions for suicidal people.

In **Padua**, most attempters are brought to the emergency service at the Padua City Hospital, where a psychiatrist is present. From there, those who do not leave the unit immediately after treatment may be transferred to a somatic department or, in some cases, to



a psychiatric unit. During admission to somatic wards, most attempters are seen and assessed by a psychiatrist, and then the person may be transferred to the psychiatric service. About 15 per cent of all attempters are first seen by a GP, and about 10 per cent receive no further treatment from other facilities.

In Israel, it is compulsory to hospitalize suicide attempters for at least 24 hours at a somatic or psychiatric hospital (the law, however, is not always followed). In **Holon and Bat-Yam** people who have attempted suicide are brought to the Volfson Hospital Emergency Room, where they go through physical examinations and treatment for the somatic implication of their act. Then a psychiatric assessment is carried out by a psychiatrist, who prescribes further treatment: inpatient or outpatient at a psychiatric ward or no treatment. The psychiatrist can also prescribe special supervision of patients assessed to be in danger of repeating the attempt.

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Sainsbury, P. The epidemiology of suicide. In: Roy, A., ed. Suicide. Baltimore, Williams & Wilkins, 1986.

## CONCLUDING REMARKS

The purpose of this work has been to provide the reader with a picture of the European areas under study by the 25 research centres participating in the WHO/EURO Multicentre Study on Parasuicide. The material has been provided by the individual participating centres who have presented the information on local, regional and national characteristics which seems relevant for the study on suicidal behaviour. Admittedly, the final picture has been painted with rather bold strokes. This is because nuances had to be omitted due to scarcity of information or because it has been provided by too few centres - or details had to be skipped because data were presented in a way that made it impossible to compare them.

Another important consideration is that such facts and figures as presented here are, of course, inadequate to fully describe people's everyday life, their feeling of fulfilment and satisfaction - or of deprivation and misery, and whether the prevailing sense in a community is one of mutual trust and close interdependency or one of alienation and loneliness. Nevertheless, we hope that the historical, demographical and socio-economical patterns, and the general conditions of health in the areas involved have emerged, and that this may be of some value to those working in the field of suicidology in Europe.

**PUBLICATIONS  
FROM  
THE PARTICIPANTS  
IN  
THE WHO/EURO  
MULTICENTRE STUDY  
ON  
PARASUICIDE**

**1988**

**Leiden**

Kerkhof A.J.F.M., Bernasco W. (1988): WHO/EURO Multicentre Study on Parasuicide. Progress Report no. 1, Leiden. Department of Clinical, Health and Personality Psychology, Leiden University.

**PUBLICATIONS  
FROM  
THE PARTICIPANTS  
IN  
THE WHO/EURO  
MULTICENTRE STUDY  
ON  
PARASUICIDE**

**1990**

## **Odense**

Center for Selvmordsforskning: Selvmordsforsøg i Fyns Amt 1989/90. 1ste Årsrapport. Odense 1990.

## **Emilia Romagna**

Crepet P, Caracciolo S, Casoli R, Fabbri D, Grassi G, Tomelli A, Jonus A: Suicidal behaviour in Emilia Romagna Region: preliminary results from 1988-1990 monitoring of parasuicide. In: Ferrari G, Bellini M, Crepet P (Eds): Volumetto estratto da: 3rd European Symposium „Suicidal Behaviour and Risk Factors“ 1990; 201-205. Bologna: Monduzzi Editore:

*Data here presented were collected in the first phase of a parasuicide (attempted suicide) prospective study which has been carried out in two urban zones of the Emilia Romagna Region (cities of Ferrara and Reggio Emilia) by our Operative Unit in the European Parasuicide Multicentre Study under the direction of WHO - European Region. A major part of the results here discussed stem from the parasuicide monitoring phase which started fully on April 15, 1988, while some preliminary results will be presented coming from the second phase of the study: a follow-up study of 250 suicide attempters which started on February, 1990.*

## **Helsinki**

Ostamo A, Lönnqvist J: Parasuicides in Helsinki: a male problem. In: Ferrari G, Bellini M, Crepet P (Eds): Proceedings of the 3rd European Symposium of „Suicidal Behaviour and Risk Factors“ 1990; 185-188. Bologna: Monduzzi Editore:

*In 1989 altogether 1445 parasuicides committed by those registered in Helsinki were admitted into the health care system. Contrary to previous results the majority (52%) of the parasuicides were male. The parasuicide rate of men per 100.000 population over 15 years of age was 321, whereas that of women was 233, The male/female ratio was 1.4:1. The mean age was 36 years. This data clearly upsets the commonly accepted fact that female parasuicides are more common than male parasuicides.*

## **Leiden**

Prins M, Kerkhof AJFM: Epidemiology of suicide attempts in the Leiden area, The Netherlands. In: Ferrari G, Bellini M, Crepet P (Eds): Suicidal Behaviour and Risk Factors, 1990; 195-200. Bologna: Monduzzi Editore:

*Since suicide attempts are not being systematically recorded in the Netherlands, a monitoring project was started in which different medical agencies register suicide attempts that come to their attention. Preliminary results of the first 12 months seem to indicate that suicide attempt rates in the Netherlands have stabilized or even decreased. Especially the number of suicide attempts seen in general hospitals seems to have decreased considerably. Continuation of the monitoring project will have to establish whether this ascertained decrease is not merely a temporary fluctuation.*

## **Stockholm**

Wasserman D: Flest självmordsförsök bland unga, fränskilda mödrar. Social Forskning, 1990; 4: 6-7:

*Fränskilda är de som oftast försöker begå självmord. Högst är dessa tal för ogifta kvinnor i åldrarna 15-34 år (493). Kvinnor, som yrkesarbetar och är ensamstående föräldrar har mycket höga tal vad gäller försök till självmord. Ändå har gruppen ensamstående föräldrar med barn tidigare inte ens rapporterats i undersökningar av det här slaget!*

## **Padova**

De Leo D, Caneva A, Predieri M, Padovani A, Cadamuro M, Pavan L:

Epidemiology of suicidal behaviour in Padua, 1989 (within the context of WHO Multicentre Study on Parasuicide). In: Suicidal Behaviour and Risk Factors, M. Bellini et al (eds), Monduzzi, Bologna, 1990. Proceedings from the 3rd European Symposium, Bologna, Italy 25-28 September 1990.

*This study assesses the parasuicidal behaviour of subjects resident in the commune of Padua and 18 surrounding communes under the USL (local health unit) no. 21, covering a catchment area of 378,204 inhabitants. Epidemiological data, recorded daily for certain sources (Casualty, Intensive Care, Emergency Psychiatric Service, Psychiatric Services) and at regular intervals for others (family doctors, rest homes) provided us, for the area under consideration, with information which could be crossed, enabling us to document diagnosis and treatment of the subjects.*

De Leo D, Caneva A, Predieri M, Cadamuro M, Pavan L:

WHO-European Multicentre Study on Parasuicide: Rilevamenti dell'unità operativa di Padova nel primo anno di sorveglianza epidemiologica (1-9-1988/31-8-1989).

In „Aspetti Clinici del Comportamento Suicidario“, D. De Leo (ed), Liviana Editrice, Padova, 1990.

*I tentativi di suicidio rappresentano un problema sociale e sanitario di crescente importanza, che coinvolge sempre più tutti coloro che sono impegnati nel miglioramento dei livelli di benessere psico-fisico di un individuo.*

*In tale prospettiva, anche l'Organizzazione Mondiale della Sanità ha avviato un progetto di ricerca per lo studio di tale fenomeno in ambito europeo. Tale progetto rientra nel più ampio „Health for all by the year 2000“ e si articola in una prima fase di rilevamento epidemiologico seguita poi da una seconda fase in cui si svilupperanno interventi di prevenzione specificatamente mirati alle caratteristiche dei singoli Paesi coinvolti.*

*Padova e la USL 21, costituendo un campione rappresentativo del Nord Italia, sono state ritenute idonee dall'OMS ad essere la sede di un osservatorio del fenomeno del parasuicidio nel contesto dello studio succitato.*

*Già da diversi anni nella nostra sede si sono attuati rilevamenti epidemiologici del comportamento suicidario, che tra l'altro ci hanno permesso di valutare l'entità della sottostima espressa dai dati ufficiali in tale ambito.*

*In questo lavoro ci si propone di valutare i dati raccolti in un anno di rilevamento (settembre '88-agosto '89), effettuato nell'ambito del progetto OMS „European Multicentre Study on Parasuicide“.*

**PUBLICATIONS  
FROM  
THE PARTICIPANTS  
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ON  
PARASUICIDE**

**1991**



## **Odense**

Center for Selvmordsforskning: Selvmordsforsøg i Fyns Amt 1990. 2. Årsrapport. Odense 1991.

## **Emilia-Romagna**

Crepet P, Caracciolo S, Casoli R, Fabbri D, Florenzano F, Grassi GM, Jonus A, Tomelli A: Suicidal Behavior in Italy: Data, Trends and Guidelines for a Suicide Intervention/Prevention Policy. *Suicide and Life-Threatening Behavior*, 1991; 21(3): 263-278.

*The Authors describe some basic data (sex and age incidence rates, events/persons ratio) of O.M.S.-EURO Multicentre Study on Parasuicide, started at the beginning of 1988. Data come from the first phase of the survey (monitoring phase), and have been collected by a questionnaire used mainly in General Hospitals, but in some case, by General practitioners too.*

*The questionnaire collects data about social and demographic characters, parasuicide mode, existence of past parasuicides, ways of access to health facilities. Data presented concern 16 Operating Units of East and West Europe, among these also operates the Italian Unit, of the Assessorato alla Sanità della Regione Emilia Romagna (Health departments of Ferrara and Reggio Emilia cities). Time period is one year for all European Units, and two years for the Italian Unit. Rates of parasuicide events, on males, are between 47 and 414 (x 100,000); on females between 95 and 595. Rates decrease at the increasing of ages, except for 35-44 ages in males, and 25-34 ages in females: male/female ratio is between 0.73 and 2.10, repeaters percentage is 6.7% over two years (Italian data only).*

Crepet P, Caracciolo S, Casoli R, Fabbri D, Grassi G, Jonus A, Tomelli A: Epidemiologia del tentato suicidio. Primi Risultati della ricerca multicentrica europea Dell'OMS. *Riv. Sper. Freniatr.* 1991; CXV(3): 362-371.

*Even though in Italy, as in the majority of Mediterranean countries, the increase in suicide rates is not among the highest in Europe, between 1969 and 1989 it showed a sharp upswing (+43% among males and +31% among females). In terms of geographical differences, the regions with the highest suicide rate are the northern ones (up to twice the national average). The age groups with the highest suicide risk are those over 74 years (in 1989 the rate among males over 65 was the highest of all: 31.3 per 100,000). The differences in the between-sexes distribution show that among females over 65 years old the suicide rate rose by 70% between 1974 and 1989, versus 77% for males of the same age. The preliminary epidemiological results of one of two Italian centers are presented. These centers are collaborating with the WHO/EURO Multicentre Study on Parasuicide; parasuicide rates are higher for females than for males (55.9 per 100,000, as against 38.1 for males), while the age group at highest risk is seen to be young women (15-24 years), with a specific rate of 115.6.*

## **Helsinki**

Ostamo A, Lönnqvist J, Heinonen S, Leppävari A, Liikkanen A, Mattila M, Mönkkönen J: Epidemiology of Parasuicides in Finland. *Psychiatria Fennica*, 1991; 22: 181-189.

*Since parasuicides are not being systematically recorded in Finland, a monitoring project, within the framework of the WHO/Euro Multicentre Study on Parasuicide, was started in four different catchment areas. The main purpose of this paper is to provide epidemiological background information of the WHO project in Finland. The data consist of all parasuicide admissions in Helsinki and in Jyväskylä Seinäjoki and Rovaniemi catchment areas during one year. The results suggest that the parasuicide rates in Finland follow to some extent the rates of completed suicides and are more than ten times higher than the completed suicide rates. The results also show that the parasuicide rates among both sexes are higher in urban than in rural municipalities. Male parasuicide rates are higher than female rates almost every area under study. The predictive value of parasuicide for completed suicide is still open.*

Ostamo A, Lönnqvist J: Parasuicide in four catchment areas in Finland. In: Bjerke T, Stiles TC

(Eds): Suicide Attempts in the Nordic Countries. Epidemiology and Treatment. 1991; 57-68. Trondheim: Tapir Forlag.

*Finland is a country with a high suicide mortality (WHO 1989). The suicide rates in different areas of the country vary greatly (Lönngqvist and Salovainio 1989).*

*National parasuicide rates have been difficult to determine because of the absence of comprehensive and reliable registration. Since parasuicides are not being systematically recorded in Finland, a monitoring project, within the framework of the WHO/Euro Multicentre Study on Parasuicide (WHO 1986), was started in four different, clearly defined catchment areas. All parasuicides admitted to the health care in these areas were systematically registered over one year.*

*The main purpose of this study is to obtain information on the epidemiology of parasuicide in Finland. Our objectives are to identify similarities and differences in the local profiles of parasuicide and to extend the discussion of the findings to that of the completed suicides in the same areas.*

## **Umeå**

Salander-Renberg E, Jacobsson L: Attempted suicides in Västerbotten county 1989. In: Bjerke T, Stiles TC (Eds): Suicide attempts in the Nordic countries. 1991; 69-78. Trondheim: Tapir Publishers.

Salander-Renberg E, Jacobsson L: Medical care and the parasuicide patient. In: Bjerke T, Stiles TC (Eds): Suicide attempts in the Nordic countries. 1991; 165-170. Trondheim: Tapir Publishers.

## **Stockholm**

Isacsson G, Bergman U, Wasserman D: Medications and attempted suicide. Proceedings of the XXIII Nordiska Psykiaterkongressen, Helsingfors, 1991; 31-6.

Isacsson G, Bergman U, Wasserman D: Self-poisonings with medicines as a method of parasuicide in a distinct epidemiological suburban area of Stockholm, Sweden. In: Bjerke T, Stiles TC (Eds): Suicide Attempts in the Nordic Countries. Epidemiology and Treatment. 1991; 113-119. Trondheim: Tapir Publishers.

*The medicines used for intoxication as a method of parasuicide were studied as part of the ongoing WHO-study on parasuicide in a distinct epidemiological catchment area in greater Stockholm. The relative use of such medicines was obtained from an independent survey of medicines dispensed at the pharmacies. The clinical impression that the benzodiazepine hypnotics-tranquillizers were the drugs most commonly used for intoxication was confirmed. Antidepressants were less commonly used, both in absolute and relative terms. As 50% of the patients had sought help at a health care center or hospital during the month prior to the intoxication, and while many of the patients probably were depressed, the low rate of intoxications with antidepressants of particular concern and might reflect failure to diagnose and treat depressive disorders.*

Olsson M, Wasserman D: The family - buffer or risk factor in parasuicide? In: Bjerke T, Stiles TC (Eds): Suicide Attempts in the Nordic Countries. Epidemiology and Treatment. 1991; 121-129. Trondheim: Tapir Publishers.

*During a 12-month period, a total of 520 parasuicide patients were treated at Huddinge Hospital. Structured interviews were carried out with 259 of these patients. This article analyses the household composition and reasons for parasuicide reported by the patients.*

*The risk of parasuicide in single-parent households was 2.6 times higher compared with two-adult households. Individuals with children cited relationship problems with partners and separation from partners as reasons for their parasuicide more often than childless individuals. In order to try to reduce the risk of future suicidal behaviour in both parents and children, it is important to involve the whole family in post-parasuicide treatment.*

*Key words: Parasuicide, family; household composition; single parents; relationship problems; separation.*

Wasserman D: Världshälsoorganisationens program för suicidprevention. Socialmedicinsk Tidskrift, 1991; 1: 24-30.

*Självmod och självmordsförsök är stora folkhälsoproblem. Likartade bedömningar har gjorts i flera europeiska länder och lett till att Världshälsoorganisationen (WHO) initierat ett samarbete mellan flera suicidologiska centra i Europa och skisserat riktlinjer för suicidprevention. WHO's regionkontor för Europa antog 1984 ett program om "Hälsa för alla", enligt vilket till år 2000 de nuvarande skillnaderna i hälsa mellan europeiska länder och mellan olika sociala grupper inom länderna borde reduceras med åtminstone 25 % genom förbättrad hälsoliv hos missgynnade nationer och grupper. Beträffande självmordsproblematiken satte WHO under "Target 12" som mål att till år 2000 försöka vända de trender till ökande antal självmord och självmordsförsök som många västeuropeiska länder uppvisar. Det bör påpekas att i dessa sammanhang inget kvantitativt mål uppställts.*

*I artikeln, som bygger på en föreläsning hållet vid Svenska psykiatriska föreningens Örmöte i jan. 1989, redovisas och kommenteras WHO's rekommendationer för suicidpreventiv verksamhet. Vidare presenteras WHO's multicenterstudie beträffande självmordsförsök.*

*Danuta Wasserman är med dr och docent verksam vid den psykiatriska institutionen, Huddinge sjukhus. Hon leder WHO:s multicenterstudie av suicidförsök inom Huddinge och Södertälje sjukhus upptagningsområden.*

Wasserman D, Eklund G: A study of socio-demographic factors in an unselected parasuicide population in Stockholm. In Bjerke T, Stiles TC (Eds): Suicide Attempts in the Nordic Countries. Epidemiology and Treatment. 1991; 79-89. Trondheim: Tapir Publishers.

*In the course of one year, 520 parasuicide patients were registered, on 601 occasions, at Huddinge Hospital, Stockholm. Parasuicide rates were 205 for men, 310 for women and 260 for the overall population. Parasuicide rates peak in slightly older age groups than previous investigations have shown.*

*The exceptionally high parasuicide rates for Finnish citizens (513), especially in the 15-34 age group (726), are reported here for the first time in Sweden*

### **Sör-Trøndelag**

Bjerke T, Stiles T (Eds): Suicide Attempts in the Nordic Countries. 1991. Trondheim: Tapir.

Bjerke T: Selvmord og selvmordsforsøk blant unge. (Suicide and suicide attempts among young persons). 1991. Trondheim: Tapir Publishers.

Bjerke T, Jorgensen P, Riaunet Å, Rygnestad T, Stiles TC: Selvpåførte skader i Sør-Trøndelag. (Deliberate selfharm in Sør-Trøndelag). In: Suicidal atferd i Norge (Suicidal behaviour in Norway). 1991; 51-57. Organon Norway: J. Grieg Publishers.

Bjerke T, Rygnestad T, Stiles TC: Epidemiological and clinical aspects of parasuicide in the county of Sør-Trøndelag. In: Bjerke T, Stiles TC (Eds): Suicide Attempts in the Nordic Countries. Epidemiology and Treatment. 1991; 91-101. Trondheim: Tapir Publishers.

Bjerke T, Stiles TC, Rygnestad T, Jorgensen P, Riaunet Å: Parasuicid blant unge i Sør-Trøndelag: Insidens og utdanningsstatus. (Parasuicide among young persons in Sør-Trøndelag: Incidence and educational status). Nordisk Psykiatrisk Tidsskrift, 1991; 45: 357-361. (Nordic Psychiatric Journal, English abstract).

*The objectives of the present study were to calculate the incidence of parasuicide among young people (16-19 years) in a representative Norwegian county (Sør-Trøndelag; 250,000 inhabitants), to compare the results with what has been found elsewhere in Europe and to ask whether an association exists between educational status and incidence of parasuicide. A total of 63 young parasuicide patients were registered in medical treatment facilities during the study period (1 October 1988 to 15 July 1990). The male rates were 87 per 100,000 in 1988/89 and 101 per 100,000 in 1989/90, and the female rates were 180 per 100,000 in 1988/89 and 384 in 1989/90. Results from other centres*

participating in the WHO (Euro) study on parasuicide indicate that the parasuicide rates found in the Nordic areas are of a relatively high rank and that the rates in Sør-Trøndelag are at an average level. The rates of parasuicide among students were significantly lower than those found among non-students. Consequently, school-based programs do not seem to be sufficient in the prevention of suicidal behaviour among young persons.

## **Berne**

Michel K, Knecht Ch, Kohler I, Sturzenegger M: Suizidversuche in der Agglomeration Bern. Schweizerische Medizinische Wochenschrift, 1991; 121: 1133-1139.

*Im Rahmen einer europäischen Multizenter-Studie wurden während 12 Monaten in der Stadt und Agglomeration Bern alle Suizidversuche, welche in medizinische Behandlung gelangten, erfasst. Es handelte sich dabei um 243 Frauen und 153 Männer, was einer Rate von 177,1 bzw. 128,6/100000 entspricht. Die untersuchte Region kann als repräsentativ für die Schweiz gelten. Ein Vergleich mit andern Zentren zeigt, dass die Häufigkeit von Suizidversuchen in der Schweiz - anders als diejenige der vollendeten Suizide - etwa dem Durchschnitt der meisten europäischen Länder entspricht. Meist wurden Überdosen von Medikamenten eingenommen, vor allem Benzodiazepine. Fast alle zur Überdosis verwendeten Medikamente waren offensichtlich ärztlich verschrieben worden. Die Wahl der Medikamente lässt vermuten, dass suizidale Menschen oft bewusst angst- und spannungslösende Mittel einnehmen. Dies ist ein Hinweis auf die Verwandtschaft von Angstanfällen und Suizidversuchen. Beides wird als Ausdruck einer akuten emotionalen Überforderung verstanden und erfordert eine entsprechende therapeutische Haltung.*

## **Leiden**

Arensman E, Kerkhof A.J.F.M., Hengeveld M.W., Mulder J. Dzn. (1991). Epidemiology of medically treated suicide attempters in the Leiden area, The Netherlands. Proceedings of the 16th International Conference on Suicide Prevention and Crisis Intervention. Hamburg.

*Over the period 1989-1990 suicide attempts were registered in a catchment area of 354 722 inhabitants in the Netherlands. This study is part of the WHO/EURO Multicentre Study on Parasuicide. The main purposes of this monitoring project are: assessment of the feasibility of using local case registers to monitor parasuicides in a defined catchment area; estimation of the true incidence of medically treated parasuicide and trends over time, (using standardized definitions and case finding criteria); and identification of sociodemographic risk factors significantly associated with parasuicide (WHO, 1986).*

**PUBLICATIONS  
FROM  
THE PARTICIPANTS  
IN  
THE WHO/EURO  
MULTICENTRE STUDY  
ON  
PARASUICIDE**

**1992**

## **Odense**

Center for Selvmordsforskning: Selvmordsforsøg i Fyns Amt 1991. 3. Årsrapport. Odense 1992.

## **Helsinki**

Lönnqvist J, Ostamo A: Itsemurhayritykset ja niiden hoidon organisointi Helsingissä. Suomen Lääkärilehti, 1992; 47: 2065-2071. (Suicide attempts and the organization of their treatment in Helsinki. Finnish Medical Journal)

*Tutkimuksessa analysoitiin kaikki yhden vuoden aikana Helsingissä terveydenhuollon hoitoon tulleet 1 822 itsemurhayritys tapausta strukturoidun haastattelun sekä potilasasiakirjojen perusteella. Helsingissä terveydenhuoltoon tulee noin 2 000 itsemurhaa yrittänyttä vuodessa eli keskimäärin 5-6 tapausta jokaista vuoden päivää kohti. Potilnat hoidettiin tavallisesfi HYKS:n päivystyspoliklinikoissa. Hoidon kehittämiseksi ja resurssien suuntaamiseksi tulisi diagnoosi- ja rekisterikäytäntöä kehittää siten siten, etfi itsemurhayritystapauksia voifaisiin joustavasti seurata. Itsemurhayritysten hoidon laatua fulisi parantaa tukemalla henkilökunfaa koulutuksen ja työnohjauksen avulla, järjestämällä systemaattinen psykiatrinen konsultaatiotoiminta, käyttämiillii suunnitelmallisemmin hyväksi koko hoitojärjestelmää sekä parantamalla Iääkärikunnan tietoutta itsemurhamenefelmien vaarallisuudesta.*

## **Huddinge**

Wasserman D: Attempted suicide and alcoholism: Epidemiological and psychodynamic aspects. In: Crepet P, Ferrari G, Platt S, Bellini M: Suicidal Behaviour in Europe - Recent Research Findings. 1992; 287-295. Roma, Milano, London, Paris, New York: John Libbey CIC s.v.l.

*Several follow-up studies of alcoholics show that mortality from suicide and the incidence of suicide attempts are high in this group of patients.*

*In this study, 259 suicide-attempt patients - 175 women and 84 men- who were treated at emergency somatic and psychiatric departments following their attempted suicide were investigated by structured interviews. Alcohol abuse was screened by means of CAGE questions*

*The acronym CAGE stands for questions focused on Cutting down, Annoyance by criticism, Guilty feelings and Eye-opener. Ninety-two of the 259 suicide attempt patients (35%) - 44/175 (25%) of the women and 48/84 (57%) of the men - were diagnosed as alcohol abusers owing to two or rmore affirmative answers to CAGE questions.*

*The other set of material consisted of 40 suicide-attempt patients who were investigated by means of semi-structured interviews based on a psychodynamic frame of reference, their 70 significant others and 73 care providers. Seventeen of the 40 (42%) were diagnosed as alcohol abusers, and 15 of the alcohol abusers had a borderline personality structure according to DSM III R axis II.*

*The incidence of early separations due to parental divorce and separation among suicide attempters characterised by alcohol abuse was significantly higher ( $p<0.05$ ) than in the non-alcoholic suicide-attempt patients.*

*The emotional instabilty experienced in childhood by the suicide-attempters in the alcohol-abuse group as a result of early separation, lack of emotional support and the presence of alcohol abuse in the parental home may be significant for the developement of the suicidal abuser's self-esteem and personality structure. Suicidal alcohol abusers try to adapt to, and compensate for, their poor self-esteem by choosing partners who posess characteristics they themselves lack. This is probably why separation from partners is such a predominant factor in precipitating attempted suicide or suicide.*

*Problems in treating suicidal alcohol abusers are also discussed.*

*Key words: attempted suicide; alcoholism; epidemiology; psychodynamic aspects; borderline personality; early object losses; treatment difficulties.*

## **Sör-Tröndelag**

Rygnestad T, Stiles TC, Bjerke T, Jorgensen P: Fatal and non-fatal repetition of parasuicide. In: Ferrari G, Crepet P, Platt S, Bellini M (Eds): Suicidal Behaviour in Europe - Recent Research Findings. 1992; 183-190. London: J Libbey.

## **Joint publications**

Platt S, Bille-Brahe U, Kerkhof A, Schmidtke A, Bjerke T, Crepet P, De Leo D, Haring C, Lönnqvist J, Michel K, Philippe A, Pommereau X, Querejeta I, Salander-Renberg E, Temesvary B, Wasserman D, Sampaio Faria J: Parasuicide in Europe: The WHO/EURO Multicentre Study on Parasuicide. I. Introduction and preliminary analysis for 1989. *Acta Psychiatrica Scandinavica* 1992; 85: 97-104.

*The WHO/EURO multicentre study on parasuicide is a new, coordinated, multinational, European study that covers two broad areas of research: monitoring trends in the epidemiology of parasuicide (epidemiological monitoring study); and follow-up investigations of parasuicide populations, with a view to identifying the social and personal characteristics predictive of future suicidal behaviour (repetition prediction project). This article provides background information on the development and organization of the multicentre study and presents selected findings from the epidemiological monitoring project, based on a preliminary examination of data collected in 15 centres on parasuicides aged 15 years and over treated in health facilities in defined catchment areas during the year 1989. The overall parasuicide incidence varied considerably across the centres, from a high (event) rate of 414 per 100,000 males in Helsinki to a low of 61 among males in Leiden. The highest female event rate was 595 in Pontoise, and the lowest 95 in Guipuzcoa. The mean event rate across all centres was 167 among males and 322 among females. Parasuicide incidence tended to be elevated among 15- to 34-year-olds, with lowest rates among those aged 55 years and over. With one exception (Helsinki), the female parasuicide rate was higher than the male rate, the F:M ratio ranging from 0.71:1 to 2.15:1, with a median of 1.5:1 (events). Short-term repetition rates (as measured by the event:person ratio) differed between centres, from 1.03 to 1.30 (median = 1.12) among males, and from 1.07 to 1.26 (median = 1.13) among females. Although we warn against generalizing from our findings to make statements about differences in parasuicide between countries, we argue that the differences between centres are valid and should be addressed in further research.*

**PUBLICATIONS  
FROM  
THE PARTICIPANTS  
IN  
THE WHO/EURO  
MULTICENTRE STUDY  
ON  
PARASUICIDE**

**1993**



## **Odense**

Nielsen A S, Stenager E, Bille-Brahe U: Attempted Suicide, Suicidal Intent, and Alcohol. Crisis, 1992; 14: 32-38.

*The purpose of the present study was to relate suicidal intent to the suicide method chosen and the medical lethality of the suicidal act, and to discuss how ingestion of alcohol impacts these three factors. The study was based upon interviews with 239 suicidal patients admitted to the Department of Psychiatry of Odense University Hospital. The results indicated a tendency for suicide attempters using wrist-cutting to score low on the Suicidal Intent Scale. Patients using kinds of self-injury other than self-poisoning or wrist-cutting scored high. In the case of self-poisoning, suicidal intent did not influence the choice of toxic agent, nor was the choice of method and/or choice of toxic agent affected by alcohol ingestion. A correlation between suicidal intent and the lethality of the suicide attempt was seen only among patients without a diagnosis of alcohol dependence. Alcohol-dependent patients who made highly lethal attempts scored relatively low on the Suicidal Intent Scale. The results indicate that the lethality of the suicidal act is only an incomplete guide to a patient's suicidal intent. However, it should be stressed that, despite the fact that alcohol-dependent suicide attempters may not strongly wish to die, they are nonetheless at high risk for making fatal suicide attempts.*

Bille-Brahe U et al: Facts and Figures. In: WHO/EURO: A Multicentre Study on Parasuicide. EUR/ICP/PSF 018. København 1993.

Bille-Brahe U: The Role of Sex and Age in Suicidal Behaviour. Acta Psychiatr Scand, 1993; 371(87): 21-27.

*Danish suicide rates for the last 65 years and data from 1976-1979 and 1989- 1990, respectively, on attempted suicide in a representative Danish area show that marked changes have taken place in the distribution by sex and age of suicides and suicide attempters. Relatively more women are now taking their own life and, although suicidal risk still increases by age, the high-risk group also has come to include younger age groups. In contrast, relatively more men are attempting suicide, and the suicide attempters are getting older. Thus an equalization of the sexes has taken place, and the effect of age has become less pronounced. Both trends tally with the general trends in society.*

Center for Selvmordsforskning: Selvmordsforsøg i Fyns Amt 1992. 4. Årsrapport. Odense 1993.

Stenager EN: Parasuicide, somatic diseases, and pain. In: Böhme K, Freytag R, Wächtler C, Wedler H (Eds): Suicidal Behavior. The State of the Art. Proceedings of the XVIth Congress of the International Association for Suicide Prevention. 1993; 869-872. Regensburg: S Roderer Verlag.

## **Helsinki**

Ostamo A, Lönnqvist J: Alcohol as a Part of Parasuicide. In: Böhme K, Freytag R, Wächtler C, Wedler H (Eds): Suicidal Behavior. The State of the Art. Proceedings of the XVIth Congress of the International Association of Suicide Prevention. 1993; 911-914. Regensburg: S. Roderer Verlag.

Öhberg A, Ostamo A, Lönnqvist J: Lama ja itsetuho. Itsemurhat Uudenmaan läänissä ja itsemurhayritykset Helsingissä 1989-1992. Suomen Lääkärilehti; 1993; 48: 1344-1347. (Economic depression and suicidal behavior. Suicides in the county Uusimaa and suicide attempts in Helsinki 1989-1992. Finnish Medical Journal)

*Kun työttömyys lisääntyy, oletetaan myös itsemurhien yleistyvän. Tuore tutkimus osoittaa, ettei vuosikymmenen vaihteen lama ole suoraviivaisesti lisännyt itsemurhien määrää Uudellamaalla. Vuoteen 1990 osunut itsemurhakuolleisuuden huippu näyttääkin heijastelevan enemmän taloudellisen kasvun aikaa kuin lamaa.*

## **Leiden**

Arensman E, Kerkhof AJFM, Hengeveld MW, Mulder J: Epidemiology of medically treated suicide attempts in the Leiden area, The Netherlands. In: Böhme K, Freytag R, Wächtler C, Wedler H (Eds): Suicidal Behavior. The State of the Art. Proceedings of the XVIth Congress of the International Association of Suicide Prevention. 1993; 801-804. Regensburg: S Roderer Verlag.

## **Umeå**

Salander Renberg E, Jacobsson L: Självbrandsförsök i Västerbottens län: (Suicide attempts in Västerbotten county). In: Beskow J, Allebeck P, Wasserman D, Åsberg M (Eds): Självbrand i Sverige. En epidemiologisk översikt. (Suicide in Sweden. An epidemiological review). 1993; 97-106. Medical Research Council.

*In Västerbotten (250 000 inh) 244 persons (over 15 years of age) made 288 suicide attempts during 1989, resulting in a rate of 78 for men and 121 for women. The rate was high in the 25-44 year old group and even higher for 15-24 year old women. Three out of four of the attempts were poisonings, 1/6 cuttings. Every 20th patient went directly home from the emergency department while 35% were admitted to a somatic ward and 60% to a psychiatric ward.*

## **Stockholm**

Wasserman D: High-risk groups for parasuicide in Stockholm. In: Böhme K et al (Eds): Suicidal Behaviour. The State of the Art. 1993; 725-728. Regensburg: S Roderer Verlag.

*During the period from 1 January 1989 to 31 December 1989, 475 parasuicide patients on 541 occasions were registered at the WHO/EURO centre no:10 (Stockholm), which participates in the multicentre study on parasuicide. Person-based parasuicide rates were 297 for women and 170 for men. Maximum rates were found among 30-39 year-old males and 25-39 year-old females. Thus the new risk-groups for parasuicide comprise middle-aged men and early middle-aged women. The exceptionally high parasuicide rates for Finnish citizens call for further investigation.*

Persson M-L, Wasserman D, Schulman A: Psychiatric analysis of individuals who committed suicide after parasuicide. In: Böhme K et al (Eds): Suicidal Behaviour. The State of the Art. 1993; 746-749. Regensburg: S Roderer Verlag.

*During a follow-up period of up to one year the mortality in completed suicide after parasuicide was 2.3 %, uncertain suicides included. The most common psychiatric diagnoses according to ICD-9 classification at the time of the last parasuicide were affective disorders and alcoholism. DSM-III-R criteria revealed more depressions than ICD-9 classification. The time between the last parasuicide and suicide was extremely short: one to four weeks for 7/8 depressed patients. The psychiatric disorders were often accompanied by a high degree of social deterioration and isolation, which complicated psychiatric treatment.*

Isacsson G, Bergman U, Wasserman D: Medications used for suicide attempts in a suburb of Stockholm. In: Böhme K et al (Eds): Suicidal Behaviour. The State of the Art. 1993; 673. Regensburg: S Roderer Verlag.

Wasserman D, Eklund G: Självbrandsförsök i Stockholms län: Huddinge sjukvårdsområde (Suicide attempts in Stockholm county: Huddinge Hospital catchment area). In: Beskow J, Allebeck P, Wasserman D, Åsberg M (Eds): Självbrand i Sverige. En epidemiologisk översikt. (Suicide in Sweden. An epidemiological review). 1993; 107-120. Medical Research Council.

*In Huddinge district (250 000 inh) 475 persons were registered for 541 suicide attempts during 1989. In 1990 the corresponding figures were 382 and 426. The suicide attempt rate (15+) for 1989/1990 were 170/165 for men, 297/212 for women and 236/190 for the total material. In 1990, higher rates were seen in males than in females in the 30-34 and 50-54 year old group. Both men and women living alone, especially if divorced, had higher rates of attempted suicide. Single parents, especially women, also had high rates. Finnish citizens had higher rates than other nationalities. These were however lower than corresponding rates observed in Helsinki.*

Adamsson C, Wasserman D, Eklund G: Risk groups for parasuicide - survey of unselected people who attempt suicide treated in hospital. *Scandinavian Journal of Social Welfare*, 1993; 2:178-185.

*A registration survey of parasuicide patients seeking hospital care in a defined catchment area was conducted over 24 months (1989-1990). In 1989, 475 individuals registered as residents in the catchment area were given care on 541 occasions, and in 1990, 382 individuals received care on 426 occasions as a result of parasuicide. The parasuicide rates for the overall population in the catchment area were estimated by means of demographic variables. Parasuicide rates were highest among women 25-39 years old and among men 30-39 years old, i.e., in older age groups than previous studies (from the 1970s) have shown. Parasuicide rates are 3 times as high for single men as for married men and twice as high for single women as for married women. Among single men and women, divorcé(e)s show the highest parasuicide rates, especially in the 15-34 age group. The number of parasuicides among women decreased significantly between 1989 and 1990, which had the effect of evening out the female:male parasuicide ratio (1.28:1). Moreover, for the first time it becomes clear that the Finnish citizens in Sweden, both men and women, show a high risk for parasuicide compared with the Swedish population. These results focus attention on deficient psychic and social wellbeing of Finns in Sweden.*

### **Sor-Trondelag**

Bjerke T, Stiles TC, Rygnestad T, Jorgensen P: Youthful Parasuicide in a Norwegian County. In: Böhme K, Wedler H (Eds): *Suicidal Behaviour. The State of the Art. Proceedings of the XVIth Congress of the International Association of Suicide Prevention*. 1993; 826-829. Regensburg: S Roderer Verlag.

### **Padova**

Amigoni A, Rocco P, Fantinato S, De Leo D: W.H.O. European Multicentre Study on Parasuicide: rilevamenti dell'unità operativa di Padova nel periodo 1/1/1990-31/12/1991. *Supplement of Giornale Italiano di Suicidologia*, 1: 13-17, 1993.

*Il „parasuicidio“, atto autolesivo volontario di esito non letale, rappresenta una delle emergenze di maggior rilievo del mondo occidentale, sia da un punto di vista strettamente medico che, più generalmente, sociale. Infatti, dalla seconda guerra mondiale ad oggi i tentativi di suicidio hanno seguito un trend continuamente ascendente, suscitando sempre più interesse da parte di numerosi ricercatori.*

*Ai fini di ottenere un quadro quanto più completo della portata del fenomeno in ambito Europeo e di poter intervenire in senso preventivo, l'Organizzazione Mondiale della Sanità ha avviato nel 1988 uno „Studio Multicentrico sul Parasuicidio“ che si colloca nel contesto del più vasto „Health for all by the year 2000“ (obiettivo n. 12).*

*Esso si articola in due fasi successive: la prima, tuttora in corso, prevede da parte dei 16 centri partecipanti un preciso lavoro di rilevamento epidemiologico („epidemiological monitoring project“); la seconda, iniziata a partire dal 1990, si propone di identificare i principali fattori di predittività del comportamento suicidario („repetition prediction project“).*

*Padova, occupandosi già da diversi anni dello studio delle dinamiche autolesive e quale città campione rappresentativa del Nord Italia, è stata ritenuta idonea dall'OMS ad essere la sede di un osservatorio del fenomeno nell'ambito di tale progetto.*

*In questo lavoro ci si propone di presentare i dati raccolti nel periodo 1/1/1990-31/12/1991.*

Amigoni A, Rocco P, De Leo D: Il tentativo di suicidio negli adolescenti: analisi di un campione padovano. *Supplement of Giornale Italiano di Suicidologia*, 1: 49-52, 1993.

*Il tentativo di suicidio è una condotta rilevante in età adolescenziale sia da un punto di vista epidemiologico che per le caratteristiche che l'atto stesso assume in questa età.*

*Rispetto alla popolazione generale il tasso parasuicidario riscontrato nei Paesi Occidentali risulta particolarmente elevato (intorno ai 351/100.000 abitanti) e si contrappone ad una mortalità per suicidio meno frequente rispetto alle altre età della vita ((7,7/100.000 contro 15,4/100.000), nonostante questo evento rappresenti (anche in Italia) la seconda causa di morte dopo gli incidenti stradali.*

*L'attuazione dell'agito autolesivo si distingue, inoltre, dal resto della popolazione per maggior impulsività, per una meno accurata progettazione del parasuicidio e per un più frequente ricorso a metodi potenzialmente meno letale, come ad esempio i farmaci.*

*Nel presente lavoro ci si propone di presentare un'analisi descrittiva del campione costituito dai soggetti di età*

*compresa tra i 15 ed i 25 anni giunti in contatto con l'unità operativa Padovana nel corso del rilevamento epidemiologico per lo „Studio Multicentrico W.H.O. sul Parasuicidio“. La raccolta di dati è relativa al periodo 1/1/1990-31/12/1991.*

Rocco P L, Amigoni A, De Leo D: Il tentato suicidio nell'anziano: analisi di un campione. Supplement of Giornale Italiano di Suicidologia, 1: 53-55, 1993.

*Il suicidio ed il tentato suicidio costituiscono un problema di notevoli dimensioni in età senile: si calcola che il comportamento suicidario sia la decima causa di morte nei soggetti ultrasessantacinquenni.*

*Il tasso più alto comprende i soggetti di età compresa tra gli 80 e gli 85 anni, con una significativa preponderanza del sesso maschile; si calcola che il numero assoluto di suicidi tra gli anziani duplicherà nei prossimi quaranta anni, anche per l'aumento considerevole della popolazione anziana vivente.*

*L'osservazione che il parasuicidio nell'anziano è più raro rispetto al suicidio, contrariamente a ciò che avviene in età più giovanile, non è recente; è stato osservato inoltre che qualora l'anziano tenti il suicidio, l'intenzionalità è completa e sono molto rari i parasuicidi con fini manipolativi.*

*Sembra verosimile un rapporto di parasuicidi/suicidi di 3:1 nell'anziano, contro un rapporto nel giovane di 40 parasuicidi per ogni suicidio completo.*

*Il rate per 100.000 abitanti di parasuicidi negli ultrasessantacinquenni è in Italia tra i più bassi del mondo occidentale, aggirandosi intorno a 75/85 casi per 100.000 persone, contro i 110 casi per 100.000 di Helsinki, o i 160 casi per 100.000 della Svezia.*

*I dati che presentiamo in questo studio sono estrapolati da un campione di soggetti che hanno tentato il suicidio nel periodo compreso tra settembre 1991 e agosto 1992, in due città del Nord Italia, Padova e Udine. Il numero totale di parasuicidi nelle due città è stato di 380 parasuicidi ed il campione estrapolato di soggetti ultrasessantacinquenni è costituito da 58 soggetti, ossia il 15,2%.*

### **Joint publications**

Stiles T, Bille-Brahe U, Bjerke T, Lönnqvist J, Jacobsson L, Wasserman D: WHO (Nordic) Multicentre Study on Parasuicide: Description and Present Status. Nor J Psychiatr, 1993; 47: 281-286.

*Sixteen centres from 14 different European countries are participating in the WHO/Euro multicentre study on parasuicide. In this paper the Nordic part of the research project is presented. Both the epidemiologic monitoring study and the repetition prediction study (EPSIS) are introduced. The catchment areas covered by each of the five Nordic centres are described, along with selection procedures and assessment instruments. Moreover, some recent incidence data on parasuicide event rates in the Nordic catchment areas are also presented. Finally, a progress of the repetition prediction study is described.*

Schmidtke A, Bille-Brahe U, Kerkhof A, et al: The WHO/EURO multicentre project on parasuicide - State of the art. Giornale Italiano di Suicidologia, 1993; 3(2): 83-95.

*This paper presents the main characteristics of the WHO/EURO Multicentre Study on Parasuicide. The project is aimed both to carefully monitor parasuicidal behaviours (medically treated) and to predict future acts („repetition prediction study“). Preliminary results from the monitoring phase of the project are here discussed.*

Bille-Brahe U, Bjerke T, Crepet P, De Leo D, Haring C, Hawton K, Kerkhof A, Lönnqvist J, Michel K, Philippe A, Pommereau X, Querejeta I, Salander-Renberg E, Temesvary B, Wasserman D, Sampaio Faria J: WHO/EURO Multicentre Study on Parasuicide. Facts and Figures. WHO, Regional Office for Europe, 1993.

De Leo D, Bille-Brahe U, Bjerke T, Crepet P, Haring C, Kerkhof A, Lönnqvist J, Michel K, Pommereau X, Querejeta I, Salander-Renberg E, Schmidtke A, Temesvary B, Wasserman D, Bernardini M, Sampaio-Faria J: Parasuicide in the Elderly: Results from WHO/EURO Multicentre Study 1989-1991. Abstract Book. Sixth Congress International Psychogeriatric Association, Berlin, September 5-10, 1993.

**PUBLICATIONS  
FROM  
THE PARTICIPANTS  
IN  
THE WHO/EURO  
MULTICENTRE STUDY  
ON  
PARASUICIDE**

**1994**

## **Odense**

Stenager EN, Stenager E, Jensen K: Attempted suicide, depression and physical diseases. A one year follow-up study. *Psychother Psychosom* 1994; 61: 65-73.

*In the period January 1, 1990 to March 31, 1991 a sample of suicide attempters admitted to the Department of Psychiatry, Odense University Hospital, underwent a structured interview. In the study 52 % of the patients interviewed were found to suffer from a somatic disease, and 21% were daily on analgesics for pain. Patients that suffered from a somatic disease differed from other suicide attempters in depression score, age, pain and the presence of psychosis. Fewer of the somatically ill suicide attempters had a psychosis. Patients complaining of pain were more often depressed and abused medicine. Statistically, the risk of repetition of parasuicide for patients with a somatic disease but without depression was significantly less. The 7 patients committing suicide were older and a tendency was found towards painful somatic diseases and depression as risk factors for suicide.*

Stenager E, Jensen K: Attempted suicide and contact with the primary health authorities. *Acta Psychiatr Scand* 1994; 90(2): 109-113.

*In a study describing suicide attempters' approach to the health and social welfare authorities prior to a suicide attempt, it was found that one-fourth of the patients seeking help requested therapeutic consultations and only a few asked for medicinal treatment. Forty-four percent had taken newly prescribed medicine for the parasuicide. It is concluded that the availability of psychological support and a more restrictive prescription of medicine could have a preventive effect on parasuicidal behaviour. Patients suffering from depression and pain have more often than other patients been in contact with their general practitioner prior to the suicide attempt. Postgraduate courses for practitioners on depression diagnostics and suicidal behaviour are proposed as a measure in suicide prevention.*

Bille-Brahe U, Jessen G: Repeated Suicidal Behavior: A Two-Year Follow-up. *Crisis*, 1994; 15(2): 77-82

*The majority of suicide attempters repeat the suicidal act at least once. The study described here on a Danish sample of suicide attempters shows that 31% had made only one attempt. More repeaters than nonrepeaters were divorced, and more repeaters also lived alone or alone with children. The two groups did not differ significantly as to level of education, but were clearly different with regard to their economic activity. These differences cannot be used as a basis for the prediction of future suicidal behavior, since the factors discussed refer to characteristics that define suicide attempters in general. However, they do point to conditions that might be targets for intervention and aftercare.*

## **Helsinki**

Ostamo A, Lönnqvist J: The Epidemiology of Attempted Suicide in Helsinki, 1989-1993. In: Kerkhof et al (Eds): *Attempted Suicide in Europe. Findings from the Multicentre Study on Parasuicide by the WHO Regional Office for Europe*, 1994; 137-158. Leiden: DSWO Press.

Lönnqvist J, Suokas J, Ostamo A: Parasuicidio ad Helsinki: Epidemiologia, Conduzione ed Outcome. In de Leo D, Pavan L (eds.): *Suicidio: Verso Nuove Strategie Preventive*, 1994; 53-61. Kendall Press.

## **Huddinge**

Wasserman D, Larsson N, Adamsson C, Estari J, Spellerberg S: Parasuicide in Stockholm, Sweden 1989-1991. In: Kerkhof A et al (eds.): *Attempted Suicide in Europe. Findings from the Multicentre Study on Parasuicide by the WHO Regional Office for Europe*, 1994; 175-187. Leiden: DSWO Press.

Wasserman D, Larsson N, Adamsson C, Estari J, Spellerberg S: Parasuicide population in Stockholm, Sweden, 1989-1991. Interim report from Center 10 of the WHO/EURO Multicentre Study on Parasuicide. Centre for Suicide Research and Prevention, Karolinska Hospital, Stockholm, 1994.

Runeson B, Wasserman D: Management of suicide attempters: what are the routines and the costs? *Acta Psychiatr Scand* 1994; 90: 222-228.

*The service offered to a consecutive series of 97 suicide attempters (36 men and 61 women) at a general hospital were registered by a participating observer. All but one case were subjected to psychiatric consultation for suicide risk assessment, but only 34% were evaluated by a psychiatric specialist. Fifty-seven percent were admitted to psychiatric inpatient care. The length of inpatient care varied, the average duration was 5 days for men and 14 days for women. Repeaters were admitted more often than non-repeaters. The short time compliance was satisfactory. The direct cost for management was evaluated based on the detailed quantification of care provided for each subject. The care at the hospital equalled 6.4% of the total budget for psychiatric inpatient care.*

## **Bern**

Michel K, Valach L, Waeber V: Understanding Deliberate Self-Harm: The Patients' Views. *Crisis*, 1994; 15(4): 172-178.

*Patients were asked to explain why they had attempted suicide, by spontaneous description and by the use of lists of problems and motives presented to them. They were also asked what help they would have accepted before the event, and what the consequences of the suicide attempt were. The main motive for attempting suicide mentioned was an acute and unbearable state of mind. Interpersonal (manipulative) motives were of much less importance to the patients. In contrast, the problems which patients thought had an influence on what they had done were mainly interpersonal problems and, to a lesser degree, health problems. Especially younger individuals saw interpersonal difficulties as the main problems. Many patients reported that in the suicidal crisis they would not have been prepared to accept help. Most felt the suicide attempt had positive consequences for them.*

## **Padova**

De Leo D: Parasuicide in the elderly: Results from the WHO/EURO Multicentre Study, 1989-1991. A short report. *IPA Bulletin* 11, 1: 15-17, 1994.

*(Following are excerpts from a presentation made at IPA's Sixth Congress in Berlin).*

*Comparison of suicide and parasuicide rates in relation to age suggests that suicidal behavior in the elderly is far less manipulative or demonstrative than in other age groups, and those who do commit the act seem more determined to die as a result. This can also be demonstrated, for example, by the more lethal methods chosen, by the active or passive precautions taken to ensure that no one else can intervene, and by the contents of suicide notes (Mille, 1979). In substance, parasuicide in the elderly can frequently be classified as false suicide. Thus the affinity between suicide and parasuicide in this age group is far more marked than in the younger population. This observation seems to be of particular importance, as the study of parasuicide in the elderly would allow us to better understand and prevent suicide.*

Fantinato S, Bernardini M, Padoani W, Scocco P, De Leo D: Epidemiologia dei Parasuicidi a Padova, 1989-1992. In „Comportamenti suicidari a Padova, 1989-1992“. D. De Leo, W. Padoani, S. Fantinato (eds.). Kendall, Padova, 1994, p. 13-60.

*Nell'anno 1986, sono stati rilevati da De Leo e coll. (1988) 258 casi di condotte suicidarie tra i residenti in Padova, di cui 35 letali. Nel campione di soggetti che avevano tentato il suicidio erano prevalenti le donne (rapporto F/M=1,47/1) e l'età media risultava pari a 33,5 anni. Gli stessi autori (De Leo et al., 1990) segnalavano, per il periodo 1-9-1988/31-8-1989, 268 tentativi di suicidio, di cui 97 compiuti da soggetti maschi e 171 da soggetti di sesso femminile, sottolineando che tale numero era molto verosimilmente sottostimato e rappresentava, come riportato in letteratura, una percentuale vicina al 25% di tutti i casi realmente verificatisi (Diekstra, 1989).*

*Scopo di questo lavoro, inserito nel contesto del WHO/Euro Multicentre Study on Parasuicide, è quello di fornire un quadro il più veritiero possibile delle caratteristiche del comportamento suicidario in Padova negli anni 1989-1992, al fine di individuare alcune caratteristiche predittive di un futuro agito suicidario e nell'ipotesi di poter fornire alcune concrete linee di prevenzione.*

Fantinato S, Dello Buono M, De Leo D: Aspetti Clinici del Comportamento Suicidario Ripetuto. In „Comportamenti suicidari a Padova, 1989-1992“. D. De Leo, W. Padoani, S. Fantinato (eds.). Kendall, Padova, 1994, p. 61-79.

*La ripetizione dell'atto riveste peculiare importanza clinica nell'ambito dei comportamenti suicidari.*

*In base ai dati epidemiologici disponibili, una percentuale valutata fra il 50% e l'80% di tutti i soggetti che vanno incontro a suicidio è „repeater“ (De Leo et al., 1988). La mortalità tra i soggetti con storia di ripetuti episodi di parasuicidio è stimata essere 100-250 volte quella della popolazione generale (Montgomery, 1984). L'1% dei tentatori di suicidio si toglie la vita nell'anno seguente l'episodio parasuicidario (Hawton, 1990), percentuale che aumenta se l'episodio non era il primo (Overstone & Kreitman, 1974).*

*Il rischio di morte per suicidio resta, comunque, elevato per gli otto anni seguenti il tentativo (Hawton, 1990), decrescendo, però, con il passare del tempo: la maggior parte delle ripetizioni cade entro il primo anno, con un'incidenza particolarmente elevata nei primi tre mesi, soprattutto nei giorni immediatamente successivi al parasuicidio (Montgomery, 1984).*

### **Joint publications**

Kerkhof AJFM, Schmidtke A, Bille-Brahe U, De Leo D, Lönnqvist J: Attempted Suicide in Europe. Findings from the Multicentre Study on Parasuicide by the WHO Regional Office for Europe. 1994; Leiden: DSWO Press.

Schmidtke A, Bille-Brahe U, Kerkhof A, De Leo D, Platt S, Sampaio-Faria J, Henderson J, Pototzky W, Bjerke T, Crepet P, Haring C, Lönnqvist J, Michel K, Philippe A, Pommereau X, Querejeta I, Salander-Renberg E, Temesvary B, Wasserman D: Studio Multicentrico WHO/EURO sul parasuicidio. Stato dell'Arte. In „Suicidio: Verso Nuove Strategie Preventive“, D. De Leo e L. Pavan (eds.). Kendall, Padova, 1994, pp. 21-37.

*Come parte di un programma d'azione per il raggiungimento dell'obiettivo 12 delle strategie dell'Organizzazione Mondiale della Sanità, Ufficio Europeo, ed in considerazione dello sviluppo di indicatori per questo tipo di obiettivo, è stato deciso di ottenere dati comparativi dei trends nei tentativi di suicidio in diversi paesi europei. In aggiunta, è stato proposto di ottenere un quadro epidemiologico del parasuicidio in Europa come pure informazioni su gruppi a rischio particolare. Un gruppo di lavoro dell'OMS decise a New York nel 1986 che fosse quindi opportuno condurre uno studio collaborativo multicentrico multinazionale a livello europeo per raggiungere tali obiettivi (Schmidtke, 1989). Tale progetto, supportato dall'Ufficio Europeo dell'Organizzazione Mondiale della Sanità, è chiamato „Studio Multicentrico WHO/EURO sul Parasuicidio“.*

Wasserman D, Fellman M, Bille-Brahe U, Bjerke T, Jacobsen L, Jessen G, Lönnqvist J K, Njåstad O, Ostamo A, Salander-Rehnberg E: Parasuicide in the Nordic Countries. Scand J Soc Med, 1994; 22(3):170-177.

*This article gives an account of some findings of the WHO/EURO multicentre study on parasuicide from the five Nordic centres: Helsinki (Finland), Stockholm (Sweden), and the counties of Funen (Denmark), Sør-Trøndelag (Norway) and Västerbotten (Sweden). For parasuicide patients treated in hospital in these five Nordic centres, the parasuicide rates per 100,000 inhabitants per annum were 222 for women, 213 for men and 224 for both sexes combined. In all the Nordic centres except Helsinki, women had higher parasuicide rates than men. The female/male parasuicide ratio was 1.16 for all Nordic centres. The highest parasuicide rates in the whole material were found in Helsinki, Stockholm and Funen, and the lowest in Sør-Trøndelag and Västerbotten. The highest parasuicide rates lay in the 30-39 age interval, i.e. the peak of parasuicide rates was in older age groups than previously reported. Single people, especially divorcees and those who have never been married, constitute a highrisk group in both sexes. The risk of parasuicide for single men is three times that for married men in all the Nordic centres except Sør-Trøndelag, where the risk is five times higher. The parasuicide risk for single women is twice as high as for married women except for women in Funen, where the risk for single and married women is almost equal. Exceptionally high parasuicide rates are also reported for Finnish citizens in Sweden, compared with Finns from the Helsinki centre. Parasuicide rates appear to be correlated with population density, since the densely populated areas of Helsinki, Stockholm and Funen evince higher parasuicide rates than the sparsely populated areas of Sør-Trøndelag and Västerbotten.*



**PUBLICATIONS  
FROM  
THE PARTICIPANTS  
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MULTICENTRE STUDY  
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PARASUICIDE**

**1995**

## **Sør-Trøndelag**

Bjerke T, Hjelmeland H, Jørgensen PT, Stiles TC, Skjærvold L: Parasuicid i Sør-Trøndelag 1989-92. Rater og sosiodemografiske karakteristika. (Parasuicide in Sør-Trøndelag 1989-92. Rates and sociodemographic characteristics). Tidsskr Nor Lægeforen, 1995; 115: 1221-4.

*A total of 1,740 events of parasuicide (1,329 persons; female/male ratio 1,4) were registered in the county of Sør-Trøndelag from 1 October 1988 to 31 December 1992. The information was collected by means of monitoring forms completed in hospitals, by general practitioners, and at local health centres. Person-based rates were highest amongst 25-44 year-olds (both sexes). While male rates remained relatively stable, female rates seemed to decline, owing to reduced rates amongst 25-34 year-olds and 45-54 year-olds. For both sexes rates were highest in the urban area of Trondheim. For males and females alike, the lowest rates were found in coastal municipalities. Self-poisoning was involved in 84% of the male and in 92% of the female cases. Rates for divorced and separated males and females (per 100,000) were lower than demonstrated earlier in the catchment area. The largest proportion of female parasuicides were either employed or in receipt of a disability pension; the two largest male groups were unemployed and employed. Low education was characteristic for both sexes. Almost half of each sex reported earlier attempt(s), and the annual rate of repetition varied between 10-21% for females and 11-18% for males.*

Hjelmeland H, Bjerke T, Stiles TC: Parasuicid i Sør-Trøndelag 1989-92 - kliniske og psykologiske karakteristika. (Parasuicide in Sør-Trøndelag 1989-92 - clinical and psychological characteristics). Tidsskr Nor Lægeforen, 1995; 115: 1824-8.

*The present study is based on interviews with 953 patients (572 females and 381 males) from the county of Sør-Trøndelag who came in contact with the health services after a parasuicide during the period 1 October 1988 to 31 December 1992. Almost half of the patients had a history of earlier parasuicide, and almost half reported that the intention of the last parasuicide was to kill themselves. The parasuicides were regarded as serious by the medical staff in 26% of the cases. There was a significant association between suicidal intention and seriousness. The patients often reported alcohol, drug, family and psychiatric problems, and had often been in contact with health services during the month preceding the parasuicide. 3% of the females and 23% of the males had been sentenced to jail. 24% had experienced a parasuicide and 17% a suicide among family members or friends. 33% of the females and 18% of the males reported having been physically abused, and 14% of the females and 6% of the males reported sexual abuse. The results are discussed in light of previous Norwegian studies*

Hjelmeland H: Verbally Expressed Intentions of Parasuicide: I. Characteristics of Patients with Various Intentions. Crisis, 1995; 16(4): 176-181.

*Comparisons of 584 parasuicides with a verbalized intention to die and 341 parasuicides with other intentions were made on a number of sociodemographic and clinical/psychological variables. The results revealed that patients with a verbalized intention to die had different life-problems than those with other intentions. More specifically, after sex and age had been controlled for, patients with an intention to die were more often economically inactive and were more likely to report psychiatric problems as their main concern, while those with other intentions more often abused alcohol and were more likely to report family or economical problems. The identification of discriminating risk factors is important in light of the fact that those with an intention to die made more life-threatening attempts, as reflected by the choice of method and the medical judgment of the attempt's seriousness.*

## **Huddinge**

Isacsson G, Wasserman D, Bergman U: Self Poisonings with Antidepressants and Other Psychotropics in an Urban Area of Sweden. Annals of Clin Psychiatry, Vol. 7, No. 3, 1995; 113-117.

*As part of a WHO project on parasuicide, the medications used for self-poisoning in the Stockholm area were studied.*

*The prescribing rates of the medications were estimated from an independent survey of prescriptions. Anxiolytics, hypnotics, and analgesics were the drugs most commonly used for parasuicide. Related to prescribing rates, antipsychotics and anxiolytics represented an increased risk for parasuicide compared to the average for psychotropics. Analgesics, on the other hand, showed a lower risk for parasuicide. The low number of self-poisonings with antidepressants may reflect that suicidal individuals are seldom prescribed antidepressants and/or that antidepressants actually prevent suicidal acts. As we have shown earlier for completed suicides, underprescribing and therapeutic failure seem to be greater problems with antidepressants than their use for self-poisoning.*

## **Helsinki**

Ostamo A, Räsänen L: Vajaa kolmannes oli tyytyväisiä hoitoonsa. Itsemurhien ehkäisyprojekti 1992-1996/STAKES, lehti yhteyshenkilöille IMPRO 3/1995: 14-16.

Ostamo A, Räsänen L, Valjakka S, Lönnqvist J: WHO/EURO Multicentre Study on Parasuicide -research project: The Repetition-prediction Study in Finland. Material and Methods. Publications of the National Public Health Institute B 18/1995. Yliopistopaino, Helsinki, 1995.

## **Leiden**

Arensman E, Kerkhof A.J.F.M., Hengeveld M.W., Mulder J.D.: Medically treated suicide attempts: a four year monitoring study of the epidemiology in the Netherlands. Journal of Epidemiology and Community Health, (1995): 49, 285-289.

*The incidence of medically treated attempted suicides was investigated in a defined area in the western part of the Netherlands, and demographic groups at risk were identified. Apart from general hospitals and psychiatric hospitals, 28% of all reported suicide attempts were reported exclusively by general practitioners, which supports the conclusion that they are an important source of information. There were indications that the number of medically treated suicide attempts in this area is stabilizing.*

## **Padova**

Scocco P, Padoani W, Dello Buono M, Carollo G, Conforti D, De Leo D: WHO/EURO Multicentre Study on Parasuicide: Findings from the Operating Centre of Padua 1989-1993. In Abstract Book. XVIIIth Congress of the International Association for Suicide Prevention and Crisis Intervention, Venice, 4-8 June, 1995.

Scocco P & De Leo D: Relevance of Diagnostic Setting in Predicting the Outcome of Suicide Attempters. In Abstract Book. XVIIIth Congress of the International Association for Suicide Prevention and Crisis Intervention, Venice, 4-8 June, 1995.

## **Joint Publications**

De Leo D, Schmidtke A, Bille-Brahe U, Kerkhof A, Carollo G, Bjerke T, Crepet P, Haring C, Hawton K, Lönnqvist J, Michel K, Philippe A, Salander-Renberg E, Temesvary B, Wasserman D, Conforti D, Padoani W, Sampaio Faria J: Suicidal Behaviour in The Elderly: Results from the WHO/EURO Multicentre Study on Parasuicide. In Abstract Book. XVIIIth Congress of the International Association for Suicide Prevention and Crisis Intervention, Venice, 4-8 June, 1995.

**PUBLICATIONS  
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MULTICENTRE STUDY  
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PARASUICIDE**

**1996**

## **Joint Publications**

Schmidtke A, Bille-Brahe U, De Leo D et al.: Attempted Suicide in Europe: rates, trends and sociodemographic characteristics of suicide attempters during the period 1989-1992. Results of the WHO/EURO Multicentre Study on Parasuicide. *Acta Psychiatr Scand* 1996; 93: 327-338.

*The World Health Organization/EURO Multicentre Project on Parasuicide is part of the action to implement target 12 of the WHO programme, „Health for All by the Year 2000“, for the European region. Sixteen centres in 13 European countries are participating in the monitoring aspect of the project, in which trends in the epidemiology of suicide attempts are assessed. The highest average male age-standardized rate of suicide attempts was found for Helsinki, Finland (314/100 000), and the lowest rate (45/100 000) was for Guipuzcoa, Spain, representing a sevenfold difference. The highest average female age-standardized rate was found for Cergy-Pontoise, France (462/100 000), and the lowest (69/100 000) again for Guipuzcoa, Spain. With only one exception (Helsinki), the person-based suicide attempt rates were higher among women than among men. In the majority of centres, the highest person-based rates were found in the younger age groups. The rates among people aged 55 years or over were generally the lowest. For the majority of the centres, the rates for individuals aged 15 years or over decreased between 1989 and 1992. The methods used were primarily ‘soft’ (poisoning) or cutting. More than 50% of the suicide attempters made more than one attempt, and nearly 20% of the second attempts were made within 13 months after the first attempt. Compared with the general population, suicide attempters more often belong to the social categories associated with social destabilization and poverty.*

Bille-Brahe U, Kerkhof A, De Leo D et al: A Repetition-Prediction Study on European Parasuicide Populations. Part II of the WHO/EURO Multicentre Study on Parasuicide in Cooperation with the EC Concerted Action on Attempted Suicide. *Crisis* 1996; 17(1): 22-31.

*One of the aims of the inter-European study on parasuicide, which was initiated by WHO/Euro in the mid-1980s, was to try and identify social and personal characteristics predictive of future suicidal behavior. A follow-up interview study (the Repetition-Prediction Study) was designed, and so far 1145 interviews have been carried out at nine research centers, representing seven European countries. The study and the instrument used (the European Parasuicide Study Interview Schedule, EPSIS I and II) are described here. Some basic characteristics of the material from the various centers are presented and compared, and the representativeness of the samples are discussed. There were differences between the centers in several respects. Results from analyses based on pooled data have to be treated with some caution because of the possible lack of representativeness.*

Bille-Brahe U, Andersen K, Wasserman D et al: The WHO/EURO Multicentre Study: Risk of Parasuicide and the Comparability of the Areas Under Study. *Crisis* 1996; 17(1): 32-42.

*The 15 areas under study in the WHO/Euro Multicentre Study on Parasuicide vary considerably with regard to socio-economic factors, culture, life-styles, etc. In this paper, the authors discuss whether the traditional high risk factors for suicidal behavior (such as unemployment, abuse, divorce, etc.) take on different weights depending on local societal and cultural settings. Results from analyzing covariations between various background factors characteristic of the different areas under study and the frequency of attempted suicide showed weak or insignificant correlations, indicating that high-risk factors can only be identified from international pooled data with great care.*

## **Sør-Trøndelag**

Hjelmeland H: Verbally Expressed Intentions of Parasuicide: II. Prediction of Fatal and Nonfatal Repetition. *Crisis*, 1996; 17(1): 10-14.

*The predictive value of verbally expressed intentions of parasuicide was studied in 925 patients admitted after deliberate self-harm to one of the health care facilities in the county of Sør-Trøndelag, Norway. Repetition of the suicidal act was studied prospectively, and the results showed that verbally expressed intention to die at the index parasuicide did predict fatal repetition (suicide) but not nonfatal repetition (parasuicide) of the suicidal act.*

Hjelmeland H, Bjerke T: Parasuicide in the county of Sør-Trøndelag, Norway. General epidemiology and psychological factors. Soc Psychiatry Psychiatr Epidemiol (1996) 31: 272-283.

*After several decades of increasing parasuicide rates in the region we are now witnessing a reduction. In general, the sociodemographic and psychological characteristics of parasuicide identified in the present report are consistent with previous research. In addition, due to a longitudinal design in a region with reliable statistics regarding the general population we demonstrated declining parasuicide rates among the divorced and the separated. We also concluded that further insight into self-destructive behaviour should be gained by a consideration of the value of psychological theories on the development and functions of sex and age roles.*

Hjelmeland H: Repetition of Parasuicide: A Predictive Study. Suicide and Life Threatening Behavior, Vol. 26(4), Winter 1996: 395-404.

*Medically treated parasuicides in a Norwegian county were monitored for more than 6 years, and variables predicting repetition of the parasuicide were identified. Numerous variables were found to be associated with repetition of the parasuicide when studied retrospectively. In prospective analysis of patients with no history of parasuicide, only sexual abuse (both sexes), alcohol abuse, and report of own psychiatric problems as the main concern at the time of the parasuicide (females only) were significant predictors of repetition. The results indicated that predictors of repetition are highly dependent upon the stage of the "suicidal career" the patients are in.*

## **Odense**

Bille-Brahe U: Measuring social intergration and social support. Nord J Psychiatry 1996;50 Suppl 37:41-46.

*With the point of departure in the classic theories of Émile Durkheim on the importance of the relationship between the individual and her society, the concepts of social integration and social support, and the theoretical framework behind an operationalization of the two are discussed. The paper then concentrates on measuring „social support“. To illustrate the method, preliminary Danish data from an inter-European study on attempted suicide are used.*

Nylev Stenager E.: Attempted Suicide - Treatment and Outcome. A clinical Psychiatric Study. A PhD-thesis. Odense University Press 1996.

Søgaard Nielsen S et al.: Alcohol Problems Among Suicide Attempters in the Nordic Countries. Crisis 1996; 17(4): 157-166.

*The purpose of this study was to see whether and how the number of suicide attempters with alcohol problems and their drinking habits differ between the Nordic areas under study. Problem-drinkers were defined as persons who themselves felt that they had an alcohol problem. The analyses were based on data collected at five Nordic research centres participating in the WHO/Euro Multicentre Study on Parasuicide, namely: Helsinki, Umeå, Stockholm, Sør-Trøndelag and Odense. The results showed that the frequency of problem-drinkers among suicide attempters differed markedly between the areas under study; the Finnish male and the Danish female suicide attempters included the highest proportions of self-identified problem-drinkers. The pattern of drinking among suicide attempters also differed between the areas. The analysis indicate that the point when alcohol becomes a problem to somebody, especially to a degree that it increases the risk of suicidal behaviour, not only depends on how much and how often the person drinks alcohol; the prevailing drinking pattern, the attitudes towards drinking alcohol, and the level of social control are also important factors to take into consideration when relations between alcohol and suicidal behaviour are under study.*

## **Helsinki**

Suominen K, Henriksson M, Suokas J, Isometsä E, Ostamo A, Lönnqvist J: Mental disorders and comorbidity in attempted suicide. Acta Psychiatr Scand (1996) 94: 234-240.

*The present study examined the prevalence and comorbidity of mental disorders according to DSM-III-R among male and female suicide attempters. A systematic sample of 114 patients from consecutive cases of attempted suicide referred to a general hospital in Helsinki between 1 January and 31 July 1990 was interviewed. In 98% of the cases at least one Axis I diagnosis was made. Depressive syndromes were more common among females (85%) than males (64%), and alcohol dependence was more common among males (64%) than females (21%). A high proportion of suicide attempters (82%) suffered from comorbid mental disorders. Comorbidity appears to play an important role in parasuicide.*

Ostamo A: Lama ei lisännyt itsemurhayrityksiä Helsingissä. Kansanterveys 6/1996:3-4.

Ostamo A, Valjakka S, Lönnqvist J: Itsemurhayritysten epidemiologia Helsingissä 1989-1995. Suomen Lääkärilehti 1996; 51:17: 1927-1930.

**PUBLICATIONS  
FROM  
THE PARTICIPANTS  
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THE WHO/EURO  
MULTICENTRE STUDY  
ON  
PARASUICIDE**

**1997**



## **Leiden**

Arensman E.: Attempted Suicide: Epidemiology and Classification. A PhD-thesis. Ella Arensman/BMJ Publishing Group/The Guilford Press. Leiden 1997.

## **Odense**

Bille-Brahe U.: Death Diagnoses among Suicides: An Overview Based on Official Danish Records, 1972-1993. Nord J Psychiatry 1997; 5/51:19 - 29.

On the basis of printouts of the Danish Central Death Register compiled by the National Board of Health, the frequencies of the three types of death diagnoses stated on the death certificate (the underlying, the secondary, and the tertiary cause-of-death) have been calculated for all deaths registered as suicide during a period of 22 years. In addition, samples of death certificates have been scrutinized. Analyses showed that the number of suicides registered under a psychiatric diagnosis decreased during the period from 76 to 59 per cent for males and from 79 to 66 per cent for females. For both males and females, the most frequent psychiatric diagnosis was non-classifiable psychoses; for males the second most frequent diagnosis was alcoholism; for females manic depression, closely followed by alcoholism. The suitability of using death certificates and cause-of-death statistics only as basis for studying death diagnoses among suicides is critically discussed.

Keywords: suicide, death diagnoses, psychiatric diseases

## **Leiden**

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*Keywords: suicide, death diagnoses, psychiatric diseases*

## **Joint Publications**

D. De Leo\*, P. Scocco\*, P. Marietta\*, A. Schmidtke, U. Bille-Brahe, AJFM Kerkhof, J. Lönnqvist, P. Crepet, E. Salander-Renberg, D. Wasserman, K. Michel, T. Stiles. \*Suicide Unit, Department of Neurological and Psychiatric Sciences, University of Padua, Italy: The role of physical illness in suicidal behaviour: Data from the European Parasuicide Study Interview Schedule (EPSIS/WHO-EURO). Presentation. VI World Congress of the World Federation for Mental Health, Lahti, 6-11 July, 1997.

*The importance of somatic pathology in the parasuicidal process was analysed within the context of the European Multicentre Study on Parasuicide (Prediction/Repetition Study - EPSIS 1).*

*1269 parasuicidal subjects were assessed following an attempted suicide, in 9 European centres, representing 7 countries, by means of a structured interview: the European Parasuicide Study Interview Schedule (EPSIS). The interview retrospectively surveyed the presence of any physical pathologies/infirmities in the year and in the two weeks prior to the parasuicide. 48% of the subjects interviewed declared that they suffered from a somatic illness (29% had chronic, 4% had acute and 15% had dual or chronic pathologies in relapse).*

*The subjects with a somatic pathology were clinically more depressed, had a more positive psychiatric history and their parasuicide exhibited greater suicidal intentionality. This profile was more marked in subjects with a chronic somatic disease in relapse or with two pathologies.*

*Old age also plays a role, not only because with increase in age there is a parallel rise in the incidence of somatic disorders in parasuicidal subjects, but also because the elderly attribute a more important role to these illnesses in precipitation of the parasuicide.*

*Despite the fact that the efficiency and/or physical performance of the subjects with somatic pathologies are probably restricted, no differences emerged in the expressed need for practical or moral support between the various groups of subjects considered.*

*The data which emerge confirm the role of somatic pathology in suicidal behaviour and stress the need to pay attention to the physical consequences of parasuicide at both medical and social level.*

D. De Leo\*, P. Scocco\*, P. Marietta\*, A. Schmidtke, U. Bille-Brahe, AJFM Kerkhof, J. Lönnqvist, P. Crepet, E. Salander-Renberg, D. Wasserman, K. Michel, T. Stiles.

\* Suicide Unit, Department of Neurological and Psychiatric Sciences, University of Padua, Italy:

Physical illness and parasuicide: Evidence from the European Parasuicide Study Interview Schedule (EPSIS/WHO-EURO). Presentation. XIX Congress of the IASP, Adelaide, March 23-27, 1997.

*The importance of somatic pathology in the parasuicidal process was analysed under the umbrella of the European Multicentre Study on Parasuicide (Prediction/Repetition Study - EPSIS 1).*

*1269 parasuicidal subjects were assessed, following an attempted suicide, in 9 European centres, representing 7 countries, by means of a structured interview: the European Parasuicide Study Interview Schedule (EPSIS).*

*The interview retrospectively surveyed the presence of any physical pathologies/infirmity in the year and in the two weeks prior to the parasuicide, any restrictions in activities owing to said illness, the lasting somatic effects of the parasuicidal act, and the individual's judgement of his state of physical health over the preceding three months.*

*The data which emerge confirm the role of somatic pathology in suicidal behaviour and stress the need to pay attention to the physical consequences of parasuicide at both medical and social level.*

D. De Leo, A. Schmidtke, U. Bille-Brahe, A. Kerkhof, G. Carollo, T. Bjerke, P. Crepet, C. Haring, K. Hawton, J. Lönnqvist, K. Michel, A. Philippe, E. Salander-Renberg, B. Temesvary, D. Wasserman, D. Conforti, W. Padoani, J. Sampaio Faria: Suicidal behaviour in the elderly: Results from the WHO/EURO Multicentre Study on parasuicide. Presentation. 8th Congress of the International Psychogeriatric Association (IPA). Jerusalem, August 17-22, 1997.

**Objective:** *The aim of this study, which is part of the more wide-ranging WHO/EURO Multicentre Study on Parasuicide, is to highlight patterns of suicidal behaviour, both fatal and nonfatal, in the 65-and-over age group.*

**Methods:** *The method employed in the study is the one described elsewhere for the multicentre study. This presentation also assesses data relating to completed suicide in ten of the collaborating centres. Psychiatric diagnoses in the subjects have also been assessed by five centres.*

**Results:** *Unlike data relating to parasuicide distribution in the general population, the patterns recorded for the elderly differ among the centres taking part in the study. Stockholm, Szeged and Helsinki have the highest parasuicide rates; Odense and Oxford follow immediately after. In most centres, the majority of elderly people who attempt to commit suicide are widow(er)s, who often live alone, have a low level of schooling and professional qualification, and the method used is predominantly voluntary drug intoxication.*

**Discussion and conclusions:** *Compared with the young, the number of parasuicides decreases with age, whereas the number of completed suicides rises. This confirms the well-known finding that the elderly are more determined than the young. In the years considered, substantial stability in suicide and parasuicide rates was observed.*

## **Padua**

Scocco Paolo, Padoani Walter, Dello Buono Marirosa, Carollo Giovanni, Conforti Donatella, De Leo Diego. Suicidology Unit, University of Padua: WHO/EURO Multicentre Study on Parasuicide. Findings from the operating centre of Padua from 1989-1993. Italian Journal of Suicidology, 7:23-31, 1997.

*The study, which is part of the „WHO/EURO Multicentre Study on Parasuicide“, aims to highlight the patterns of suicidal behaviour in the general population, residing in the town of Padua, in the five-year period from 1989-1993. In this period, the parasuicides carried out by the 661 subjects over 15 years of age totalled 790. This study shows that there is substantial stability in the overall number of parasuicidal acts through the years 1989-1993, with a slight decrease compared to the period 1986-1988. The total sample over the five-year period mainly consisted of females, with a mean age of 38.18 (SD=18.94), single, and resident with their family of origin. The most commonly used parasuicide method was found to be voluntary drug overdose. There is considered to be a sufficiently reliable picture of the dimensions and characteristics of the phenomenon in the area being examined, and it is hoped that this type of study will continue, with a view to achieving more thorough epidemiological analysis and to enabling primary prevention to be better targeted as a result of improved overall understanding of the phenomenon.*

## **Sør-Trøndelag**

Hjelmeland H: Parasuicide: General epidemiology and prediction of repetition of suicidal acts with special reference to intentions and sex differences. A doctoral thesis. Norwegian University of Science and Technology, 1997.

## **Oxford**

Hawton K, Fagg J, Simkin S et al: Deliberate Self Harm in Oxford 1996. A report. Warneford Hospital, Oxford, 1997.

*In 1996 some of the worrying trends noted in recent years continued while others did not.*

*The total number of episodes of self-harm presenting to the Oxford Radcliffe Hospital did not show a continuation of the large increases seen in each year since 1991. Thus the 1996 figure (1354) was slightly lower than that in 1995. To put this in context, in 1991 the equivalent figure was 872.*

*In spite of there having been no increase in the number of episodes the number of actual persons who presented (1077) was by far the largest yet recorded and a considerable increase over the 1995 figure (1021).*

*The number of episodes resulting in an admission to an inpatient bed in the Oxford Radcliffe Hospital was 1171, a very similar figure to 1995. Between 1991 and 1995 the numbers had increased from 789 to 1177.*

*The increase in rates of self-harm in young males which we highlighted in our 1995 report continued in 1996, with further increases in 15-24 year olds.*

*The worrying trend towards more frequent repetition of self-harm highlighted in the 1995 report showed some reversal in 1996, with a decrease in the episodes to persons ratio. The proportion repeating within a year of an episode in 1995 had also decreased compared with the previous year's figure.*

*The proportion of first-timers was unchanged. Thus recruitment to the self-harm population has not diminished. There was an increase in the number of drug misusers in the DSH population and in the proportions of female patients who were drinking unsafe amounts of alcohol.*

*The proportion of overdoses involving paracetamol (including compounds) decreased slightly. It is interesting to note that in 1996 there was considerable media publicity about the dangers of paracetamol overdose. Nevertheless, the proportion is still nearly half of all overdoses.*

*The proportion of overdoses involving antidepressants increased, continuing a trend which probably reflects increased prescribing.*

*The numbers of assessments conducted by members of the general hospital psychiatric service (972) was the highest yet recorded and provides an indication of the pressure on this service.*

## **Bern**

Michel K, Runeson B, Valach L et al: Contacts of Suicide Attempters with GP's Prior to the Event: a comparison between Stockholm and Bern. Acta Psychiatr Scand 1997; 95: 94-99.

*This study describes patterns of contacts with GPs of persons in two cities, prior to attempting suicide. The aim was to find out if differences in the health care systems could be a possible factor influencing help-seeking behaviour of persons in suicidal crises. Structured interviews with suicide attempters from geographically defined catchment areas in two countries with a private and a national health care system, respectively, were carried out. The subjects were suicide attempters, admitted successively, aged 15+, living either in Stockholm (N=202) or in Bern (N=66). Patients in Bern had seen their GPs more regularly and more frequently throughout the year. There was an increase of visits to the GP prior to the suicide attempt in both cities, but it was higher in Stockholm than in Bern. However, in Stockholm fewer patients who saw the GP in the week prior to the attempt talked about their suicidal thoughts. The differences in helpseeking behaviour between the two patient samples may be related to a higher number of practising GPs and a more personal and consistent patient-doctor relationship in Bern. It is possible that the private medical care system in Switzerland lowers the threshold for patients to talk to their GP about their suicidal plans. The results suggest that in both cities there is room to improve the communication of the suicidal patient with his doctor.*



**PUBLICATIONS  
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**1998**

## **Joint Publications**

Hjelmeland H, Stiles TC, Bille-Brahe U et al: Parasuicide: The value of suicidal intent and various motives as predictors of future suicidal behaviour. Archives of Suicide Research, 1998, 4: 209-225.

*The main aim of the study was to examine whether various aspects of suicidal intent or various motives for an index parasuicide can predict nonfatal or fatal repetition of suicidal behaviour. 776 parasuicide patients from 5 Nordic regions participating in the WHO/EURO Multicentre Study on Parasuicide were followed for one year. The Suicide Intent Scale (SIS) and the Motives for Parasuicide Questionnaire (MPQ) were used as predictor variables. A low level of suicidal intent predicted nonfatal repetition. The motive "make things easier for someone" differentiated female repeaters from male repeaters. The report of an unclear motive was the only significant predictor of fatal repetition. Suicidal intent and various motives for a parasuicide have some value in predicting repetition of suicidal behaviour, but should, perhaps, in future studies be combined with other variables in order to increase the predictive value.*

*Key words: intention, motive, parasuicide, prediction, repetition*

Hawton K, Arensman E, Wasserman D et al: Relation between attempted suicide and suicide rates among young people in Europe. J Epidemiol Community Health 1998; 52: 191-194.

*Study objective - To determine if there are associations between rates of suicide and attempted suicide in 15-24 year olds in different countries in Europe.*

*Design - Attempted suicide rates were based on data collected in centres in Europe between 1989 and 1992 as part of the WHO/EURO Multicentre Study of Parasuicide. Comparison was made with both national suicide rates and local suicide rates for the areas in which the attempted suicide monitoring centres are based.*

*Setting - 15 centres in 13 European countries.*

*Patients - Young people aged 15-24 years who had taken overdoses or deliberately injured themselves and been identified in health care facilities.*

*Main results - There were positive correlations (Spearman rank order) between rates of attempted suicide and suicide rates in both sexes. The correlations only reached statistical significance for male subjects: regional suicide rates,  $r = 0.65$ ,  $p < 0.02$ ; national suicide rates,  $r = 0.55$ ,  $p < 0.02$ .*

*Conclusions - Rates of attempted suicide and suicide in the young covary. The recent increase in attempted suicide rates in young male subjects in several European countries could herald a further increase in suicide rates.*

## **Helsinki**

Suominen K: Attempted Suicide in Helsinki: Mental Disorders and Treatment Received. An academic dissertation. Department of Mental Health and Alcohol Research, National Public Health Institute, Helsinki Finland, 1998.

Suominen K et al.: Hopelessness, Impulsiveness and Intent Among Suicide Attempters with Major Depression, Alcohol Dependence or Both. Accepted for publication in Acta Psychiatrica Scandinavica.

*The present study examined differences in hopelessness, impulsiveness and suicide intent between suicide attempters with either major depression, alcohol dependence, comorbid major depression and alcohol dependence, or without these disorders. A sample of 114 patients from consecutive cases of attempted suicide referred to a general hospital in Helsinki was interviewed and diagnosed according to DSM-III-R. Suicide intent was measured by the Beck Suicide Intent Scale (SIS) and hopelessness by the Beck Hopelessness Scale (HS). Impulsiveness of the suicide attempt was measured by two items of the SIS. Suicide attempters with major depression without comorbid alcohol dependence had higher suicide intent and lower impulsiveness compared to attempters with nondepressive alcohol dependence. Suicide attempts may differ between subjects with major depression, alcoholism or both disorders in terms of impulsiveness and suicide intent.*

## **Umeå**

Renberg E S: Perspectives on the Suicide Problem - from Attitudes to Completed Suicide. Umeå Universitet 1998. A PhD-thesis.



**PUBLICATIONS  
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**1999**

## **Würzburg**

Schmidtke A, Weinacker B, Apter A et al.: Suicide Rates in the World: Update. Arch Sui Res 5; 81-89, 1999.

*In many countries, especially the Western countries, suicidal behavior constitutes a major public and mental health problem and a considerable drain on resources in both primary and secondary health care settings (Schmidtke, 1997). In numerous countries, the number of suicides is significantly higher than the number of deaths due to traffic accidents. There are age and gender specific cultures of suicidal behavior (Leenaars, 1995). In many countries in some age groups, especially the younger age groups, suicide is ranked after accidents as one of the leading causes of death. Due to the changing age pyramids in some countries (increasing percentage of older persons) the problem of suicidal behavior among the elderly is also increasing (Gulbinat, 1996). In recent years, especially in Europe, the rank order of suicide rates among the various countries has changed. This is partially due to the splitting up of countries. On the other hand, some countries have published official suicides rates for the first time in their history. This paper will provide a short overview of the latest available suicide figures in the world.*

Weinacker B: The Role of Anger Experience and Anger Expression in the Explanation of Suicidal Behaviour. A dissertation. Verlag im Internet. Berlin. 1999.

## **Odense**

Bille-Brahe U, Egebo H, Crepet P et al.: Social Support among European Suicide Attempters. Arch Sui Res 5: 215-231, 1999.

*In order to measure social support among suicide attempters, an instrument was especially designed to be included in the follow-up interview study being part of the WHO/Euro Multicentre Study on Parasuicide which is carried out in cooperation with EC Concerted Action on Attempted Suicide. In this paper, which is to be the first in a series, the theories behind the design and the methodology are discussed, and some general results presented. Judged by the level of the need for support, there are some differences between the 10 European areas under study, but judged by the individual's perception of to what degree his needs are met, somewhat to our surprise the majority of the suicide attempters in the various areas under study agree in feeling that their needs for support are met to a great extent.*

Jessen G, Andersen K, Arensman E et al.: Temporal Fluctuations and Seasonality in Attempted Suicide in Europe. Arch Sui Res 5: 57-69, 1999.

*The temporal variations (month of the year, day of the week, and time of day) in attempted suicide have been studied from data on 13,553 suicide attempts by persons aged 15 years and over from 13 centres participating in the WHO/EURO Multicentre Study on Parasuicide mainly in the three-year period 1990-1992. Seasonal and temporal fluctuation in suicide attempts were found throughout Europe. The seasonal pattern for attempted suicide was similar with that seen for suicide with a spring peak and a nadir in December, but only in females. In contrast with suicide, in which deaths are most common on Mondays, the peak days for attempted suicide was Sunday with fewest attempts occurring on Friday. Again this pattern was only statistically significant in females. The peak time of day for attempted suicide in both series was the late evening, whereas suicide is most frequent in the daytime. Our finding that half of the suicide attempts occur in the evening or early part of the night is particularly relevant to prevention, especially the availability of telephone help-lines and the accessibility of other sources of help for people in crisis.*

## **Joint Publications**

Jessen G, Jensen BF, Arensman E, Bille-Brahe U, Crepet P, De Leo D, Hawton K, Haring C, Hjelme-land H, Michel K, Ostamo A, Salander-Renberg E, Schmidtke A, Temesvary B, Wasserman D: Attempted Suicide and Major Public Holidays in Europe: findings from the WHO/EURO Multicentre Study on Parasuicide. *Acta Psychiatr Scand* 1999; 99: 412-418.

*Objective:* The aim of the study was to examine the relationship between suicide attempts and major public holidays in Europe.

*Method:* The analysis was based on data on 24 388 suicide attempts by persons aged 15 years or older in the period 1989-1996. Data from 13 centres (representing 11 countries) participating in the VMO/EURO Multicentre Study on Parasuicide were analysed. The analysis of the fluctuation of suicide attempts around public holidays was based on the daily number of suicide attempts for each centre. For each day in the period under examination a mean number of suicide attempts ( $\mu$ ) was calculated. The analysis was based on the assumption that the data followed a Poisson distribution. The observed number of daily suicide attempts was compared with the expected number of attempts. A multiplicative model for the expected number in each centre was developed.

*Results:* Before Christmas there were fewer suicide attempts than expected, and after Christmas there were approximately 40% more attempts than expected. In addition, more attempts than expected were registered on New Year's Day. In countries where people have the day off work on Whit Monday there were significantly fewer attempts during the 3 days before, but where Whit Monday is a normal working day significantly fewer attempts occurred on the Monday to Wednesday after Whit Sunday.

*Conclusion:* There appears to be a transposition of a significant number of suicide attempts from before (and during) a major public holiday until after it. The division of holidays into non-working and working days showed that a 'holiday effect' could only be found around major public holidays, particularly Christmas, Easter and Whitsun. These findings support the theory of the 'broken-promise effect' for major public holidays.

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