

# Global suicide rates among young people aged 15-19

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*Global suicide rates among adolescents in the 15-19 age group, according to the latest World Health Organization (WHO) Mortality Database, were examined. Data for this age group were available from 90 countries (in some cases areas) out of the 130 WHO member states. The mean suicide rate for this age group, based on data available for the latest year, was 7.4/100,000. Suicide rates were higher in males (10.5) than in females (4.1). This applies in almost all countries. The exceptions are China, Cuba, Ecuador, El Salvador and Sri Lanka, where the female suicide rate was higher than the male. In the 90 countries (areas) studied, suicide was the fourth leading cause of death among young males and the third for young females. Of the 132,423 deaths of young people in the 90 countries, suicide accounted for 9.1%. The trend of suicide rates from 26 countries (areas) with data available during the period 1965-1999 was also studied. A rising trend of suicide in young males was observed. This was particularly marked in the years before 1980 and in countries outside Europe. The WHO database is the largest of its kind and, indeed, the only information source that can currently be used for analysis of global mortality due to suicide. Methodological limitations are discussed.*

**Key words:** Suicide, young people, causes of death

Suicidal behaviour is a major health concern in many countries, developed and developing alike. At least a million people are estimated to die annually from suicide worldwide (1). Many more people, especially the young and middle-aged, attempt suicide (2).

Over the last few decades, while suicide rates have been reported as stable or falling in many developed countries, a rising trend of youth suicide has been observed. In 21 of the 30 countries in the World Health Organization (WHO) European region, suicide rates in males aged 15-19 rose between 1979 and 1996. For females, suicide rates rose less markedly in 18 of the 30 countries studied (3). Various possible explanations for these rising suicide trends – loss of social cohesion, breakdown of traditional family structure, growing economic instability and unemployment and rising prevalence of depressive disorders – have been presented.

Some worldwide analyses of suicide trends and rates in the world have been published (4-7), but very little is known worldwide about the causes of death and suicide rates among young people aged 15-19.

The purpose of this study was to present an overall picture of suicide among adolescents worldwide using available data from the WHO database, and to evaluate the role of suicide as a cause of death in the 15-19 age group.

## METHODS

Data on causes of death and population for each country (area) were downloaded from the WHO Mortality Database website in February 2004. Statistics on causes of death and population in the 15-19 age group were available for 90 countries (areas) in the year 1980 or later. From 71% of these 90 countries (areas), there were data relating to the year 1995 or later, and roughly half had data for

2000 or later. For 30%, there were figures dating back to before 1995.

The downloaded data files were converted into SPSS files. Data files with different versions of the International Classification of Diseases (ICD) were merged and analysed by gender, age group, cause of death and calendar year.

The following codes for certain suicide in the WHO Mortality Database were used: in ICD-7 classification, codes A148 and B049, including E963, E970-E979; in ICD-8 classification, codes A147 and B049, including E950-E959; in ICD-9 classification, codes B54 and C102, including E950-E959; in ICD-10 classification, codes X60-X84 (in some countries code 1101, including codes X60-X84).

The mean suicide rate in the 15-19 age group was calculated by collating the numbers of suicides in the latest year with available figures in the population from all the 90 countries (areas). Moreover, to avoid confounding country effects with time effects, only countries that reported data for the same year were selected. Therefore, suicide rates in 63 countries in 1995 were also analysed and compared, since the largest number of countries (areas) reported suicide and population data for that year.

A few countries were excluded from the analyses since the population in the 15-19 age group numbered less than 10,000.

In order to evaluate suicide trends, suicide rates from all countries (areas) with data available throughout the period 1965-1999 were examined. Rates in European and non-European countries were compared.

The total number of deaths for the 90 countries (areas) with the latest available data was divided by the number of deaths in each diagnostic category to arrive at percentages for causes of death in each category. The “other causes of death” category includes many different causes that account for relatively small numbers of deaths, such as dis-

eases of the blood and blood-forming organs; diseases of the eye, ear, skin and subcutaneous tissue, musculoskeletal system and connective tissue, and genito-urinary system; certain conditions originating in the perinatal period; and various symptoms, signs and ill-defined conditions.

## RESULTS

For 90 countries (areas), data were available both on causes of death and on the population aged 15-19. The numbers of suicides and rates per 100,000 persons aged 15-19 and the latest year in which data were available for each country (area) are presented in Table 1.

A total of 12,064 cases of suicide (8,801 males and 3,263 females) from 90 countries (areas) were analysed. The mean suicide rate for 15-19 year-olds in the 90 countries (areas), based on data in different years for the various countries, was 7.4/100,000 (10.5 for males and 4.1 for females).

There were 13 countries with suicide rates 1.5 times or more above the mean: these included Sri Lanka, with the highest suicide rate, followed by Lithuania, Russia and Kazakhstan. In 24 countries (areas) suicide rates were above, but less than 1.5 times, the mean: this category included Norway, Canada, Latvia, Austria, Finland, Belgium and the USA. The remaining 53 countries (areas) had below-average suicide rates (Table 1).

**Table 1** Suicide numbers and rates per 100,000 young persons aged 15-19 in 90 countries (areas), according to the WHO Mortality Database, February 2004 (latest available data for each country or area)

Country (area)	Year	Number			Rate		
		Males	Females	Total	Males	Females	Total
Sri Lanka	1986	388	424	812	43.9	49.3	46.5
Lithuania	2002	54	12	66	38.4	8.8	23.9
Russian Federation	2002	2,384	499	2,883	38.5	8.3	23.6
Kazakhstan	2002	240	78	318	31.2	10.5	21.0
Luxembourg	2002	3	1	4	23.5	8.2	16.0
New Zealand	2000	31	11	42	22.3	8.2	15.3
El Salvador	1993	44	52	96	13.2	15.8	14.5
Belarus	2001	100	16	116	23.6	3.9	14.0
Estonia	2002	13	1	14	24.1	1.9	13.2
Turkmenistan	1998	41	21	62	16.6	8.8	12.8
Ukraine	2000	375	92	467	19.6	4.9	12.4
Ireland	2000	34	7	41	19.8	4.3	12.3
Mauritius	2000	5	6	11	10.1	12.5	11.3
Norway	2001	21	8	29	15.3	6.2	10.9
Canada	2000	173	52	225	16.3	5.2	10.8
Latvia	2002	16	4	20	16.9	4.4	10.8
Kyrgyzstan	2002	42	13	55	15.2	4.8	10.0
Virgin Islands (USA)	1980	1	0	1	20.0	0.0	9.8
Barbados	1995	1	1	2	9.6	9.8	9.7
Austria	2002	37	9	46	15.1	3.8	9.6
Trinidad and Tobago	1994	6	6	12	8.9	10.5	9.6
Finland	2002	25	6	31	15.0	3.8	9.5
Uzbekistan	2000	170	86	256	12.5	6.4	9.5
Belgium	1997	46	12	58	14.5	3.9	9.3
Cuba	1996	23	45	68	6.1	12.5	9.2
Ecuador	1991	40	64	104	6.9	11.4	9.1
Iceland	1999	1	1	2	9.0	9.3	9.1
Australia	2001	95	25	120	13.8	3.8	8.9
Singapore	2001	10	8	18	9.2	7.8	8.5
Suriname	1990	3	1	4	12.5	4.3	8.5
Poland	2001	242	39	281	14.1	2.4	8.4
Switzerland	2000	27	8	35	12.6	4.0	8.4
Croatia	2002	21	3	24	14.0	2.1	8.2
USA	2000	1,347	269	1,616	13.0	2.7	8.0
Grenada	1988	0	1	1	0.0	15.6	7.8
Slovenia	1987	8	2	10	12.0	3.1	7.6
Hungary	2002	37	12	49	11.2	3.8	7.5
Guadeloupe	1981	2	1	3	8.8	4.6	6.8
Japan	2000	335	138	473	8.8	3.8	6.4
Uruguay	1990	11	5	16	8.3	3.9	6.2
Bulgaria	2002	25	6	31	9.2	2.3	5.8
Czech Republic	2001	33	6	39	9.5	1.8	5.7
Argentina	1996	122	67	189	7.1	4.0	5.6
Costa Rica	1995	13	7	20	7.1	4.0	5.6
Germany	2001	207	54	261	8.7	2.4	5.6
Thailand	1994	189	154	343	6.1	5.1	5.6
Colombia	1994	120	73	193	6.7	4.2	5.5

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**Table 1 (continued)** Suicide numbers and rates per 100,000 young persons aged 15-19 in 90 countries (areas), according to the WHO Mortality Database, February 2004 (latest available data for each country or area)

Country (area)	Year	Number			Rate		
		Males	Females	Total	Males	Females	Total
Venezuela	1994	80	41	121	7.1	3.8	5.5
Republic of Korea	2001	110	85	195	5.9	4.9	5.4
Hong Kong	1999	12	12	24	5.1	5.3	5.2
France	1999	150	48	198	7.5	2.5	5.0
Denmark	1999	13	1	14	9.0	0.7	4.9
Israel	1999	24	2	26	8.7	0.8	4.9
Paraguay (reporting areas)	1987	5	7	12	3.9	5.6	4.7
Romania	2002	59	18	77	7.0	2.2	4.7
Netherlands	2000	35	8	43	7.4	1.8	4.6
Sweden	2001	15	7	22	5.7	2.8	4.3
Brazil (South, South-East and Central West)	1995	286	128	414	5.7	2.6	4.2
Puerto Rico	1992	14	0	14	8.3	0.0	4.2
United Kingdom	1999	122	33	155	6.5	1.8	4.2
Republic of Moldova	2002	13	2	15	7.1	1.1	4.1
China (selected rural and urban areas)	1999	179	253	432	3.2	4.8	4.0
Belize	1995	0	1	1	0.0	7.9	3.9
Slovakia	2002	13	4	17	5.8	1.9	3.9
Chile	1994	38	8	46	6.2	1.3	3.8
Mexico	1995	263	117	380	5.1	2.3	3.7
Spain	2000	71	18	89	5.3	1.4	3.4
Panama	1987	6	2	8	4.6	1.6	3.1
Albania	2001	4	5	9	2.8	3.3	3.0
Dominican Republic	1985	10	12	22	2.7	3.2	2.9
Italy	2000	57	25	82	3.6	1.7	2.7
Macedonia	2000	1	3	4	1.2	3.7	2.4
Tajikistan	1999	11	3	14	3.3	0.9	2.1
Portugal	2000	9	3	12	2.6	0.9	1.8
Greece	1999	10	2	12	2.7	0.6	1.7
Guyana	1984	2	0	2	3.4	0.0	1.7
Armenia	2002	2	1	3	1.3	0.6	1.0
Peru	1983	13	7	20	1.3	0.7	1.0
Jamaica	1985	2	0	2	1.4	0.0	0.7
Azerbaijan	2002	5	0	5	1.1	0.0	0.6
Syrian Arab Republic (part)	1985	5	0	5	1.0	0.0	0.5
Georgia	2000	1	0	1	0.6	0.0	0.3
Egypt	1987	0	1	1	0.0	0.04	0.02
Bahamas	1995	0	0	0	0.0	0.0	0.0
Guatemala	1984	0	0	0	0.0	0.0	0.0
Kuwait	2001	0	0	0	0.0	0.0	0.0
Malta	2002	0	0	0	0.0	0.0	0.0
Philippines	1996	0	0	0	0.0	0.0	0.0
Saint Lucia	1988	0	0	0	0.0	0.0	0.0
Saint Vincent and Grenadines	1986	0	0	0	0.0	0.0	0.0
Total		8,801	3,263	12,064	10.5	4.1	7.4

The mean suicide rate for males and females together in the 63 countries (areas) for which data for the year 1995 were available was 8.4/100,000, slightly higher than that (7.4/100,000) in the 90 countries (areas) described above, mainly owing to the higher suicide rate in males (Table 2). Among these, 13 countries (including Russia, New Zealand, the Baltic states, Kazakhstan, Norway, Canada and Slovenia) reported suicide rates of 1.5 times the mean or more. Sixteen countries (including Ukraine, Switzerland, the USA, Austria, Ireland, Belgium, Hungary and Portugal) showed suicide rates above, but less than 1.5 times, the mean. Thirty-four countries had below-average suicide rates (Table 2). More than two-thirds of the countries listed in Table 2 are European countries.

In 26 countries (areas), data were available for the whole period studied, 1965-1999. Table 3 presents suicide rates for

each country (area), broken down by gender, during three periods (1965-1979, 1980-1989 and 1990-1999). A rising trend of suicide rates in the 15-19 age group was observed in males from both non-European and European countries, while the trend was fairly stable or declined slightly in females. Suicide rates among both young males and females were higher in non-European than in European countries during the whole period 1965-1999 (Table 3, Figure 1).

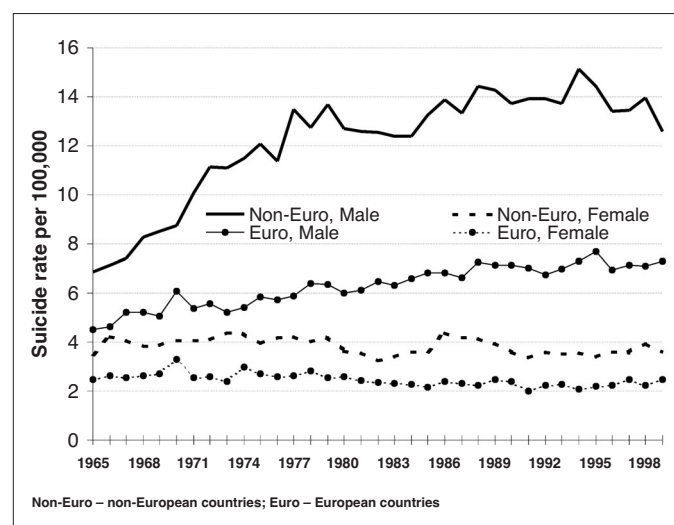
Causes of death were examined for 90 countries (areas). The data covered the same years as the data presented in Table 1. A total of 132,423 deaths from all kinds of causes in the 15-19 age group in the 90 countries (areas) (Table 4) were analysed. The most common cause of death for both males and females was "transport accidents", which accounted for approximately one-fifth of deaths. Suicide ranked fourth as a cause of death for males, and third for

**Table 2** Suicide numbers and rates per 100,000 young persons aged 15-19 in the 63 countries (areas) for which data are available for the year 1995

Country (area)	Number			Rate		
	Males	Females	Total	Males	Females	Total
Russian Federation	1,988	509	2,497	36.5	9.6	23.2
New Zealand	45	14	59	33.0	10.6	22.0
Lithuania	42	8	50	32.7	6.4	19.7
Kazakhstan	222	69	291	29.3	9.2	19.3
Latvia	21	5	26	25.1	6.1	15.7
Estonia	12	3	15	23.6	6.2	15.1
Finland	42	6	48	25.1	3.7	14.7
Belarus	89	16	105	23.7	4.3	14.0
Kyrgyzstan	36	26	62	16.1	11.8	14.0
Norway	28	8	36	20.3	6.1	13.4
Canada	217	47	264	21.4	4.9	13.3
Cuba	41	58	99	10.5	15.5	12.9
Slovenia	15	4	19	19.3	5.5	12.6
Mauritius	8	5	13	14.7	9.4	12.1
Ukraine	334	93	427	18.1	5.2	11.7
Switzerland	32	14	46	15.7	7.2	11.6
Czech Republic	72	19	91	16.2	4.5	10.5
USA	1,616	274	1,890	17.4	3.1	10.5
Austria	44	3	47	18.6	1.3	10.2
Ireland	29	5	34	16.9	3.1	10.1
Barbados	1	1	2	9.6	9.8	9.7
Iceland	2	0	2	18.7	0.0	9.5
Bulgaria	43	15	58	13.4	4.9	9.3
Australia	87	27	114	13.4	4.4	9.0
Luxembourg	1	1	2	8.8	9.2	9.0
Belgium	38	17	55	12.1	5.6	8.9
Hungary	65	9	74	15.3	2.2	8.9
Croatia	24	5	29	14.2	3.1	8.8
Poland	234	46	280	14.2	2.9	8.7
Republic of Moldova	21	8	29	11.4	4.4	7.9
Republic of Korea	181	108	289	8.9	5.6	7.3
Sweden	27	9	36	10.3	3.6	7.1
Turkmenistan	28	4	32	12.1	1.8	7.0
China (selected rural and urban areas)	227	373	600	4.9	8.7	6.7
Slovakia	27	5	32	11.1	2.1	6.7
Germany	220	66	286	9.9	3.1	6.6
Singapore	8	5	13	7.7	5.2	6.5
Israel	22	9	31	8.5	3.7	6.1
Costa Rica	13	7	20	7.1	4.0	5.6
Denmark	15	2	17	9.1	1.3	5.3
France	151	51	202	7.7	2.7	5.3
Romania	78	26	104	7.8	2.7	5.3
Uzbekistan	89	34	123	7.6	3.0	5.3
Argentina	113	60	173	6.7	3.6	5.2
Japan	287	136	423	6.6	3.3	5.0
Hong Kong	14	6	20	6.4	3.0	4.7
Brazil (South, South-East and Central West)	286	128	414	5.7	2.6	4.2
United Kingdom	106	31	137	6.0	1.8	4.0
Belize	0	1	1	0.0	7.9	3.9
Spain	100	21	121	6.2	1.4	3.9
Mexico	263	117	380	5.1	2.3	3.7
Tajikistan	15	6	21	5.2	2.1	3.6
Malta	1	0	1	6.8	0.0	3.5
Netherlands	21	11	32	4.4	2.4	3.5
Albania	5	4	9	3.7	2.7	3.2
Italy	81	22	103	4.4	1.2	2.9
Portugal	15	8	23	3.7	2.0	2.9
Greece	9	6	15	2.3	1.6	2.0
Macedonia	1	1	2	1.2	1.2	1.2
Armenia	2	1	3	1.2	0.6	0.9
Kuwait	1	0	1	1.7	0.0	0.9
Azerbaijan	4	0	4	1.2	0.0	0.6
Bahamas	0	0	0	0.0	0.0	0.0
<b>Total</b>	<b>7,859</b>	<b>2,573</b>	<b>10,432</b>	<b>12.4</b>	<b>4.2</b>	<b>8.4</b>

**Table 3** Suicide rates per 100,000 young persons aged 15-19 in 26 countries (areas) with data available for 1965-1999

Country (area)	Males			Females			Total		
	1965-79	1980-89	1990-99	1965-79	1980-89	1990-99	1965-79	1980-89	1990-99
Mauritius	5.08	6.16	11.69	9.02	11.06	13.17	7.04	8.58	12.42
Canada	13.75	20.74	19.85	3.38	3.65	4.95	8.66	12.40	12.59
USA	10.22	15.30	16.48	2.84	3.66	3.38	6.57	9.59	10.11
Hong Kong	3.01	3.38	5.87	4.65	3.63	4.95	3.81	3.50	5.43
Japan	10.61	7.46	6.60	6.91	3.99	3.24	8.79	5.77	4.96
Singapore	4.99	5.19	6.33	7.48	7.42	4.37	6.20	6.27	5.38
Australia	9.12	14.13	16.89	3.50	3.05	4.15	6.37	8.72	10.68
New Zealand	7.49	17.51	28.60	2.96	4.24	9.80	5.28	11.01	19.33
<b>Non-European countries</b>	<b>10.54</b>	<b>15.17</b>	<b>15.85</b>	<b>4.08</b>	<b>3.78</b>	<b>3.59</b>	<b>7.25</b>	<b>8.58</b>	<b>8.84</b>
Austria	16.67	19.43	16.70	5.26	6.60	3.68	11.08	13.13	10.36
Bulgaria	7.55	10.22	12.20	5.15	5.89	4.25	6.38	8.11	8.32
Denmark	6.14	9.18	8.02	2.99	3.31	2.43	4.61	6.32	5.29
Finland	18.94	24.54	25.90	4.99	5.25	4.65	12.12	15.09	15.51
France	6.54	7.95	7.62	3.25	2.85	2.80	4.92	5.46	5.26
Greece	1.51	2.61	2.17	1.72	1.72	0.76	1.61	2.18	1.49
Hungary	19.56	16.23	13.81	8.01	6.82	3.94	13.92	11.67	9.00
Iceland	9.97	20.91	26.72	0.66	0.00	6.71	5.45	10.67	16.91
Ireland	2.57	6.80	14.96	0.68	1.12	3.09	1.65	4.03	9.17
Italy	2.52	2.93	4.23	1.87	1.05	1.35	2.20	2.01	2.82
Luxembourg	9.24	12.00	13.04	3.20	6.24	4.57	6.28	9.18	8.91
Netherlands	3.78	4.09	5.62	1.22	1.76	2.37	2.53	2.95	4.03
Norway	7.04	15.71	17.37	1.92	3.45	6.63	4.54	9.74	12.12
Portugal	4.83	5.30	2.88	3.77	4.62	1.68	4.30	4.96	2.29
Spain	1.89	4.03	4.85	0.79	1.16	1.43	1.35	2.63	3.18
Sweden	8.69	8.46	8.27	5.48	3.84	4.23	7.12	6.21	6.30
Switzerland	14.87	18.63	13.64	5.35	4.58	4.29	10.16	11.77	9.09
United Kingdom	3.49	4.95	5.92	1.84	1.42	1.65	2.68	3.23	3.85
<b>European countries</b>	<b>5.50</b>	<b>6.61</b>	<b>7.13</b>	<b>2.67</b>	<b>2.35</b>	<b>2.26</b>	<b>4.11</b>	<b>4.53</b>	<b>4.75</b>
<b>All countries</b>	<b>9.12</b>	<b>11.41</b>	<b>12.14</b>	<b>3.73</b>	<b>3.40</b>	<b>3.26</b>	<b>6.46</b>	<b>7.49</b>	<b>7.82</b>



**Figure 1** Suicide rates per 100,000 young persons aged 15-19 in 26 countries (areas) with data available for 1965-1999

females. Suicide accounted for 9.1% of all deaths among male and female adolescents together: 9.5% and 8.2% respectively (Table 4).

A similar rank order of different categories of causes of death was also seen from the analysis of mortality data for the 63 countries (areas) from which data were available for the same year, i.e. 1995 (data not shown).

Suicide rates varied substantially among the countries, by a factor of up to 100. However, it must be borne in mind that some countries have small populations and that there can be major random variations in the annual number of suicides.

Although the data presented here are an acceptable basis for evaluating the global impact of suicide on young people, it should be kept in mind that relevant data are still lacking from a number of countries. For a more definitive and correct view of suicide worldwide, data collection from these countries is needed.

## DISCUSSION

Suicide data are still not available in many countries. In the present study, data from only 90 countries (areas) out of the world's 192 nations were available for the 15-19 age group in the WHO Mortality Database, which is the largest database in the world on this topic. The WHO mortality statistics are commonly broken down by gender and age. However, some countries do not report deaths broken down for the 15-19 age group, and there are only 130 member states of WHO.

The reliability of suicide statistics is often questioned (4). Suicides are underreported for cultural and religious reasons, as well as owing to different classification and ascertainment procedures. Suicide can be masked by many other

**Table 4** Causes of death for young persons aged 15-19 in 90 countries (areas), according to the WHO Mortality Database, February 2004 (latest available data for each country or area)

Causes of death	Male		Female		Total	
	N	%	N	%	N	%
Transport accidents	19,643	21.2	6,919	17.4	26,562	20.1
Other accidents	19,274	20.8	5,084	12.8	24,358	18.4
Assault	13,735	14.8	2,108	5.3	15,843	12.0
Suicide	8,801	9.5	3,263	8.2	12,064	9.1
Neoplasms	5,017	5.4	3,585	9.0	8,602	6.5
Diseases of the circulatory system	4,966	5.4	3,484	8.8	8,450	6.4
Diseases of the nervous system	3,765	4.1	2,230	5.6	5,995	4.5
Diseases of the respiratory system	2,878	3.1	2,061	5.2	4,939	3.7
Infective and parasitic diseases	2,580	2.8	2,116	5.3	4,696	3.5
Diseases of the digestive system	1,420	1.5	940	2.4	2,360	1.8
Congenital malformations, deformations	1,061	1.1	817	2.1	1,878	1.4
Endocrine, nutritional and metabolic diseases	850	0.9	859	2.2	1,709	1.3
Mental and behavioural disorders	457	0.5	188	0.5	645	0.5
Other causes	8,296	8.9	6,026	15.2	14,322	10.8
Total	92,743	100.0	39,680	100.0	132,423	100.0

diagnostic categories of causes of death. Unfortunately, in cases of young people, death due to suicide is often misclassified or masked by other mortality diagnoses. This makes the global picture of death by suicide even graver.

International comparability of data is also discussed. The information used in this paper, which reflects the official figures reported to WHO by member states, is based on death certificates signed by legally authorised personnel – usually doctors or police officers in the respective country. Usually these professionals have specific routines. How these routines differ between countries and regions, and how they influence suicide statistics, remains to be demonstrated through comparative studies of mortality statistics.

Moreover, it should be borne in mind that reporting of mortality statistics to WHO is subject to delays that vary from one country to the next. Accordingly, years for which data are available are not always the same. Data from 71% of the 90 countries (areas) included in the analysis covered the period 1995-2002. Around half (44 countries) had data for the year 2000 or later. Among these 44, most were in the European region. The remaining countries' data were from the period 1980-1994. After performing the analyses for the 90 countries (areas), we repeated the same analyses for the 63 countries (areas) in which the suicide data and mortality statistics were available for the year 1995. The results concerning suicide rates and the ranking of suicide as a cause of death were fairly similar in the two analyses (with a slightly higher global suicide rate for young people in the analysis for the year 1995).

During the period studied, different ICD classifications were used. This may have been an additional source of misclassification in the mortality statistics.

The mean suicide rate of 7.4/100,000 (10.5 for males and 4.1 for females) may be perceived as a reasonable estimate for the 15-19 age group and used as a basis for evaluating suicide rates among adolescents in different local communities.

In the calculation of suicide rates, the numbers of suicides in two large countries with more than 1,000 suicides in the 15-19 age group (Russia, with 2,883 cases in 2002 and USA with 1,616 in 2000) accounted for 37.3% of the total, thus heavily influencing the mean rate. Interestingly, these two countries' suicide rates were markedly different. The Russian rate was 23.6/100,000, more than 3 times the mean (7.4), whereas that in the USA was 8.0, fairly close to the mean. Sri Lanka had an extraordinarily high suicide rate in the 15-19 age group: at 46.5/100,000, it was more than six times the mean rate. Unfortunately, data for recent years are not available for Sri Lanka.

Suicide rates for young people in the 15-19 age group are, as for other age groups, higher in males than in females. Young males' overall suicide rate was 2.6 times that of females. Exceptions were found in a number of non-European countries, like Sri Lanka, El Salvador, Cuba, Ecuador and China, where suicide rates for females 15-19 years old exceeded those of males in the same age group. This fact urgently calls for further investigations.

Data from the latest 35-year period (1965-1999) show a marked difference in suicide rates between European and non-European countries. The high rates in non-European countries call for more attention. One reason for the lower suicide rates in European countries (although suicide rates in this region also vary widely from one country to another), beside cultural and psychosocial factors, may possibly be the physicians' awareness of the importance of adequately treating people with psychiatric disorders, psychosocial problems and harmful stress. However, this does not apply to the whole European region, since countries in transition show very high suicide rates, both for adults and for young people.

The fact that suicide rates are higher in males than in females has long been widely recognised. However, this study shows that suicide as a cause of death in the 15-19 age group is very similar in both sexes: 9.5% in males and 8.2% in females.

Suicide is one of the leading causes of death among young persons of both sexes. It is the leading cause of death in this age group after transport and other accidents and assault for males, and after transport and other accidents and neoplasms for females.

Scrutiny of the data for individual countries has revealed differences both in suicide rates and in the ranking of leading causes of death. These differences seem to be due to social, cultural and other factors, which call for further investigation.

In conclusion, suicide among young people is a major health problem in many societies, and preventive measures are strongly recommended (2).

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