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Attempted suicide in Flanders

2004

An epidemiological study of attempted suicide by means of monitoring in four Flemish emergency departments, supported by the Ministry of the Flemish Community, under the authority of the Flemish minister of Public Health .

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This report is based on data from the epidemiological study of attempted suicide in Flanders. This research project started in 1998 and is supported by the Ministry of the Flemish Community. By means of standard forms, information is collected on all cases of attempted suicide presented to the emergency department of four Flemish hospitals (Gent, Brugge, Genk and Hasselt). Valid and reliable data is obtained through quality control; the research team examines the admission registers of the Emergency services for comparison of suicide attempt-episodes with attempt-episodes registered to the research team. The next definition of attempted suicide is used:

“An act with a non-fatal outcome, in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognized therapeutic dosage, and which is aimed at realizing changes which the subject desired via the actual or expected physical consequences” (Bille-Brahe et al, 1994)

Method of attempted suicide is classified according to self-injury (hanging, strangulation, drowning, stab wounds and cuts, jumping of an altitude...) and self-poisoning (taking medication, drugs, alcohol, chemicals or other injurious substances).

The current annual report includes information of the attempted suicide patients who were referred to one of the four participating hospitals during 2004. Comparison is usually made with previous years.

The population denominator of the incidence of attempted suicide-episodes is calculated by the population from which the emergency units recruit their patients.

From the patients who have been hospitalised in a certain area, the percentage of patients admitted to the emergency service of the participating hospital is determined.

This percentage is converted into the total number of inhabitants of that region. The incidence is eventually determined by division of the attempted suicide-events (event-based) or the attempted suicide-patients (person-based) by the population denominator. Afterwards, rates per 100.000 are computed.

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A part of the data was collected within the framework of the WHO/EURO Multicentre Study of Suicidal Behaviour, in which the Unit for Suicide Research of the University of Ghent participates.

Further information can be found on: <http://users.ugent.be/~cvheerin/>

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SUMMARY

- In 2004, the total number of attempted suicide-episodes presented to the hospitals of Gent, Brugge, Genk, and Hasselt was 772. This represents an increase of 23.5 % compared with 2003.
- The number of individual persons presented in 2004 (n=738), represented an increase (26.8%) compared with 2003.
- There was a change in the gender distribution of attempted suicide presentations in 2004. Male presentations increased with 38.6% whereas female attempted suicide increased with only 21.0%. The gender ratio (female to male) in 2004 was 1.56:1.
- The event based rates increased (+9.0%) when compared to 2003 (158/100.000)). The person based rates increased with 11.8% (151/100.000).
- The person based rates increased for both genders in 25-29 year olds, and decreased in 35-39 year olds. For males, rates have risen in 40-44 year olds. For females, rates have increased in the age category 45-49 and decreased in 15-19 year olds.
- There is a higher percentage of immigrants in our patient group in comparison with the general Flemish population (6.2% versus 4.8%, respectively). The percentage of immigrant attempters (6.2%) increased compared with 2003 (3.9%).
- The largest subgroup of attempted suicide-patients was single (39.7%) at the time of the attempt, and a quarter of the patients was living alone (24.5%).
- The majority of the group (60.1%) was unemployed or inactive, which represents a decrease of 10% compared with 2003.
- 47.2% of the presented attempted suicide-patients had a history of one or more suicide attempt(s), which is similar to previous years.
- The proportion of attempted suicide-episodes involving self-poisoning in 2004 (78.4%) is similar to previous years. Men used relatively more self-injury (with or without self-poisoning) than women. In nearly half of the attempted suicides (43.7%) more than one method was used.
- In 28.9% of the cases, the attempted suicide patient consumed alcohol at the time of the attempt. Men were more frequently intoxicated during the attempt than women.
- Most of the attempted suicide-episodes occurred during the evening (39.7%) and the afternoon hours (29.6%). This is in line with the findings of 2003.
- Nearly 75% of the patients were hospitalised after their attempt, which is similar to the previous years. Ten percent of the patients were not referred for further treatment.

ATTEMPTED SUICIDE IN FLANDERS 2004

Numbers of persons and episodes

The total numbers of attempted suicide-episodes presented to the four hospitals (EB) are shown in Table 1, together with the number of individual persons involved (PB).

Table 1: Number of episodes (EB) and persons (PB), by gender and by hospital in Flanders 2004

Hospital / Area	Men		Women		Total	
	EB	PB	EB	PB	EB	PB
UZ Gent	185	180	282	265	468	446
AZ Sint-Jan / Brugge	54	54	91	85	145	139
AZ Oost-Limburg / Genk	30	30	56	53	87	84
Virga Jesse / Hasselt	25	23	47	46	72	69
Total / Flanders	294	287	476	449	772	738

Rates

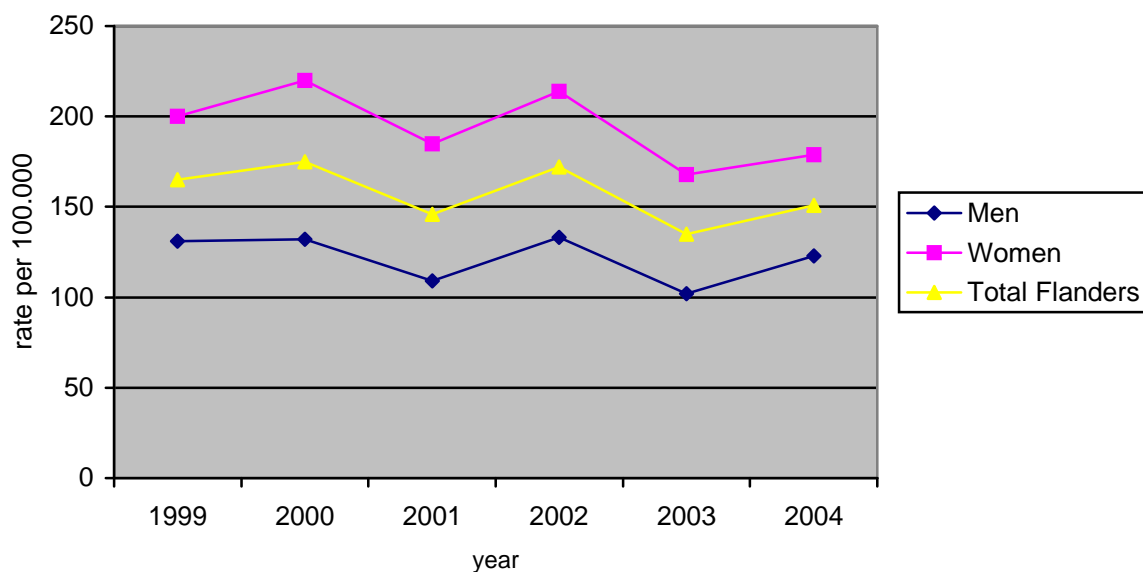
The rates by gender and by hospital are shown in table 2. The event based rates (EB) consists of the total amount of suicide attempts per 100.000 inhabitants, while the person based rates (PB) refer to the amount of persons per 100.000 inhabitants with one or more suicide attempt(s) during one registration year. The male PB and EB rates are much more alike compared to the female PB and EB rates, implying that repetitive suicide attempts occurred more frequently among women than among men in 2004.

Table 2: Summary of rates by gender and hospital in Flanders 2004

Hospital / Area	Men		Women		Total	
	EB	PB	EB	PB	EB	PB
UZ Gent	239/100.000	232/100.000	397/100.000	373/100.000	315/100.000	301/100.000
AZ Sint-Jan / Brugge	107/100.000	107/100.000	182/100.000	169/100.000	144/100.000	138/100.000
AZ Oost-Limburg / Genk	75/100.000	75/100.000	102/100.000	95/100.000	88/100.000	84/100.000
Virga Jesse / Hasselt	98/100.000	90/100.000	114/100.000	111/100.000	106/100.000	102/100.000
Total / Flanders	127/100.000	123/100.000	190/100.000	179/100.000	158/100.000	151/100.000

Figure 1 shows the evolution of the person-based rates in Flanders. During the last six years the average rate was 157/100.000 inhabitants. The average female rates (M=194/100.000) were substantially higher compared to the average male rates (M=122/100.000).

Figure 1
Person-based evolution of suicide attempts in Flanders,
by gender, 1999-2004



As can be seen in figure 2, the evolution of the event-based rates is very similar to the evolution of the person based rates. The average EB rate for Flanders during 1999-2004 was 166/100.000. The average female rate of 205/100.000 was considerably higher than the average male rate (M=129/100.000).

Figure 2
Event-based evolution of suicide attempts in Flanders,
by gender, 1999-2004

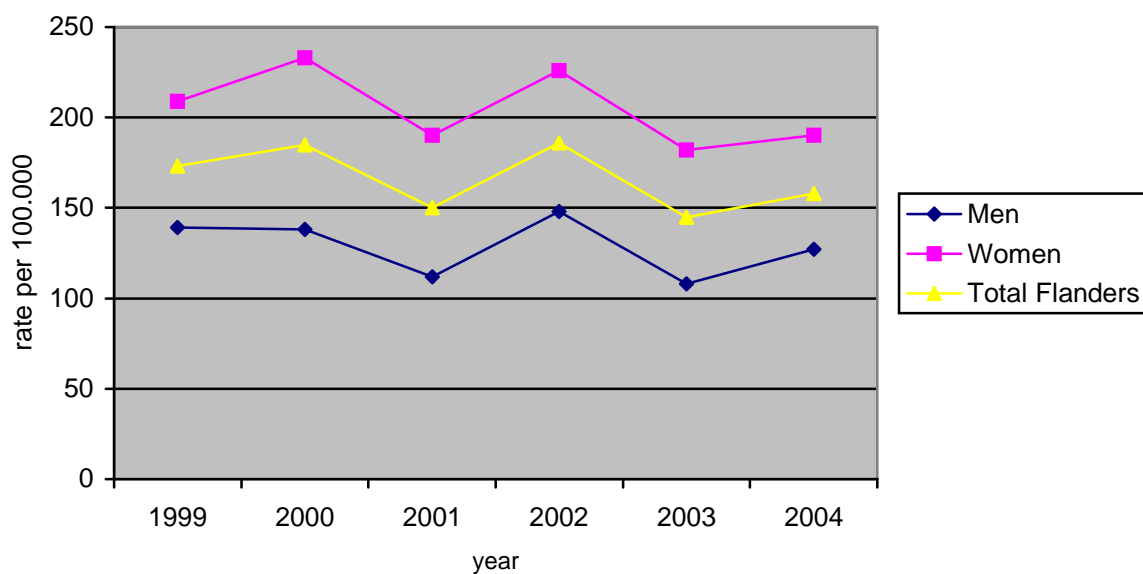


Figure 3 shows the person based evolution of the attempted suicide rates by hospital. The rates for Genk continued to decrease. A more marked decrease is seen for Brugge, while the previously decreasing rates for Hasselt seem to stagnate in 2004. In Gent, rates substantially increased. This increase of registered attempted suicide-episodes in Gent can be due to a true increase in attempted suicides in this area, or can be affected by a monitoring effect, i.e. since 2004 a quality control is carried out not only in the emergency unit of the University Hospital of Ghent, but also in the Psychiatric Emergency Unit of the hospital. Possibly, this new approach has led to a better detection of attempted suicide-episodes.

Figure 3
Evolution of (person-based) rates of suicide attempts in Flanders, by hospital, 1999-2004

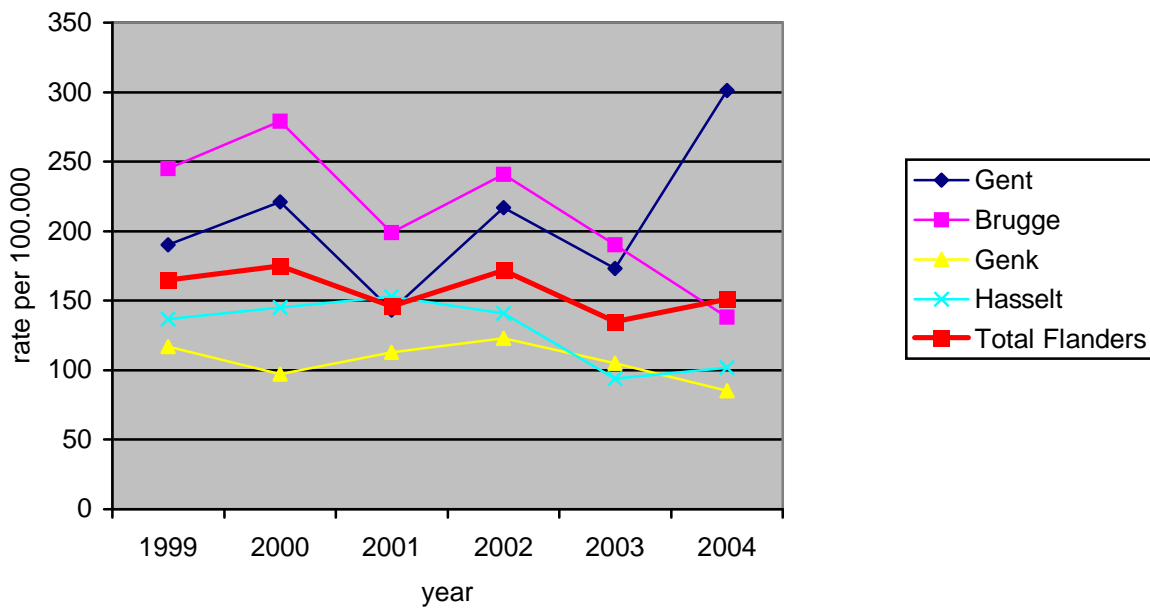
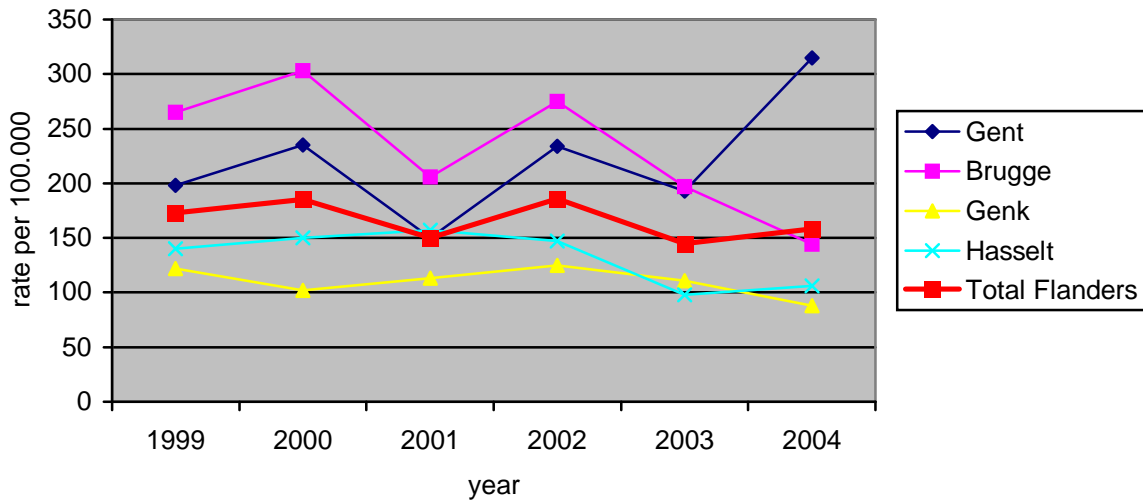


Figure 4 shows the event based evolution from 1999-2004, by hospital. Similar to the person based evolution of suicide attempts, we notice a decrease of registered attempts in the area surrounding Genk and Brugge, an increase around Gent, and a stabilisation in the area around Hasselt.

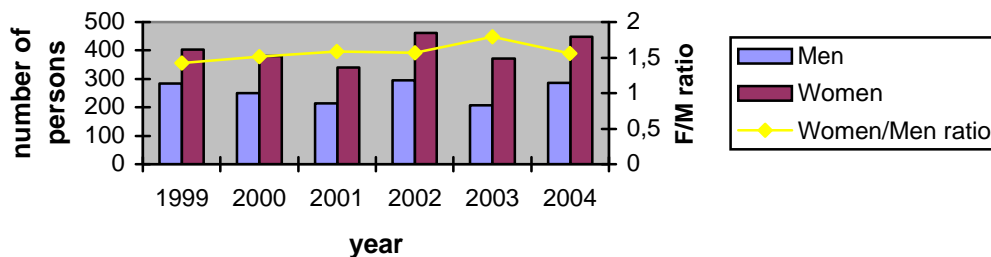
Figure 4
Evolution of (event-based) rates of suicide attempts in Flanders, by hospital, 1999-2004



Gender and age

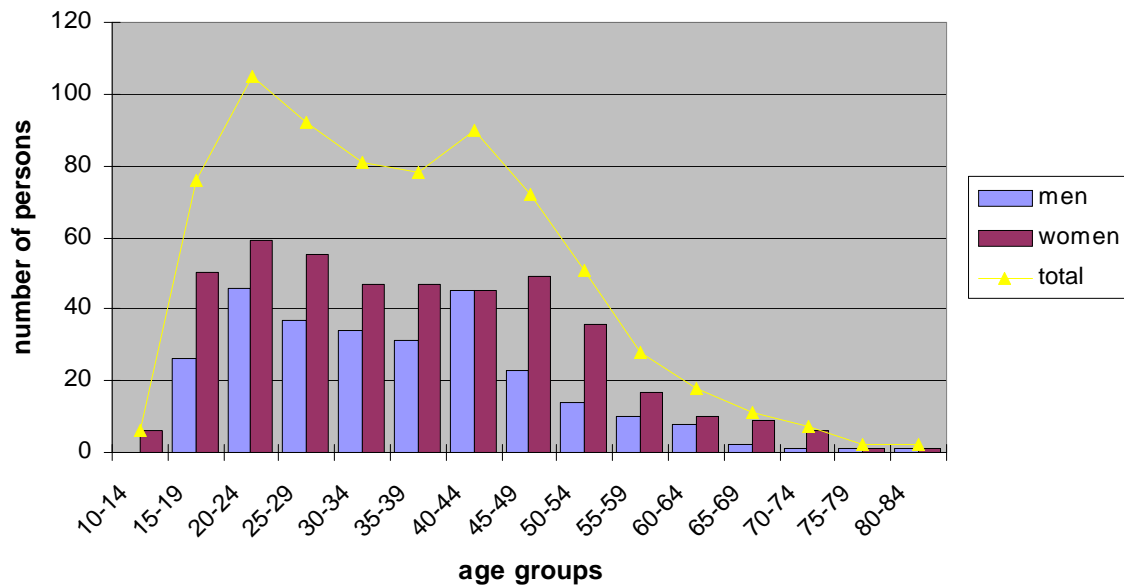
In 2004, almost two-thirds of the registered attempted suicide-episodes were carried out by women (n=449, 61.0%, compared to 287 men). The gender ratio (female to male) was 1.56. This represents a small decrease compared with 2003, due to the higher increase of male attempted suicide admissions in 2004 compared with female presentations.

Figure 5
Gender of suicide attempters in Flanders 1999-2004



The age distribution of attempted suicide patients in 2004 was largely similar to that in previous years (Figure 6). The largest number of female attempted suicide patients was found in the age group 20-24 years. The largest number of male patients was also found in the 20-24 age group, but an equally high number of male attempts (n=45) was found in the age group 40-44 years.

Figure 6
Age groups of DSH patients in Flanders, by gender, 2004

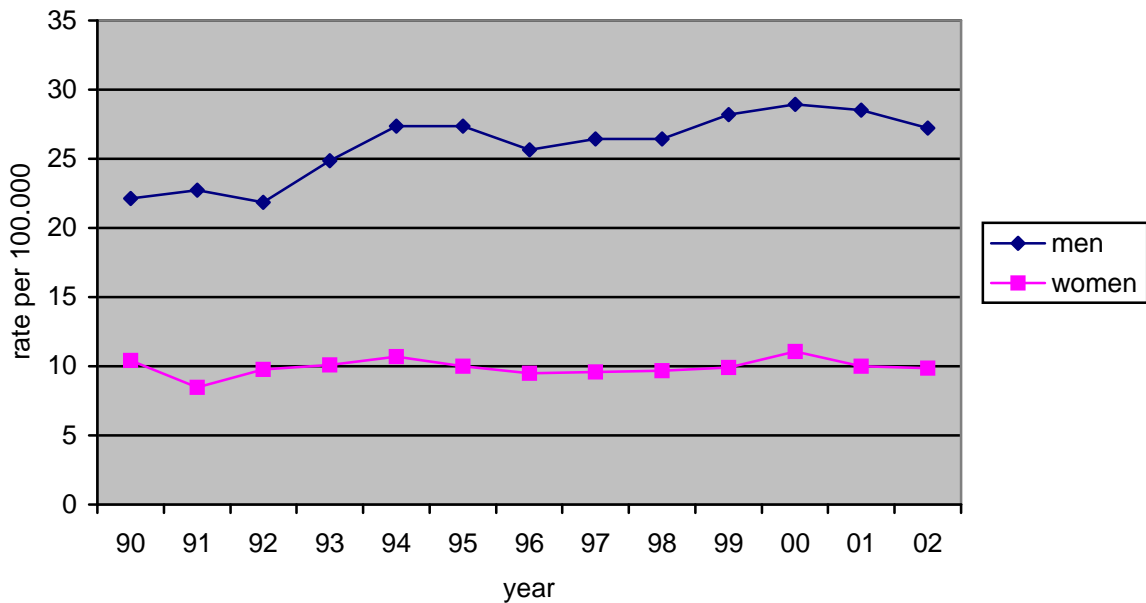


The mean age of attempted suicide patients in Flanders was 35.80 year; for men 35.20 year (min: 15, max 84), for women 36.09 year (min:13, max: 81). The youngest patient was aged 13, the two oldest 84. The age group 10-14 years was strictly female (n=6).

Comparison with suicide rates by gender and age in Flanders

The 2003 and 2004 suicide rates are not yet available. Therefore figure 7 presents the rates until 2002. In males, a noticeable increase is observed in the early 1990s, followed by a stagnation, a high point in 2000 (the highest rate ever in Flanders), and a small decrease in 2001 and 2002. Rates in females remained very stabile, except for a high point in 2000.

Figure 7
Suicide rates in Flanders, by gender, 1990-2002

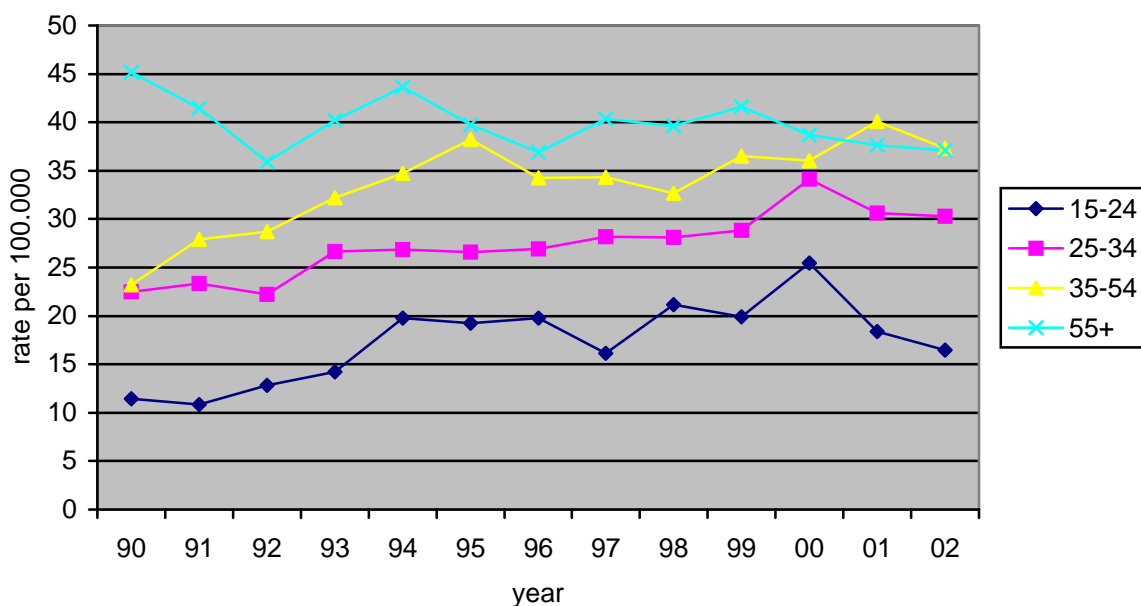


Source: Ministry of Flanders; Administration of Health Care

Figure 8 and 9 show the evolution of the suicide rates in Flanders by four age categories and gender. Apart from the much higher rates for males, the age distribution is very similar for men and women. In both groups, the rates are lowest in the youngest age groups, and highest in the oldest. In men (figure 8), we noticed an incline of suicide rates for the three youngest age groups from 1992 to 2000, while the rates for the oldest group (+55) remained fairly stable. In general, the suicide rates for males declined in 2001 and 2002.

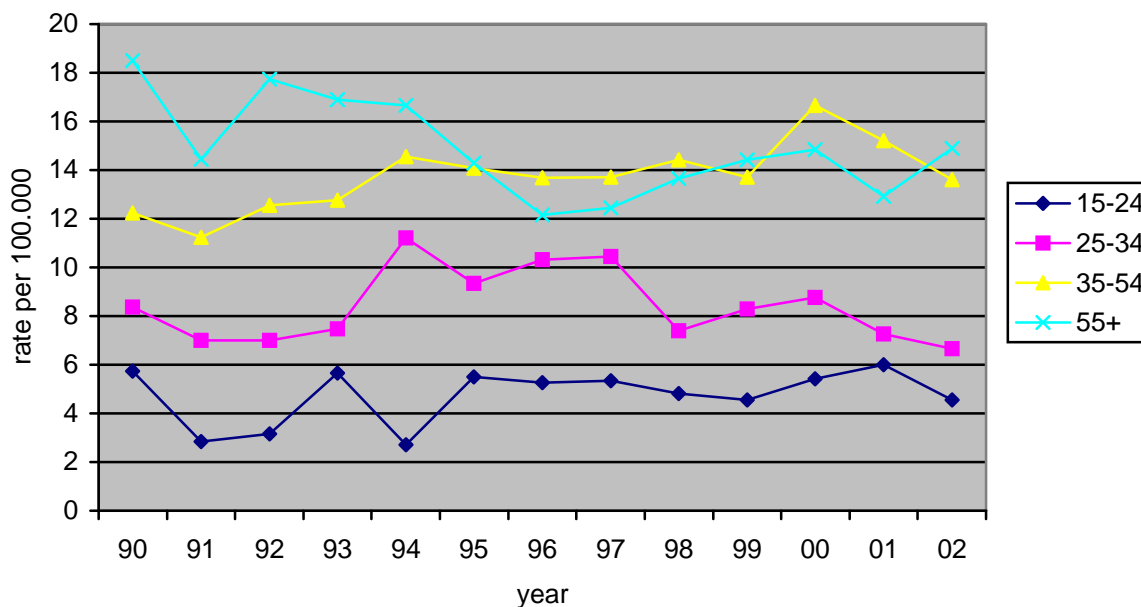
In females (figure 9), the suicide rates slightly increased for age group 35-54 year, while the rates for +55 slightly decreased. During 2001 and 2002, the rates decreased in all female age groups, except for +55.

Figure 8
Suicide rates for men in Flanders, by age groups, 1990-2002



Source: Ministry of Flanders; Administration of Health Care

Figure 9
Suicide rates for women in Flanders, by age groups, 1990-2002



Source: Ministry of Flanders; Administration of Health Care

Ethnicity

93.1% of attempted suicide patients were born in Belgium and 93.8% had the Belgian nationality. The Netherlands, Turkey and Morocco were second, third and fourth in the ranking for both variables (National Institute for Statistics, 2004).

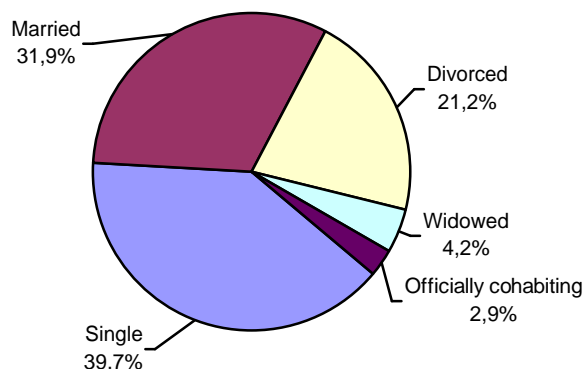
Marital Status

As in the previous years, the largest group of attempted suicide patients was single (39.7%). Approximately one fifth of attempted suicide patients was divorced (21.2%) and 4.2% was widowed. 31.9% was married and 2.9% officially cohabiting.

Marital status of attempted suicide patients differed significantly between men and women ($\chi^2=13.498$; $df=5$; $p=0.019$). Almost half of the male attempted suicide patients (47.4%) was never married compared with only one third of the females (35%).

In comparison with the general population of Flanders on January, 1, 2004 (NIS), attempted suicide patients were less often married (31.9% compared to 47.3%) and more often divorced. (21.2% compared to 6.4%).

Figure 10
Marital status of assessed patients in Flanders, 2004



Living situation

Nearly a quarter of the attempted suicide patients lived alone at the time of the suicide attempt (24.5%). 18.0% lived together with a partner of the opposite sex and children, and 16.3% lived with a partner of the opposite sex without children (figure 11).

A significant difference was found between men and women ($\chi^2=22.071$; $df=9$; $p=0.009$). A larger proportion of males compared with females were living alone or with their parents at the time of the attempt. Women were more often living alone with their children, living in a residential institution, or living with a partner of the opposite sex without children.

The structure of households of attempted suicide patients is different from the structure of households from the general population of the Flemish district (NIS, 2004) (figure 12). In the group of attempted suicide patients, more single men and women are noticed, and less married couples, with and without children, are represented.

Figure 11
Living situation of assessed patients at time of the suicide attempt in Flanders, by gender, 2004

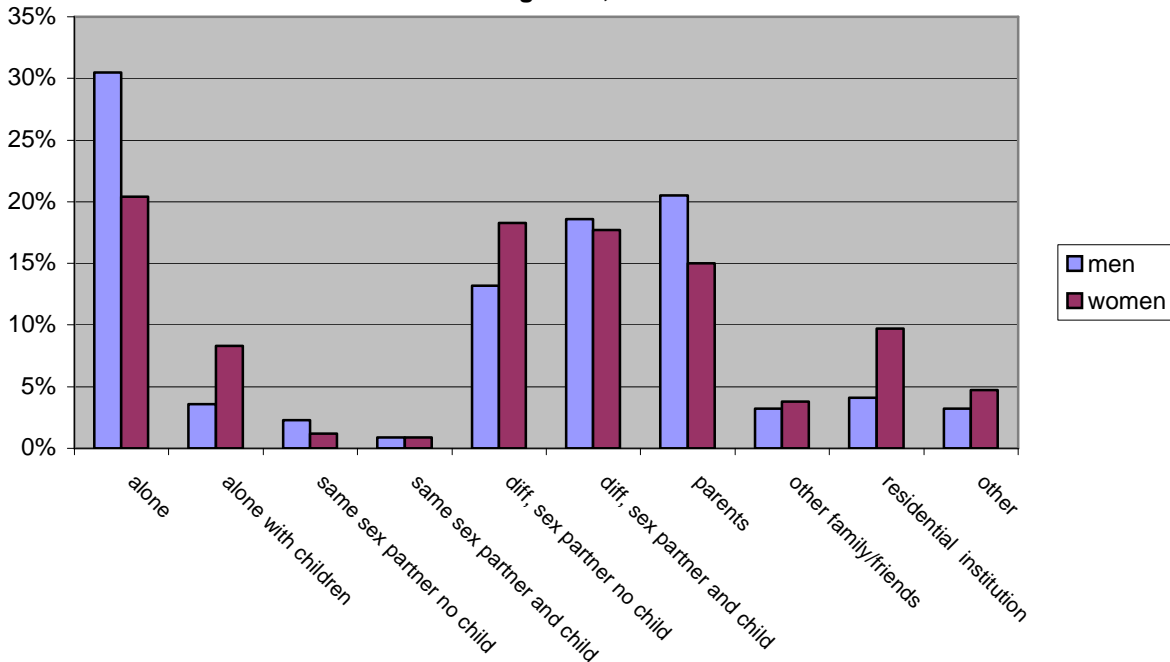
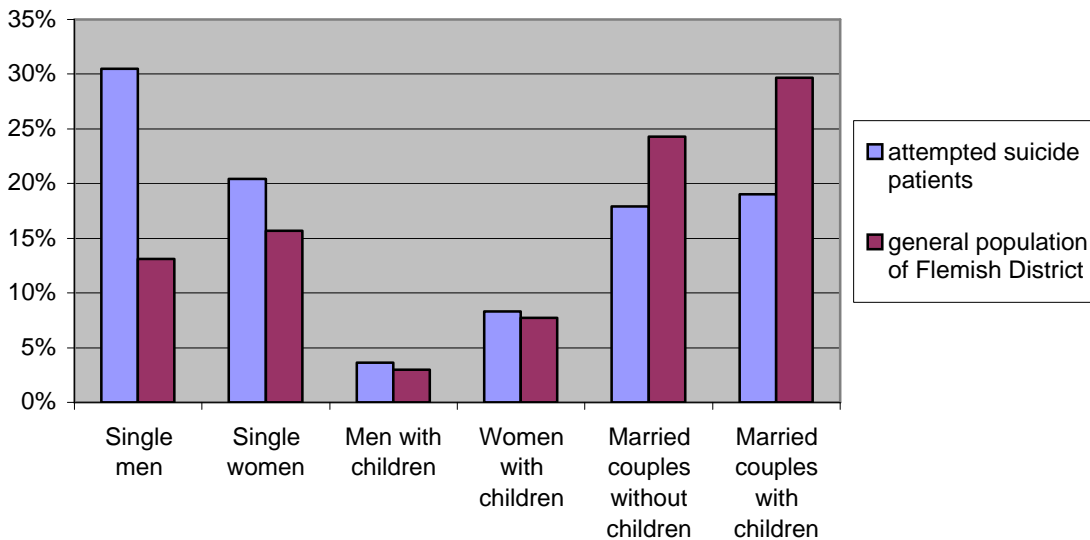


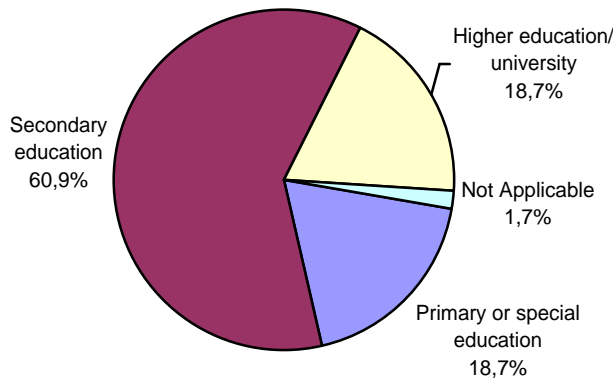
Figure 12 Marital status of attempted suicide patients compared to the general population of Flanders 2004



Education

More than half of the attempted suicide patients only graduated from secondary school (60.9%). 18.7% only finished primary or special education and the same percentage finished higher education or university. No significant differences were found between males and females ($\chi^2=5.573$; $df=3$; $p=0.134$).

Figure 13
Level of education of DSH patients in Flanders 2004

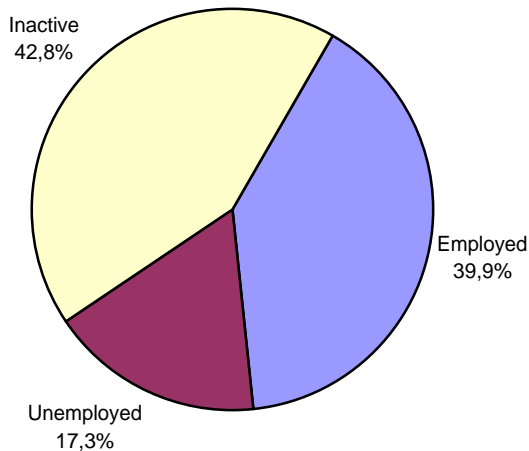


Employment status

In 2004, 42.8% of the attempted suicide patients were economically inactive (retired, student, disabled, housewife...) (figure 14). Of those patients 64.2% was aged between 18 and 64. A quarter of the inactive group was still studying (26.3%) and 9.4% was retired (respectively n=25 and n=9 of 95 patients reporting inactive economical status). 39.9% of the attempted suicide patients was employed and 17.3% was unemployed. Of those persons for whom the duration of unemployment was known, 56.5% had been unemployed for more than one year (n=13 of 23 patients specifying unemployment duration).

More women (51.0%) than men (30.6%) were inactive, and more men (51.0%) than women (32.2%) were employed ($\chi^2=21.967$; $df=2$; $p=0.000$). There was no gender difference for unemployment.

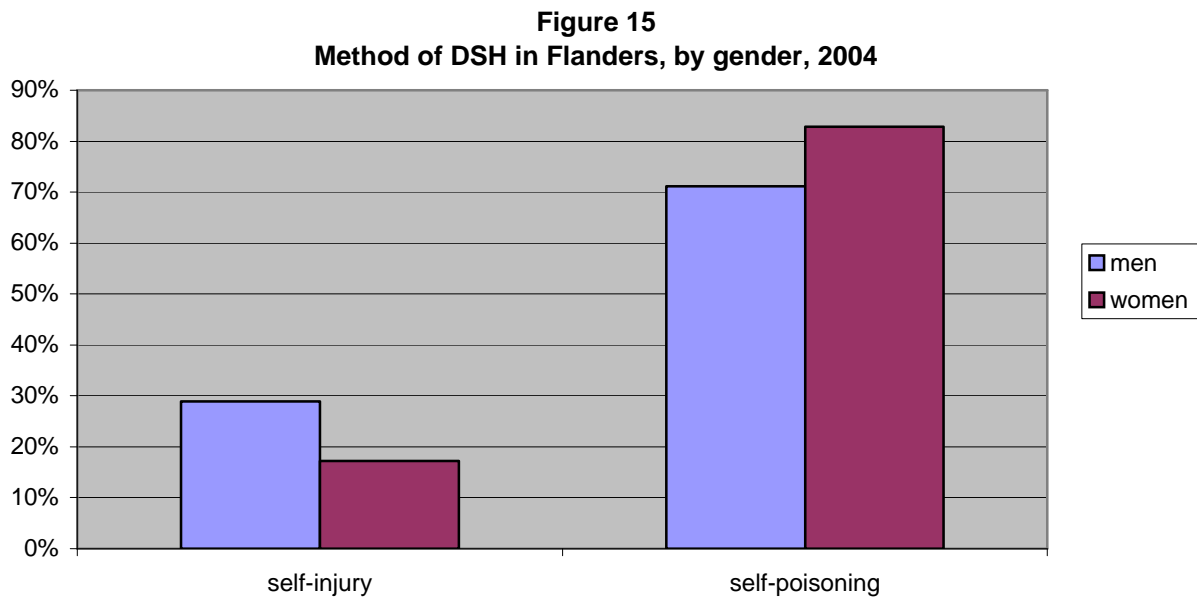
Figure 14
Employment status of assessed attempted suicide patients 2004



Method

In 2004, 78.4% of attempted suicide-episodes involved self-poisoning, 14.8% self-injury and 6.8% both methods. These figures are similar to previous years.

Self-poisoning was more frequent in females than in males, while self-injury was more common among males than females ($\chi^2=14.436$; $df=1$; $p=0.000$).



Almost half of the attempters (43.7%) used more than one method. From those, 84.7% used two methods, 13.5% three methods and 1.8% four. No significant gender difference was found in the employment of one or more methods ($\chi^2=2.358$; $df=1$; $p=0.125$).

The proportion of self-poisoning involving barbiturates, other sedatives, hypnotics and other psychotropic agents is large (62.0%). There was no significant difference between men and women in the use of these substances ($\chi^2=0.581$; $df=1$; $p=0.446$); 11.9% used non-narcotic analgesics, antipyretics and antirheumatics, involving more women than men ($\chi^2=7.117$; $df=1$; $p=0.008$). In 28.9% of the cases, the attempted suicide patient consumed alcohol at the time of the attempt, which was more prevalent in men than women ($\chi^2=6.538$; $df=1$; $p=0.011$). Self-poisoning by opiates, related narcotics and psychodysleptics; or by other drugs acting on the central and autonomic nervous systems; or by other drugs and medicaments were infrequent. Self-poisoning by petroleum products, other solvents and their vapours; by other gases and vapours; by pesticides, herbicides, and other toxic agricultural chemicals; or by other chemicals and noxious substances were even more infrequent. No gender analyses were performed because of the low numbers in each category.

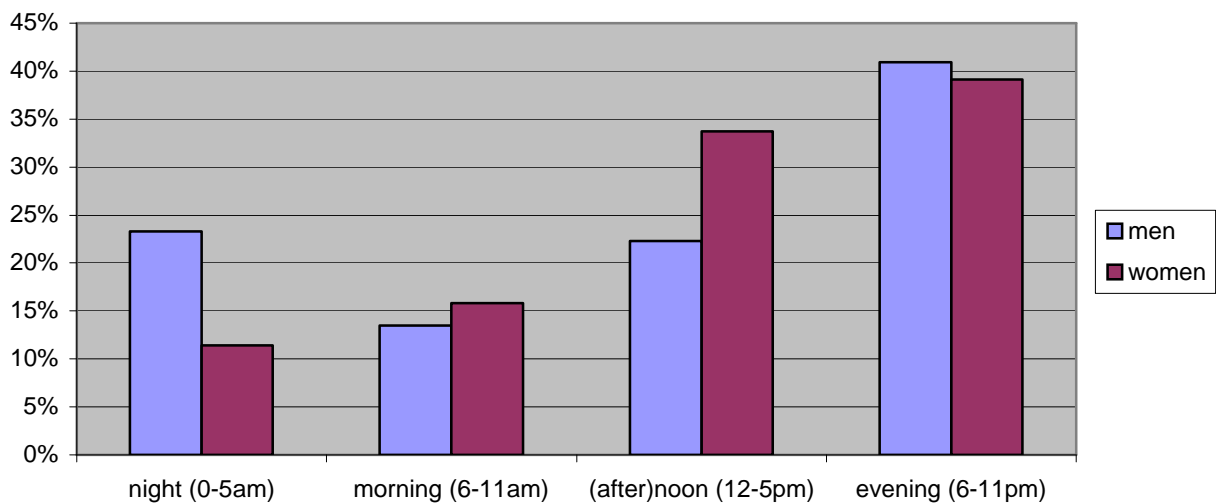
Regarding self-injury, self-harm by sharp objects was the most common used method (38.2%; 26.2% males and 42.0% females). No significant gender differences were found ($\chi^2=0.277$; $df=1$; $p=0.599$). 27.9% of self-injuries involved hanging, strangulation or suffocation (39.3% of males and 16.1% of females). Men used this method significantly more than women ($\chi^2=23.341$; $df=1$; $p=0.000$). 17.0% jumped from a high place (14.3% of males and 18.5% of females), 7.8% got injured by a motor vehicle accident (9.5% of males and 4.9% of females),

and 7.2% injured themselves by drowning (4.8% of males and 9.9% of females). Because of the low numbers in these last categories, no gender analyses were executed.

Time of attempted suicide

Four out of ten (39.7%) attempted suicide-episodes occurred during the evening, 29.6% during the (after)noon, 15.9% during the night, and 14.9% during the morning. Significantly more male attempted suicides were recorded during the night, and significantly more female attempted suicides during the afternoon ($\chi^2=18.589$; $df=3$; $p=0.000$).

Time of DSH in Flanders, by gender, 2004

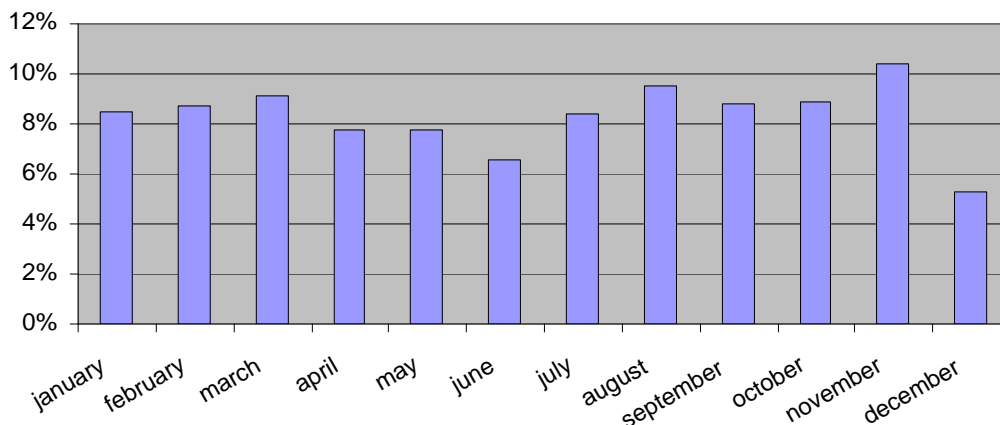


Remark

An attempted suicide-episode during the first half an hour (1-30 minutes) was assigned to the previous hour, an attempted suicide-episode during the last thirty minutes (31-59 minutes), was assigned to the next hour.

There was a higher incidence of attempted suicide in November (figure 17). During June and December less attempted suicide-episodes were registered. No significant gender differences were found ($\chi^2=16.896$; $df=11$; $p=0.111$).

Figure 17
Month of DSH in Flanders, 2004



Referral

74.3% of the patients were hospitalized after their attempt. 3.7% were referred to an out-patient treatment in the institution of presentation, 12.4% was referred to out-patient treatment elsewhere, and 10,0% of the attempters was not referred at all.

History of suicidal behaviour

Our repetition rate is the ratio of the number of episodes of attempted suicide to the number of persons who carried out an attempt. For men, the ratio was 1.01:1 and for women 1.06:1. The total ratio was 1.05, which is similar to previous years (figure 18).

Only half of the attempted suicide patients had no history of suicidal behaviour (52.1%). 28.2% of the assessed patients had attempted for the second time. 8.7% of the assessed persons had a history of four or more episodes of attempted suicide, 6.4% had a history of two previous episodes of attempted suicide, and 3.9% had a history of three episodes.

No significant gender differences were found for history of suicidal behaviour ($\chi^2=5.003$; $df=5$; $p=0.415$).

In 85.5% of the repeaters, the previous attempt received medical attention.

Figure 18
Event/Person ratio in Flanders, by gender, 1999-2004

