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Self-reported suicidal and help seeking behaviours in the general population in Latvia

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Abstract *Background* The aims of this study were to assess the prevalence of suicidal behaviours in the general population in Latvia, to identify risk groups for suicidal behaviour, to examine a possible continuous sequence of suicidal behaviours with underlying gradient of severity, to assess patterns of help seeking behaviours and preferences of different types of services for suicidal persons. *Method* A postal survey of a stratified proportional sample of the general population aged 18 and older was carried out. *Results* The last year and lifetime prevalence of any type of suicidal behaviours was 52.6 and 60.2%. The incidence of self-reported suicide attempts was 1.8 and 5.1%, respectively. Females reported significantly less serious types (includes ideation, plans and/or attempts) of suicidal behaviours (OR 0.04, $p=0.001$) during last year than males. Younger age, lower level of education, urban residency and Latvian ethnicity were identified as risk factors for serious types of suicidal behaviours in both genders. Non-cohabitation status (OR 5.3, $p=0.01$) and lower level of education for males, but higher levels of education for females were identified as significant risk factors for mild types (solely life-weariness and/or death wishes) of suicidal behaviours. The results indicated no simple cumulative

relationship between the suicidal behaviours. Age, gender, previous help seeking experience and severity of self-reported suicidal behaviours influenced help seeking behaviours. The overall acceptance of professional services was high, but people who reported suicidal behaviours ranked them lower. *Conclusions* A postal survey can provide a reasonable coverage of suicidal behaviours and description of risk groups in the general population. Higher prevalence of suicidal behaviours among males might indicate that nowadays males are under certain stress in Latvia.

Key words suicide behaviours – age – gender – population – Latvia – survey

Introduction

Suicide attempts and other self-destructive behaviours are serious general health problems and deserve special attention because of their strong association to completed suicide (De Moore and Robertson 1996).

The latest international study, the WHO/EURO Multicenter Study on Parasuicides from 15 European centres, derived population estimates of suicide attempts from figures of admissions to a wide range of health care facilities. The average annual incidence across sites for the years 1989–1992 was 140 per 100 000 for males and 193 per 100 000 for females (Schmidtke et al. 1996). However, these data do not describe the whole magnitude of the problem because it is estimated that only 25–60% of attempts result in medical treatment (Diekstra 1982; Kjoller and Helweg-Larsen 2000).

It is not easy to assess and compare suicidal behaviours in the population because of the lack of clear and concise definitions and classifications as well as differences in the methods of data collection. Therefore, reported estimates vary. The one-year incidence of suicide attempts among adults ranges from 0.2 to 2% and lifetime prevalence ranges from 0.7 to 6% (Paykel et al. 1974; Ramsay and Bagley 1985; Moscicki et al. 1988; Ma-

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dianos et al. 1993; Hintikka et al. 1998b; Crosby et al. 1999; Kessler et al. 1999; Weissman et al. 1999; Kjoller and Helweg-Larsen 2000; Pirkis et al. 2000; Renberg 2001). Population-based studies report prevalences of suicidal ideation between 2.3 and 8.6% in one-year perspective and between 2 and 21.1% in a lifetime perspective (Paykel et al. 1974; Ramsay and Bagley 1985; Moscicki et al. 1988; Kessler et al. 1999; Weissman et al. 1999; Kjoller and Helweg-Larsen 2000; Pirkis et al. 2000; Renberg 2001). Several studies have reported prevalences of other types of suicidal behaviours, one-year and lifetime prevalences, respectively; for life-weariness 7.8–29.9% and 11.5–48.8%, death wishes 5–17.9% and 8.2–33.5%, and suicidal plans 1.5–4.2% and 3.9–13.1% (Paykel et al. 1974; Ramsay and Bagley 1985; Kessler et al. 1999; Renberg 2001).

Certain factors have been found to be positively associated with suicide attempts and ideation, especially female gender and single or divorced family status (Moscicki et al. 1988; Kessler et al. 1999; Weissman et al. 1999; Kjoller and Helweg-Larsen 2000; Renberg 2001). However, there are also other studies where no association between socio-demographic factors and ideation has been found (Vilhjalmsson et al. 1998). Some studies found positive associations between unemployment and suicidal ideation (Claussen 1998), suicide attempts and ideation (Kjoller and Helweg-Larsen 2000; Pirkis et al. 2000). This supports earlier findings from Israel (Levav et al. 1988). Another study found a high level of suicidal ideation among persons with financial constraints, like debts (Hintikka et al. 1998a).

Paykel et al. (1974) found in their study a continuum, i.e. a stepwise association between different types of suicidal behaviours, suggesting an increased severity from life-weariness to death wishes, to suicidal thoughts, to suicidal plans and attempted suicide. This was supported to some extent by findings from recent population-based studies (Crosby et al. 1999; Kessler et al. 1999; Renberg 2001). However, these studies point out a complex nature of those relationships.

To our knowledge, until now only a few studies have been published regarding help seeking behaviours of persons with suicidal behaviours in the general population [other research done in the field has mostly focused on adolescents and young adults (Meehan et al. 1992; Schweitzer et al. 1995; Carlton and Deane 2000)]. However, it is very important to understand the preferences of persons with suicidal ideations when planning effective out-reach programmes.

The aims of this study were to assess the prevalence of suicidal behaviours in the general population, to identify risk groups, to examine the suggested continuous sequence of suicidal behaviours with underlying gradient of severity and to assess patterns of help seeking behaviours and preferences for different types of services.

Subjects and methods

Demographic characteristics of the country

Latvia is one of the three Baltic countries situated on the East Coast of the Baltic Sea. It has a territory of 64 589 km² and, in 1999, had a total population of 2 439 445 inhabitants (Central Statistical Bureau of Latvia 1999). The population is not equally distributed in the country, 69% live in urban and 31% in rural areas of Latvia. The capital city Riga is most urbanised with 796 732 inhabitants or 32.7% of the total population in 1999 (Central Statistical Bureau of Latvia 1999). This gives a population density in the capital as high as 2595.2 inhabitants per km².

The gender ratio in the country has been stable over the last 20 years with an average of 44.9% males and 55.1% females. In 1999, life expectancy was 64.1 years for males and 75.5 years for females. A proportion of 18.5% of the population was under the working age and 22.5% in retirement age (Central Statistical Bureau of Latvia 1999). The proportion of ethnic groups differs between Riga and the whole country: Latvians are 38.8 vs. 55.7%, Russians 47.2 vs. 32.3%, Belussians 4.4 vs. 3.9%, Ukrainians 4.4 vs. 2.9%, Polish 1.8 vs. 2.2%.

Development of questionnaire

A survey was done by using a self-reporting questionnaire on attitudes and self-reported suicidal behaviours developed by Salander-Renberg and colleagues (Salander-Renberg 1998). It was validated in two population-based studies in Northern Sweden in 1986 and 1996. The questionnaire consists of two parts: the first addressing the person's attitudes towards suicide and the second on suicidal behaviours. Regarding self-reported suicidal behaviours the person was asked the original questions used in a study by Paykel and colleagues (1974):

1. Have you ever felt that life was not worth living?
2. Have you ever wished you were dead, for instance that you could go to sleep and not wake up?
3. Have you ever thought of taking your life, even if you would not really do it?
4. Have you ever reached the point where you seriously considered taking your life, or perhaps made plans how you would go about doing it?
5. Have you ever made an attempt to take your own life?

A choice of four response possibilities was given: *often*, *sometimes*, *hardly ever* and *never*. The subjects were asked to report the occurrence during the last year and earlier in their life. For the last question, on suicide attempts, the response options were simply "yes" or "no". Basic demographic information, i.e. gender, age, region (urban/rural), cohabiting (living alone vs. all other categories), nationality and years of education (less than 9, 10–13, 14 and more years), was also included. The questionnaire was translated into the Latvian and Russian languages; problematic questions were discussed with a group of different people. Then it was back-translated into English and compared with the original. No meaningful differences were found.

The questionnaire was complemented with three new questions addressing acceptance of help in crisis situations, general opinion on the kind of professional help (e.g. hot-line, doctor, psychologist, psychiatrist, priest, healer) needed for persons with suicidal thoughts and personal ranking (from 1 to 6) of different sorts of professional help provided once one had suicidal thoughts. Test-retest reliability of the questionnaire was assessed by a repeated survey (with 3 weeks interval) of a group of hospital staff and a sample of medical students (31 Latvian and 30 Russian questionnaires). The internal correlation of responses was measured by bivariate correlation Spearman's coefficient (SPSS 1999), which was statistically significant ($\rho = 0.7-1.0$, two-tailed $p < 0.1$).

■ Sampling and procedure

Interviewer-based studies on the suicide topic have not been performed in Latvia before. There are not enough specially trained interviewers to carry out such a type of fieldwork and this would require substantial financial resources. Postal surveys have not been carried out either. Latvia does not have good and reliable registers of households and persons living there. Thus, it was not possible to select a random sample of the general population and mail out a questionnaire. Therefore, our survey was added to the Household Budget Survey routinely run by the Central Statistical Bureau of Latvia and their network of interviewers was used.

A stratified proportional sample of the residents of Latvia aged 18 and older was made by one of the authors based on the data on the population from the Central Statistical Bureau of Latvia. Within each household included in the sample of the Household Budget Survey, interviewers randomly selected persons 18 years old and older as respondents for the survey on attitudes to suicide problems. The questionnaire was left anonymous in the relevant language. Each interviewee received a letter explaining the goals and procedure of the survey. An envelope with a postage stamp and printed address was supplied for returning the completed questionnaire to the survey organisers. The survey was carried out in four equal waves from March to June 2000. Three weeks after the questionnaires were handed out a reminder letter was sent.

■ Ethical considerations

According to the existing regulations, studies of this kind do not need any special approval of an ethical committee in Latvia. However, the Central Statistical Bureau of Latvia did approve the questionnaire and the study. A network of professional interviewers from the Household Budget Survey was used to ensure the quality of fieldwork. Interviewers were instructed not to hand out the questionnaire in some exceptional cases (e.g. interviewee was severely ill or in bereavement), but they were obliged to report this to the supervisors. Only persons 18 years old and older were included in the study because they could decide whether or not to participate in the survey themselves. A contact telephone number was given in case the interviewee needed any professional assistance or help as a consequence of the study. The delivery of questionnaires and data collection was separated; therefore, anonymity of the interviewee was guaranteed.

We have had no indications of negative reaction to the study. On the contrary, the commentaries from several respondents have expressed a supportive and encouraging attitude to study this topic.

■ Response rates and methodological limitations

The planned national sample size was 1382. Due to different frame imperfections, 52 addresses from the sampling lists were excluded. In 57 other cases for some particular reason interviewers did not hand in the questionnaire. In 599 out of 1273 cases the distributed questionnaire was not received from respondents. Seven cases were excluded because it was impossible to identify the territory of the received questionnaire necessary for the calculation of weights.

The total response rate was 52.4%. Internal dropout rate (not answered questions) was very small, less than 3%. Internal consistency of Paykel's five original questions was good with a Cronbach's alpha of 0.77.

Altogether 188 males and 479 females responded to the questionnaire which gave a response rate of 32.9 vs. 68.2% of gender group included in the sample. The age group distribution for females was rather similar to the population both in urban and rural settings. Males who responded to the questionnaire were under-represented in younger (observed vs. expected as 25.0 vs. 34.6) and over-represented in older age groups (41.0 vs. 28.0), especially in rural areas.

■ Statistical analysis

Data analysis was performed using the SPSS for Windows statistical package (SPSS 1999). Descriptive statistics, independent sample t-tests, odds ratios, chi-square, bivariate correlation Spearman's coefficient and logistic regression with interaction models for gender and types of reported suicidal behaviours were applied where appropriate.

Results

■ Prevalence of different types of suicidal behaviours

Only data on self-reported suicidal and help seeking behaviours will be presented in this article. All affirmative responses to the questions except "never" were aggregated. The distribution over the response alternatives for the questions regarding suicidal behaviours ranged from 55.8% to 85.1% for the "never" alternative, and from 1.3% to 8.2% for "often".

The differences between last year and earlier in life reported behaviours are very small, in some cases even opposite. This might suggest a recall problem or under-reporting. When analysing different patterns of reporting last year and lifetime suicidal behaviours in different age and gender groups, younger people in both genders reported serious events (suicide plans and attempts) much more often than older ones. This does indicate a probable under-reporting of lifetime suicidal behaviours by the elderly and it was decided to use only the last year prevalence as more reliable in the further analyses.

■ Reports on suicide attempts

The lowest estimate of reported suicide behaviours was considered to assess the minimum figure. It was calculated based on the assumption that all persons with suicidal behaviours in the population had been included in the sample by chance. Based on absolute numbers, 19.7% of the population reported life-weariness, 22.4% death wishes, 11.6% suicidal ideation, 6.5% suicidal plans, 0.9% suicide attempts and 29.1% any type of suicidal behaviours last year. This figure for suicide attempts still came out six times higher than that calculated from the study of suicide attempts and serious suicide threat (SAST) rates in Riga city (Rancans et al. 2001).

When analysing particular frequencies of the reports of suicide attempts by age, gender and living place, it seems that responders even over-reported events, because the differences between the self-reported and hospital-known suicide attempt rates were in the range of 0 to 27.3 times for different age and gender groups. This is much higher than reported in the literature. However, the same internal age group proportions as in the hospital-known sample, young – middle-aged – elderly relating as 4-2-1 were also observed among survey respondents. Thus, persons who did not respond to the

survey most probably represent a population with a low level of suicidal behaviours.

When analysing the detailed spectrum of responders by age, gender and living place, as well as their responses to particular key questions, it was found that weighting respondents with design weights slightly changed the demographic representativeness of the sample and influenced responses. Therefore, the design weights were demographically balanced to keep the original size and representativeness of the sample. All results are presented using these weights in Table 1.

■ Self-reported suicide behaviours and demographic characteristics

Risk groups were compared in two types of suicidal behaviours: serious (includes ideation, plans and/or attempts) and mild (includes solely death wishes and/or life-weariness) types of suicidal behaviours during the last year (Table 2).

Socio-demographic factors are differently related to different types of suicidal behaviours. Taking into account that many of these factors interrelate, the binary logistic regression analysis with interaction model for gender was performed. Results are presented in Table 3.

Females reported significantly less serious types of suicidal behaviours (OR 0.04, $p=0.001$) than males. Younger age, lower level of education, urban residency and Latvian ethnicity were the risk factors for serious types of suicidal behaviours in both genders. Non-cohabitation status (OR 5.3, $p=0.01$) and lower level of education for males, but higher levels of education for females were significant risk factors for mild types of suicidal behaviours.

■ Sequence of suicidal behaviours

The frequency of reports of suicidal behaviours decreased with severity in almost all age groups of both genders (Fig. 1). However, death wishes are reported more often than life-weariness in some groups. Trends in female age groups are more similar than in male, but this might to some extent be explained by the larger sample size.

Table 1 Weighted rates of self-reported suicidal behaviours last year, earlier in life and lifetime

	Weighted rates					
	Last year N	Responders %	Earlier in life N	Responders %	Lifetime N	Responders %
Life-weariness	463	36.3	467	36.7	559	43.9
Death wishes	493	38.7	469	36.8	609	47.8
Suicidal ideation	271	21.3	338	26.5	421	33
Suicidal plans	155	12.2	196	15.4	249	19.5
Suicide attempts	23	1.8	58	4.6	65	5.1
Any type	671	52.6	631	49.5	767	60.2

Table 2 Percentages reporting serious and mild types of suicidal behaviours during last year in different demographic groups

Socio-demographic variables		Types of suicidal behaviours			
		Serious		Mild	
		N	%	N	%
Gender	Male	123	21.5	130	22.7
	Female	182	25.9	237	33.7
Age groups	18–34	100	25.6	88	22.6
	35–54	112	24.9	110	24.5
	55+	93	21.4	168	38.6
Territory	Urban	193	21.5	269	30.0
	Rural	112	29.6	98	25.9
Cohabitation	Yes	244	24.4	254	25.4
	No	59	22.8	111	42.7
Ethnic groups	Latvian	196	27.3	196	27.3
	Non-Latvian	108	19.5	170	30.6
Years of education	Less than 9	44	21.5	74	36.1
	10–13	186	23.6	221	28.0
	14 and more	59	26.1	64	28.3

Frequencies of individual sequences of reporting suicidal behaviours last year are presented in Table 4.

A proportion of 39.1% reported a non-continuous pattern of suicidal behaviours during the last year. However, if we include in the group of continuous behaviours the reports starting from death wishes, because it is the most frequently reported single type of suicidal behaviour, then the proportion of a non-continuous pattern decreases to 13.4%.

■ Help seeking behaviours

In crisis situations, 38.6% of the sample population sought some kind of help, 27.5% did not get any help for different reasons, while 32.0% reported never being in such a situation. An equal percentage of males and females did not ask for help. Major reasons for not asking for help were: “*I cannot trust others with my problems*” (45% of males, 30.7% of females) and “*Nobody can help me*” (36.4 and 39.2%, accordingly).

With respect to different types of suicidal behaviours in the group not asking for help, the overall reported frequencies of any type of suicidal behaviours did not dif-

Table 3 Logistic regression of different types of suicidal behaviours and demographic variables with interaction by gender

		Types of suicidal behaviours					
		Serious			Mild		
		B	OR	p value	B	OR	p value
Gender	Male		1		1		
	Female	-3.335	0.036	0.001	0.297	1.346	0.743
Age groups	18–34		1	0.005	1	0.254	
	35–54	-1.123	0.325	0.084	-0.633	0.531	0.309
	55+	-2.187	0.112	0.001	-0.993	0.371	0.1
Territory	Urban		1		1		
	Rural	-1.031	0.357	0.097	0.292	1.339	0.617
Cohabitation	Yes		1		1		
	No	0.559	1.748	0.431	1.669	5.305	0.01
Ethnic groups	Latvian		1		1		
	Non-Latvian	-1.2	0.301	0.034	-0.491	0.612	0.337
Years of education	Less than 9		1	0.000	1	0.041	
	10–13	-1.845	0.158	0.047	-2.394	0.091	0.015
	14 and more	-3.123	0.044	0.000	-0.672	0.511	0.333
Interaction groups							
Gender to age groups	18–34		1	0.002	1	0.561	
	35–54	0.718	2.051	0.071	0.023	1.024	0.95
	55+	1.417	4.127	0.000	0.35	1.419	0.335
Gender to territory	Urban		1		1		
	Rural	0.778	2.176	0.034	-0.174	0.841	0.618
Gender to cohabitation	Yes		1		1		
	No	-0.103	0.902	0.808	-0.545	0.58	0.153
Gender to ethnic groups	Latvian		1		1		
	Non-Latvian	0.59	1.804	0.081	0.355	1.426	0.244
Gender to education	Less than 9		1	0.000	1	0.042	
	10–13	1.0	2.718	0.08	1.367	3.923	0.015
	14 and more	1.847	6.343	0.000	0.386	1.471	0.336

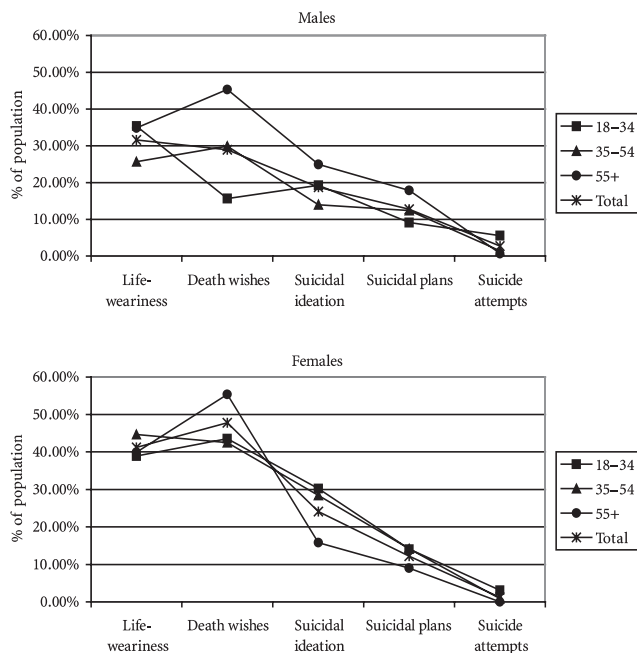


Fig. 1 Age and gender specific frequencies of suicidal behaviours

fer from the total sample rates (44.1% for males and 59.5% for females). However, a much higher proportion of persons answering “*Nobody can help me*” reported

Table 4 Sequences for reporting on suicidal behaviours last year

Types of sequences	N	%
Continuous		
LW	114	17.0
LW + DW	98	14.6
LW + DW + SI	85	12.7
LW + DW + SI + SP	99	14.8
LW + DW + SI + SP + SA	12	1.8
Continuous not complete		
DW	154	23.0
DW + SI	18	2.7
Non-continuous		
LW + DW + SI + SA	1	0.1
LW + DW + SP	15	2.2
LW + SI	24	3.6
LW + SI + SP	3	0.4
LW + SI + SP + SA	6	0.9
LW + SP	4	0.6
DW + SI + SA	3	0.4
DW + SP	6	0.9
SI	16	2.4
SI + SA	1	0.1
SI + SP	2	0.3
SP	9	1.3
Total	671	100

different types of suicidal behaviours – 56.8% of males and 80.8% of females, with increasing frequency for more serious behaviours – “mild” to “serious” as 1:2.

In the group of persons asking for help in crisis situations close to 90 % received help from significant others (mostly family and friends), 16 % from professionals and 22 % from other persons.

A total of 95 % agreed that at least some kind of professional help is needed for persons with suicidal ideations. Particular preferences are presented in Table 5.

Psychological help was favoured by males and in the younger age group of 18–54. Medical care was more accepted by the middle- and older-aged people.

A total of 63.9 % would be prepared to get at least some kind of professional help if they had suicidal thoughts and 31.3 % would not look for it. On the whole, the male representatives would accept help less often than females (59.2 vs. 73.5 %). The group accepting help was compared with the group not accepting help in respect of the reported different types of suicidal behaviour by means of logistic regression with interaction by gender and by types of suicide behaviours (not presented in the table). No overall differences between the genders were observed, but older males reporting death wishes and life-weariness were less willing to accept help.

Persons who have at some time asked for help in crisis situations are more willing to receive future help. This affects both genders – 75.4 % of males and 80.7 % of females would look for professional help. Even in the group of people giving the reason for not asking for help as “*Nobody can help me*”, overall acceptance of professional help is more than 50 %.

Eighty-eight per cent of those who would look for help gave their personal preference for different types of help offered in the questionnaire from 1 “most preferred” to 6 “least preferred”.

Rank orders in both genders are almost similar – psychologist, psychiatrist, doctor, hot-line, priest and healer with median ranking values for males and females of 2 both, 2 and 3, 3 and 4, 4 and 3, 4 and 3, 5 both, accordingly. Females compared to males prefer a possibility to communicate (hot-line, priest), but males prefer medical services (psychiatrist, doctor). The presence of suicidal behaviours is associated with decreased ranking for a doctor and with increased ranking for a priest.

Only 30 % of this general population sample in both genders know the place where they could receive professional help.

Discussion

Methodological considerations

There are questions arising on the capability of postal questionnaires to cover the most severe cases of suicidal behaviours in the population. Salander-Renberg et al. (1998), who conducted the two population-based studies in Northern Sweden, concluded, however, that this design gave rather acceptable figures on prevalence. Anonymous surveys might even give more honest answers on such a personal question as suicidal behaviour than interviews. Two to three times higher rates of suicide attempts were reported under the conditions of anonymity vs. interview in a study of adolescents (Safer 1997). Lack of clear definition of suicide attempt in the questionnaire might influence accuracy and validity of the answers given. Supplementation of the original survey question with more precise definition regarding severity and medical treatment of the attempt might help to solve this problem (Meehan et al. 1992). Information regarding the previous number of suicide attempts, if there were any, might also give better description of severity and long-lasting nature of underlying problems (Kirmayer et al. 1996).

This is the first nation-wide population-based survey on self-reported suicidal and help seeking behaviours carried out in the region. Postal surveys have not been carried out in Latvia before. A network of Household Budget Survey interviewers was used to minimise technical imperfections of mailing and the address database. The questionnaire was delivered in person to the interviewee in 67.3 % or left with a household member in 18 % of cases. In 14.7 % of cases the questionnaire was left in a mailbox. The overall response rate was as low as 52.4 %, but in other interviewer-based surveys (i. e. Household Budget Survey) performed regularly by the Central Statistic Bureau of Latvia the response rates do not reach beyond 70 %. Other international population-based surveys on attitudes and self-reported suicidal behaviours usually report response rates in the range of 63 to 82 % (Moscicki 1989; Hintikka et al. 1998b; Kessler et al. 1999; Weissman et al. 1999; Kjoller and Helweg-Larsen 2000; Pirkis et al. 2000; Renberg 2001). It should also be noted that reminder letters only increased the response rate by 10 %.

Table 5 General opinion on professional services needed for persons with suicidal ideations (in percentages of population)

Professional help	Gender		Age groups			Total
	Male	Female	18–34	35–54	55+	
Psychologist	72.5	61.0	74.5	74.2	48.9	66.0
Hot-line	46.7	49.1	59.7	54.0	30.2	48.0
Priest	39.6	47.7	42.4	52.6	36.6	44.1
Psychiatrist	38.4	44.1	31.1	45.1	47.9	41.6
Doctor	33.1	38.7	31.4	39.9	36.9	36.2
Other	10.9	16.7	18.6	12.3	11.9	14.2

A proportion of 68.2% of female representatives responded to our questionnaire, thus this group is represented reasonably well. While male overall response rate is only one-third of the sample, the frequencies and proportions of reported severe suicidal behaviours (ideas, plans and/or attempts) are high and sometimes even outreach the female rates. This might indicate that persons with high levels of suicidal behaviours were sensitive to the questionnaire so the survey probably covered a substantial part of suicidal behaviours in the population. In some groups these behaviours might even be over-reported, which could influence analysis. However, it is not possible to obtain details of the non-responding group due to the sample selection design. Under-representation of younger males and over-representation of older males could be explained by different generation responsiveness to surveys or questionnaires, which has already been observed in other surveys run by the Central Statistical Bureau of Latvia. Thus, generalisation of the results to the whole population should be made with caution.

■ Prevalence of suicidal behaviours

The lifetime prevalence of suicidal behaviours would be more appropriate to study because of the protracted nature of the suicide process. However, recall problems or under-reporting, especially by the elderly, limits the possibilities to use lifetime frequencies. Therefore, the last year prevalence was used as this was considered to be more reliable.

The prevalence of all types of suicidal behaviours is the highest, or among the highest, ever reported in literature. On the one hand, it is not surprising because Latvia has one of the highest rates of completed suicides in Europe (Schmidtke et al. 1999). The difference between the lowest estimate and weighted prevalence in all suicidal behaviours is close to two times, but, even when taking into account only the lowest estimate rates, there is an indication that persons responding to the questionnaire had high levels of these behaviours.

With regard to gender distribution, females have higher total rates for life-weariness, death wishes and suicidal ideations, but are equal to males in suicide plans; however, these proportions vary among different age groups. This corresponds to the findings from earlier studies (Renberg 2001) and with respect to ideation to other studies (Canetto and Sakinofsky 1998; Hintikka et al. 1998b; Kessler et al. 1999; Weissman et al. 1999; Pirkis et al. 2000). However, this high frequency of last year reports of suicide attempts – lowest estimate 0.9, weighted 1.8% [which gives 6–12 times higher rates than estimated from the study of SAST in Riga city (Rancans et al. 2001)], as well as a male predominance of 2.7 vs. 1.2% for females have been seen only in our study. Thus, our results seem to give a reasonable coverage of suicidal behaviours in the country.

■ Risk groups

Contrary to the results of many other studies, females reported much lower rates of serious types of suicidal behaviours (Kessler et al. 1999; Weissman et al. 1999; Pirkis et al. 2000). Only one recent study reported higher ideation among males than females (Kjoller and Helweg-Larsen 2000). These results might be biased by high rates of reporting serious suicide behaviours by the males; however, another study of our research group reported higher rates of suicide attempts for males than females in the Riga region (Rancans et al. 2001). Several possible explanations to the observed phenomenon were given, indicating that males in our population are under large social stress.

Non-cohabitation showed significant influence only on “mild types” of suicidal behaviour in males. This might be explained in two ways. Firstly, there is a relatively small number of single-member households because of long-standing traditions of living in the family, and economical shortages also restrict the possibilities of getting a separate apartment. Secondly, people from older age groups (commonly divorced or widowed) more often reported death wishes and life-weariness than serious suicidal behaviours.

The small number of young people answering our questionnaire from the countryside could influence the differences between urban and rural levels of reporting serious suicidal behaviours in males.

However, other known risk factors such as younger age and lower educational level were confirmed by our study. There is one discrepancy comparing to our findings from parasuicides hospitalised in Riga psychiatric hospital (Rancans 2001) where a higher level of education was observed. But this was a sub-sample of people with a high level of suicide intent and coming mostly from Riga city. Thus, these groups should be compared with caution.

■ Sequence of behaviours

The lower frequency of self-reported life-weariness as compared to death wishes might implicate different cultural understanding of the questions and that the question was too general. Females expressed death wishes 1.5 times more often than males, and it was more common for older persons in both genders. This was the single leading type of behaviour (23% of those who report any type of behaviours). Death wishes might be a more general human phenomenon and might not necessarily be a suicidal behaviour, instead it might indicate the communicative nature of suicidal behaviours, which is characteristic not only for young age groups and females, but also described among older people (Waern et al. 1999).

Even if we consider the possibility that a continuum of suicidal behaviours starts with death wishes, 13.4% of the persons reporting suicidal behaviours miss one or the other higher levels of suicidal behaviours. Thus, the

relations between suicidal behaviours are more complex than the cumulative one (Paykel et al. 1974). In a recent study Kessler et al. (1999) also found that the cumulative probabilities were 34 % for the transition from ideation to a plan, 72 % from a plan to an attempt, and 26 % from ideation to an unplanned attempt. More detailed analysis of this process would be necessary, most probably using qualitative research methods.

■ Help seeking behaviours

Our data support the notion that feelings of hopelessness are a factor associated with higher levels of suicidal behaviours both in adolescents and adults (Vilhjalmsson et al. 1998; Carlton and Deane 2000). Mental disorders – affective, anxiety and addiction disorders – have higher rates of hopelessness and are associated with increased levels of suicidal behaviours (Suominen et al. 1997; Vilhjalmsson et al. 1998; Pirkis et al. 2000).

Certain resistance to ask for help was observed among older males, which is a well-known phenomenon. This was also associated with the higher levels of reporting death wishes and life-weariness. Presence of suicidal behaviours is associated with decrease of ranking for doctor in both genders. This should definitely be kept in mind because, according to a study from Finland (Hintikka et al. 1998b), 85 % of persons with suicidal ideations or attempts visited general practitioners, and 20 % a psychiatrist, during the last 12 months.

Different generations have their own preferred kind of services. Persons once receiving help from others are much more willing to receive it in the future. In our study, close to 80 % of both gender representatives that once asked for help vs. 64 % of the total sample were ready to accept future help. The same tendency was noted in a study of adolescents (Carlton and Deane 2000). This emphasises the necessity of professionals to improve the match of services they provide to the needs of a particular population (Isacsson and Rich 2001).

Only 16 % of the persons in crisis situations received help from professionals and 30 % knew where they could get professional help in case of suicidal ideas or attempt. Therefore, better promotion of crisis treatment facilities should be considered.

Conclusions

In spite of some methodological limitations, our postal survey provides a reasonable coverage of suicidal behaviours and description of risk groups in the general population in Latvia, and can serve as a basis for the development of preventive strategies. Younger age, lower education level and urban residency proved to be risk factors. Females reported lower rates of suicide behaviours than males. This might indicate that males are nowadays under certain social stress in Latvia.

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