



Tervise Arengu Instituut
National Institute for Health Development

**HIV-RELATED KNOWLEDGE, ATTITUDES AND
BEHAVIOUR AMONG ESTONIAN YOUTH**

SURVEY REPORT 2007

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INTRODUCTION

The survey "HIV-related Knowledge, Attitudes and Behaviour among Estonian Youth" was conducted for the third time in 2007. Previous data collections took place in 2003 and 2005. The survey was arranged by the National Institute for Health Development within the framework of the activities of the Estonian Programme of Global Fund to Fight AIDS, Tuberculosis and Malaria.

The main objective of the survey is to provide an overview of the state and trends of HIV related knowledge, understandings, attitudes and risk behaviour in sexual relations of Estonian youth. The data collected will support planning of prevention work targeted at youth in Estonia and evaluation of the National HIV and AIDS Strategy.

All three surveys have been conducted among 10-29 year old youth living in Estonia. According to the data provided by the HIV Infection Reference Laboratory of West-Tallinn Central Hospital, as at 31 August 2007, 6,148 cases of HIV infection have officially been registered in Estonia, of which 63% among 15-24 year old population and 18% in the age group 25-29. In addition to the aforementioned age groups, the survey also covers 10-13 year olds, since early prevention measures among children about to reach adolescence allows avoiding future risk behaviour and possible contraction of HIV or sexually transmitted infections.

The present report provides an overview of the survey methods, sociodemographic data of the sample, use of alcohol and drugs, knowledge related to HIV transmission and sexually transmitted infections (STIs), attitudes towards people living with HIV and AIDS, sexual partners, habits of condom use and testing for HIV and STIs.

1. OVERVIEW OF THE SURVEY PROCEDURE

Sample Formation

The research subjects were 10-29 year old Estonian residents and the population included young people of this age living in Estonia¹. Two separate samples were formed – for the age groups 10-18 and 19-29. In the case of the age group 10-18, the sample was formed of general education school students in grades IV-XII and in the case of the age group 19-29 based on the Population Register. Based on data acquired from the Ministry of Education and Research, in the academic year 2006/2007, the number of IV-XII grade students amounted to 127,613. According to the Statistical Office, as at 1 January 2007, the number of 19-29 year old inhabitants of Estonia amounted to 219,770.

When calculating the sample, the improvement in the level of knowledge and increase in condom use among Estonian youth established as the objective of preventive work have been taken into account. The response rates of the 2005 survey have been taken into account upon sample calculation as well, in order to compensate for the losses which may arise from absence of students, refusal to participate or inappropriate age. The survey capacity is 95%.

The age group 10-18 was divided into two subgroups: 10-13 year olds (grades IV-VI) and 14-18 year olds (grades VII-XII). Both age groups were divided into three regions: Harju County, Ida-Viru County and the rest of Estonia. In all areas schools were divided into three groups: Estonian city schools, Russian city schools and country schools. In such a way 18 layers were formed. In each layer a simple random sampling was performed among the schools and in each school random grades were included in the sample. In all, the sample amounted to 2,896 10-18 year old individuals, 2.3% of the population. The target number of questionnaires returned was 1,300, i.e. 1.0% of the population.

19-29 year olds were divided into two subgroups in three regions (Harju County, Ida-Viru County and the rest of Estonia): 19-24 year olds and 25-29 year olds. This way 6 layers were formed. A simple random sampling was performed in each layer. In all, the sample amounted to 5,446 19-29 year old young people, i.e. 2.5% of the population. The target number of questionnaires returned was 2,200, i.e. 1.0% of the population.

Conduct of Questionnaire Survey

Different questionnaires were composed for three age groups: 10-13 year olds, 14-18 year olds, and 19-29 year olds. The questionnaire for 10-13 year olds did not include specific questions regarding sex life (present in the questionnaires of older age groups). 19-29 year old respondents were not asked questions regarding school. The questions used in the questionnaire were mainly the same as in the case of 2003 and/or 2005 questionnaires, which were put together by a broad working group. Estonian and Russian questionnaires were used.

Among 10-18 year old school children the survey was conducted during the school visits. Pupil filled in the questionnaire in their classroom during one lesson. Questioning procedures were carried out by people hired by the National Institute for Health Development after preliminary instruction. In the case of the age group 19-29, the questionnaires were sent to the respondents' home addresses together with an accompanying letter.

The data collection period was from April to June 2007.

¹ The research did not include youth in schools for students with special needs, school drop-outs and 18 year old or younger students acquiring vocational education based on basic education.

Survey Ethics

The questionnaires were anonymous and replying to questions voluntary. In the case of school children the school principals were informed in advance in writing and a written permission was requested. The permission had to be signed by the principal and a representative of the parents. At the time of filling in the questionnaire, there were no teachers in the classroom, filled in questionnaires were put into envelopes and the envelopes sealed. Students of grades IV-VI were not asked questions regarding sexual life. In the case of the age group 19-29, respondents received the questionnaire with an accompanying letter providing an overview of the survey by mail. Representatives of this age group had the possibility of calling a contact person at the National Institute for Health Development for additional information.

The survey has been approved by the Tallinn Ethics Committee of Medical Research.

Response Rate

2,444 questionnaires were received from students (10-18 year old), of which 2,265 were suitable for analysis. The number of school children's questionnaires suitable for analysis constituted 78.2% of the original sample and 174.2% of the desired sample. 5 students refused to fill in the questionnaire (i.e. less than 1% of the original sample) and 436 students were absent from school at the time (i.e. 15.1% of the original sample).

As concerns the age group 19-29, 2,037 respondents returned the questionnaire. 2,026 of the questionnaires were filled in a manner allowing analysis – 37.2% of the questionnaires distributed and 92.1% of the desired sample. The applied response rate² was 38.9%. Questionnaires filled in by persons of wrong age or by wrong persons, as well as inadequately filled questionnaires were excluded from the analysis.

Data Analysis

The data have mainly been analysed by gender, age, nationality, region, type of habitation and in the case of 19-29 year olds, also education level and social status. If no significant differences were found between the respondents based on the mentioned socio-demographic data, the indicators have not been discussed in the report.

In the data analysis the respondents have been divided into three basic age groups: 10-13, 14-18 and 19-29. In the case of significant differences division into five groups has been used as well:

- 10-13 year olds;
- 14-15 year olds;
- 16-18 year olds;
- 19-24 year olds;
- 25-29 year olds.

As concerns associations with nationality, the respondents have been divided into two groups: Estonians and non-Estonians. The group of non-Estonians consists of both Russians and

² Upon calculation of applied response rate, only the persons who were known to be able to reply, i.e. who actually received the questionnaire have been taken into account. Persons who were outside of Estonia, in the military service or in prison were considered as persons unable to return the questionnaire, as well as persons whose address was incorrect or who were unable to fill in the questionnaire because of a health condition. According to the information available, there were 234 such respondents. The information was acquired through feedback provided to the contact person at the National Institute for Health Development by telephone.

representatives of other nationalities, since the share of young people of other nationalities (besides Estonian and Russian) was very small in the sample.

In order to identify education-related associations in the age group 19-29, the respondents have been divided between three levels:

- 1st level – basic education or less; acquisition of secondary education;
- 2nd level – completed secondary or vocational secondary education or acquisition of secondary or vocational secondary education;
- 3rd level – completed higher education or acquisition of higher education.

By type of habitation the respondents have been divided into two groups: city and country (small town, village). In order to identify regional differences the respondents have been divided into three groups:

- Harju County – the largest county in Estonia by population and a larger percentage of people living with HIV and AIDS (PLWHA) as compared to other regions;
- Ida-Viru County – a larger percentage of PLWHA as compared to other regions;
- the rest of Estonia – all other counties in Estonia.

The data of 2007 are also compared to the survey results of 2003 and 2005.

In order to verify the representativeness of data, i.e. in order to assess the compliance of the sample with the population, a separate analysis was conducted in the aforementioned five age groups. The data were checked and weighted by gender, nationality, habitation, and region.

In the case of 10-13 year old pupil, in comparison with the population, the sample proved to be representative in relation to the gender and type of habitation, and the data of 14-15 year old respondents were representative in relation to the gender. In the remaining age groups (16-18, 19-24 and 25-29) the data were not representative in relation to any of the indicators.

For conducting the analysis the survey data was weighed. In the case of 10-13 year olds, upon weighing of the data, the distribution of the population by nationality and region was taken into consideration. In the case of 14-15 year olds, the distribution of the population by nationality, type of habitation and region was considered. In the three older age groups the data was weighed based on the population's gender, nationality, habitation, and region-related data. Data regarding the population were acquired from the home page of the Estonian Statistical Office (www.stat.ee).

Statistical data processing software SPSS10.1 has been used for data analysis. For data description, distribution of characteristics is used, described with the help of frequency tables and the average indicators. Common distributions of several characteristics have been described with the help of cross-tables. χ^2 (chi-square), t-test, ANOVA LSD test, Kruskal-Wallis test and Wilcoxon's Mann-Whitney test have been used for evaluation of differences. A difference is considered significant if the significance level is $\alpha \leq 0.05$. The significance and strength of connections between two identifiers have been checked using the Spearman's rank correlation coefficient ρ .

2. SOCIODEMOGRAPHIC DATA OF THE SAMPLE

The following tables describe the sociodemographic data of the sample of 2007: gender, age, nationality, education, social status, residence by type of habitation and regional division.

Table 1: Gender of respondents by age groups

Age group	male		female		TOTAL		gender missing
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
10-13	395	49.7	399	50.3	794	100	9
14-18	681	49.9	769	50.1	1,450	100	12
incl. 14-15	338	49.3	348	50.7	686		9
incl. 16-18	343	44.9	421	55.1	764		3
19-29	822	41.0	1,185	59.0	2,007	100	19
incl. 19-24	579	42.1	797	57.9	1,376		8
incl. 25-29	243	38.5	388	61.5	631		6
incl. age missing	4		1		5		0
TOTAL	1,898	44.6	2,353	55.4	4,251	100	40

Table 2: Nationality of respondents by age groups

Age group	Estonians		Russians		other nationalities		TOTAL		nationality missing
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
10-13	626	78.0	163	20.3	14	1.7	803	100	
14-18	935	64.0	487	33.3	40	2.7	1,462	100	
incl. 14-15	447	64.3	230	33.1	18	2.6	695		
incl. 16-18	488	63.6	257	33.5	22	2.9	767		
19-29	1,144	56.7	810	40.2	63	3.1	2,017	100	9
incl. 19-24	770	55.8	566	41.0	44	3.2	1,380		4
incl. 25-29	374	58.7	244	38.3	19	3.0	637		
incl. age missing	3		2				5		
TOTAL	2,705	63.2	1,460	34.1	117	2.7	4,282	100	9

In the case of age groups 10-13 and 14-18 the education level of respondents is considered equal since all of the respondents attend school. 10-13 year olds attend grades IV-VI (i.e. are acquiring basic education) and 14-18 year olds grades VII-XII (i.e. are acquiring either basic or secondary education). In the older pupil's age group the respondents acquiring basic education and secondary education were not analysed separately since a strong connection exists here between education and age and the differences in education levels become apparent when data are analysed in more precise age groups: 14-15 and 16-18. In the case of 19-29 year olds the difference is defined based on the highest education acquired.

Table 3: Education level of 19-29 year old respondents by age groups

Education	19-24		25-29		TOTAL		age missing
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	
Level 1	266	19.2	70	11.0	336	16.7	2
incl .completed basic education or less	170	12.3	57	9.0	227	11.3	
incl .acquisition of secondary education	96	6.9	13	2.0	109	5.4	
Level 2	578	41.8	284	44.7	862	42.7	3
incl .completed secondary education	158	11.4	82	12.9	240	11.9	
incl .acquisition of vocational secondary education	117	8.5	7	1.1	124	6.1	
incl .completed vocational secondary education	303	21.9	195	30.7	498	24.7	
Level 3	538	38.9	282	44.3	820	40.6	1
incl .acquisition of higher education	402	29.1	71	11.2	473	23.4	
incl .completed higher education	136	9.8	210	33.1	346	17.2	
TOTAL	1,382	100.0	636	100.0	2,018	100.0	
Education level missing	4		2				6

Social status can be determined in the case of 98% (n=1,990) of the 19-29 year old respondents who participated in the survey.

Table 4: Social status of 19-29 year old respondents by age groups

Social status	19-24		25-29		TOTAL		age missing
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	
employed	532	39.1	426	67.6	958	48.1	5
employed/student, postgraduate	253	18.6	73	11.6	326	16.4	
student, postgraduate	360	26.5	20	3.2	380	19.1	
unemployed	75	5.5	11	1.7	86	4.3	
economically inactive	112	8.2	97	15.4	209	10.5	
other	28	2.1	3	0.5	31	1.6	
TOTAL	1,360	100	630	100	1,990	100	5
status missing	26		8		34		

Table 5: Distribution of respondents by type of habitation by age groups

Age group	city		country		TOTAL		type of habitation missing
	n	%	n	%	n	%	n
10-13	521	65.0	280	35.0	801	100	2
14-18	1,059	72.4	403	27.6	1,462	100	
incl 14-15	529	76.1	166	23.9	695	100	
incl 16-18	530	69.1	237	30.9	767	100	
19-29	1,638	81.4	375	18.6	2,013	100	8
incl 19-24	1,140	82.7	238	17.3	1,378	100	6
incl 25-29	498	78.4	137	21.6	635	100	2
incl age missing	5		1		6		
TOTAL	3,218	75.3	1,058	24.7	4,276	100	10

Table 6: Distribution of respondents by region by age groups

Age group	Harju County		Ida-Viru County		rest of Estonia		TOTAL		region missing
	n	%	n	%	n	%	n	%	n
10-13	288	35.9	213	26.5	302	37.6	803	100	
14-18	609	41.7	388	26.5	465	31.8	1,462	100	
incl 14-15	278	40.0	176	25.3	241	34.7	695	100	
incl 16-18	331	43.2	212	27.6	224	29.2	767	100	
19-29	715	35.6	566	28.2	727	36.2	2,008	100	13
incl 19-24	501	36.4	373	27.1	503	36.5	1,377	100	7
incl 25-29	214	33.9	193	30.6	224	35.5	631	100	6
incl age missing	1		2		2		4		
TOTAL	1,612	37.7	1,167	27.3	1,494	35.0	4,273	100	13

3. WAY OF LIFE

Family and Partner Relations

- 70% of school children (10-18 year old) lived with both parents and one-fourth lived with one parent, most often with mother.
- As compared to 19-24 year olds, the share of 25-29 year old respondents living with a regular partner was larger (43% and 70% respectively) and less of the respondents had casual partners. One-tenth of young adults had had casual partners in the preceding 4 weeks.
- As compared to males, 19-29 year old females live with a regular partner more often and had casual partners less often. Less than 1% of the respondents had relations with both the regular partner and a casual partner within the last four weeks.

Use of Tobacco Products

- The percentage of school children who have tried smoking at least once in their life quickly increased with age. While in the age group 10-13 32% of the respondents had tried smoking at least once, in the age groups 14-15 and 16-18 the respective percentages were 69% and 77%.
- In the four weeks that preceded the survey, 7% of 10-13 year old children had smoked at least once; in other age groups the percentages were as follows: 32% of 14-15 year olds, more than 40% of 16-18 year olds and 19-24 year olds and 37% of the representatives of the oldest age

group. The share of everyday smokers among 14-15 and 16-18 year old school children was 15-19%; in the age group of young adults the share of everyday smokers amounted to about one-third. 1% of 10-13 year old respondents admitted to smoking every day (see Figure 1).

- As compared to 2005, the percentage of smokers has decreased in the age group 25-29 – the share of non-smokers has increased by 8% and the share of everyday smokers decreased by 5%.
- In most age groups, smoking is more popular among non-Estonians than among Estonians. 19-29 year old inhabitants of the Ida-Viru County smoke more often than the youth from the Harju County or the region "rest of Estonia".
- 14-15 year old and 16-18 year old city youth smoke more often than country youth. In the age group 19-24, the situation is contrary.
- The higher is the education level of young adults (19-29), the smaller is the percentage of smokers among them.

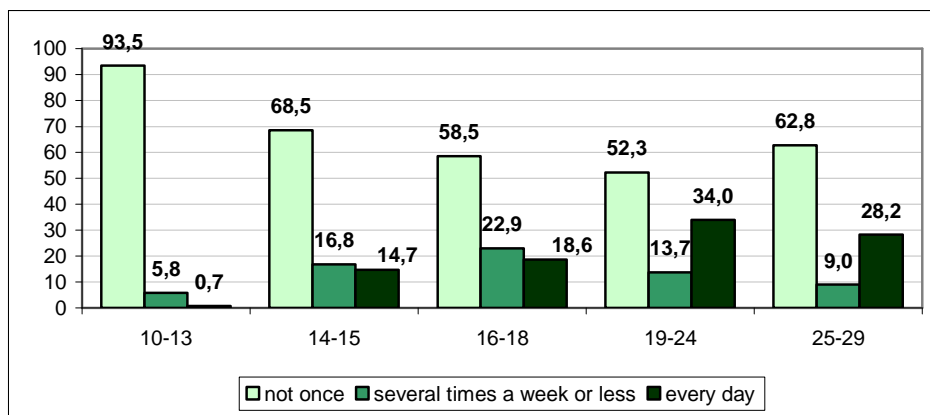


Figure 1: Smoking frequency in the last four weeks by age groups (%)

Consumption of Alcohol

- Among schoolchildren the percentages of respondents who have consumed alcohol at least once in their life and who have been drunk increase with age (see Figure 2).
- In the last four weeks, alcoholic drinks had been consumed by 14% of 10-13 year old, 54% of 14-15 year old, 77% of 16-18 year old and 80% of 19-29 year old respondents. 5% of 10-13 year old, 36% of 14-15 year old, 56% of 16-18 year old, 55% of 19-24 year old and 47% of 25-29 year old respondents had been drunk (see Figure 3).
- As compared to 2003, in 2005 the consumption of alcohol increased in nearly all age groups. In 2007 the respective percentage generally remained on the same level as in 2005. 10-13 year olds are an exception – the number of respondents who had never consumed alcohol has not decreased, but the frequency of alcohol consumption and inebriation has increased.
- As compared to females, alcohol consumption is more common among young males of the youngest age group and 19-29 year olds.
- Young people living in a city use alcohol more often than those living in country side (with the exception of 10-13 year olds).

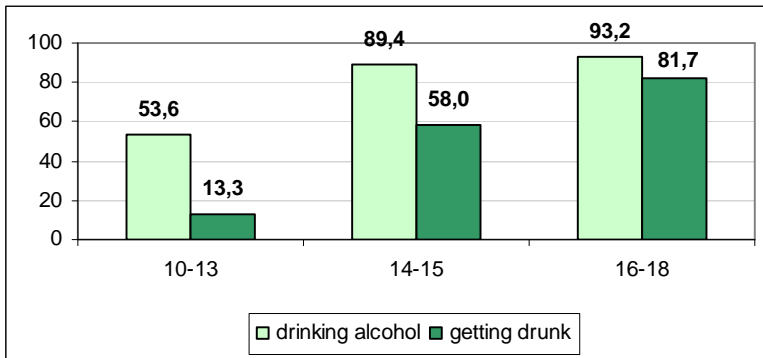


Figure 2: Young people who have used alcohol and been drunk at least once in their life, by age group (%)

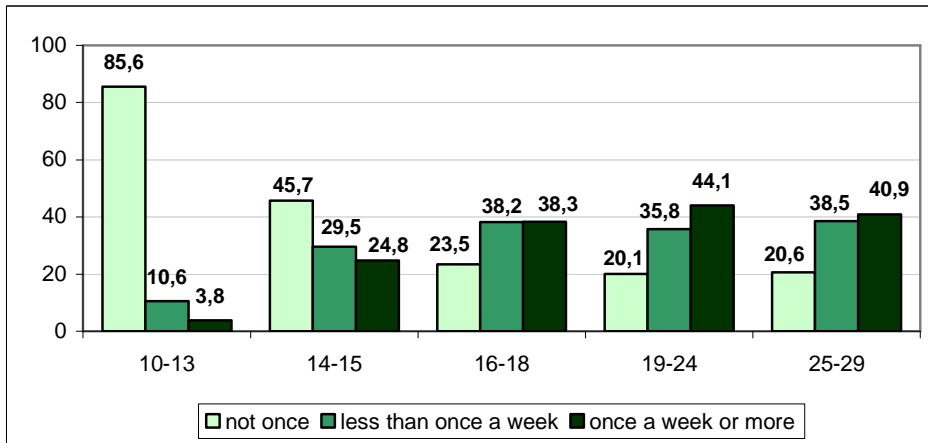


Figure 3: Frequency of alcohol consumption in the last four weeks, by age group (%)

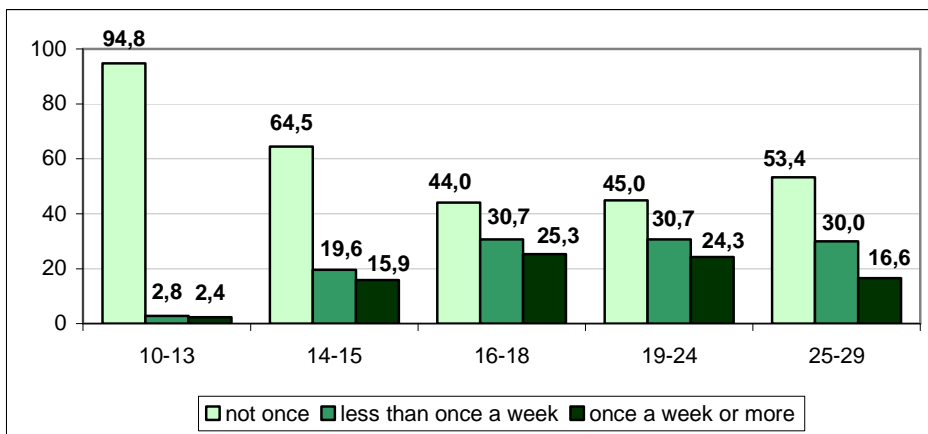


Figure 4: Frequency of getting drunk in the last four weeks, by age group (%)

Consumption of Drugs

- 2% of 10-13 year old schoolchildren had used drugs at least once. 6% had acquaintances that had tried or used drugs and 2% had been offered drugs in the four weeks preceding the survey.
- 18% of 14-15 year old, 30% of 16-18 year old, 42% of 19-24 year old and 36% of 25-29 year old respondents had consumed drugs at least once during their lives (see Figure 5).

- Comparison of the survey years indicates that usage of drugs has increased among 14-15 year old respondents. A difference can be seen in comparison with the year 2003 when 87% respondents from said age group had never used drugs. In 2007 the respective value was 82% (86% in 2005). The share of 14-15 year old respondents who had used drugs several times has increased by 3% – while in the two previous survey years the respective value was 7%, by 2007 it has increased to 10%.
- Approximately one-half of 16-18 and 19-24 year old respondents had acquaintances who had consumed or were consuming drugs intravenously and approximately 60% knew people who had used drugs in some other way. In the age groups 14-15 and 25-29, the share of respondents who had drug-injecting acquaintances was about the same and one-half knew people who had used drugs in some other way.
- 6% of 25-29 year old respondents had been offered drugs in the four weeks preceding the survey. In the rest of the age groups, this value was higher: 15% of 14-15 year old, 19% of 16-18 year old and 11% of 19-24 year old respondents.
- Among city youth the percentage of young people who had had some kind of contact with drugs was higher in all age groups when compared to the young people living in country.
- In the young adults group (19-29) there were less young people who had tried or were using drugs in the region “rest of Estonia“ when compared to Harju County and Ida-Viru County.
- The higher was the education level of 19-29 year old respondents, the smaller was the percentage of young people who had consumed drugs.
- Young people who had acquaintances with experiences of trying or using drugs had also consumed drugs more often themselves. Among school children who used tobacco products and alcohol the percentage of respondents with drugs consumption experience was higher as well.

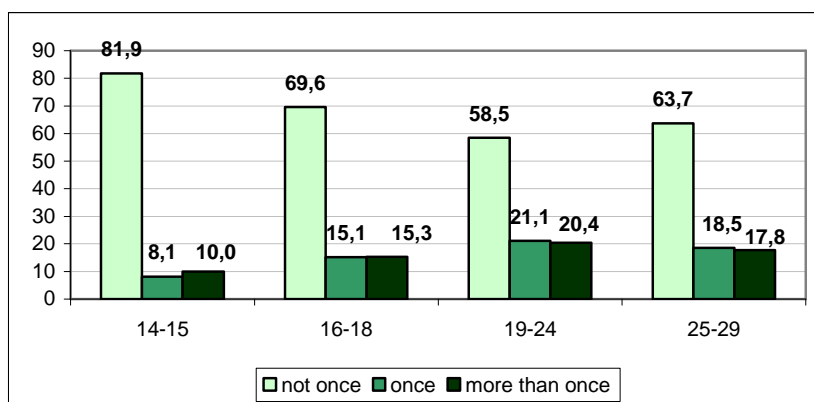


Figure 5: Consumption of drugs, by age group (%)

4. HIV INFECTION RELATED KNOWLEDGE

HIV Transmission

- Similarly to the previous survey years, the percentage of respondents who were aware that it is possible to get HIV by injecting with a syringe that has been used by someone else before and that it is possible to reduce the risk of getting infected by using a condom during every sexual intercourse was very high. Among the older respondents the percentage of young people who answered to the respective question correctly amounted to at least 90% and among 10-13 year olds to approximately two-thirds. In all survey years the share of respondents who were aware

of that mosquitoes cannot transmit HIV infection has been the lowest (less than one-half) (see Table 7).

- 6% of 10-13 year old, 22% of 14-15 year old, 32% of 16-19 year old and 36% of 19-29 year old respondents gave correct answers to all five questions, i.e. had correct knowledge about HIV transmission.
- The knowledge level was influenced the most by the mosquito bite question. If this question is left out from the indicator, its value rises by more than twice. Four questions were answered correctly by 18% of 10-13 year old schoolchildren, 58% of 14-15 year olds, 72% of 16-18 year old school children and 80% of the representatives of older age groups.
- As compared to 2005, the knowledge level has decreased by 8% among 16-18 year old respondents and increased by 6% among 25-29 year old respondents.
- In most of the age groups, the knowledge level of non-Estonians was lower than that of Estonians (with the exception of age groups 10-13 and 19-24).
- Among 19-29 year old respondents with higher education level and involved in studying the percentage of young people having correct knowledge was higher than among respondents who had lower education level and worked/were unemployed.

Table 7: Respondents who answered correctly to the questions on HIV transmission, by age group, 2005-2007 (%)*

Question	10-13		14-15		16-18		19-29	
	2005	2007	2005	2007	2005	2007	2005	2007
1. Can the risk of HIV transmission be reduced by using condom during every sexual intercourse? (<i>affirmative answer</i>)	64.4	61.8	88.9	89.7	94.7	94.9	95.4	95.1
2. Can the risk of HIV transmission be reduced by having sex with only one uninfected partner who is faithful to you? (<i>affirmative answer</i>)	41.2	38.7	74.2	79.1	88.1	85.5	92.4	92.2
3. Can a person get HIV if she/he injects with a syringe that was previously used by someone else? (<i>affirmative answer</i>)	87.9	79.4	95.4	94.6	95.8	96.5	98.6	98.4
4. Can a person get HIV from mosquito bite? (<i>negatory answer</i>)	31.8	38.3	39.5	36.3	50.7	42.6	40.4	41.8
5. Can a healthy-looking person have HIV? (<i>affirmative answer</i>)	55.6	54.6	74.1	79.0	88.9	88.2	88.1	90.1
Answered correctly to all five questions	7.1	6.2	22.8	21.9	40.4	32.2	34.1	35.7

* A comparison with the year 2003 has not been provided since the wording of two questions was somewhat changed in 2005.

Mother-to-Child Transmission

- More than one-half of 14-18 year old and 19-29 year old respondents did not agree with the statement that nothing can be done in order to reduce the risk of mother-to-child transmission (MTCT) of HIV. 10-13 year olds were not asked questions associated with this subject.
- 14-18 year old and 19-29 year old young people were most often aware that the risk of MTCT can be reduced by abstaining from breastfeeding – more than one-half of the respondents answered accordingly. The fact that caesarean section can be used as a measure against HIV transmission is known the least (see Table 8).

- Correct answers related to all three methods were provided by 6% of 14-18 year old, 14% of 19-24 year old and 17% of 25-29 year old respondents. That was seen as the amount of youth having correct knowledge on reducing the risk of MTCT.
- As compared to 2005, the percentage of young people having correct knowledge has increased in all age groups.
- As compared to males, in the young adults' age group, females had better knowledge regarding reducing the risk of MTCT.
- As compared to Estonians, young people of other nationalities had better knowledge in the age groups 16-18 and 19-24. In the same age groups, among the youth living in the Ida-Viru County there were more respondents with correct knowledge as compared to other regions of Estonia.
- The level of knowledge was better among economically inactive 19-29 year old respondents (including those on pregnancy leave and parental leave).

Table 8: Correct knowledge on reducing the risk of mother-to-child transmission of HIV, by age group, 2003-2007 (%)

Statement	14-18			19-24			25-29		
	2003	2005	2007	2003	2005	2007	2003	2005	2007
timely taking of medicines (affirmative answer)	35.6	30.1	42.4	32.1	34.6	44.5	30.2	34.2	44.2
giving birth by caesarean section (affirmative answer)	15.5	15.9	19.3	22.9	23.4	29.1	27.3	25.9	35.0
abstaining from breastfeeding (affirmative answer)	36.1	40.2	56.2	33.1	37.1	56.8	31.8	32.0	50.6
Answered all three statements correctly	6.0	3.9	6.4	8.0	9.4	13.7	9.0	9.4	17.1

Methods for Avoiding STIs

- Young people were best aware of that use of condoms can protect from contracting STIs – among 10-13 year olds approximately two-thirds knew this; in the older age groups nearly 100% of the respondents gave the correct answer.
- 10-13 year old respondents were the least aware of that oral contraceptives offer no protection from sexually transmitted infections. Among 14-18 year olds, the number of correct answers was smallest in the case of a question regarding intrauterine spiral. Among young adults the knowledge regarding different methods was more uniform (see Tables 9 and 10).
- 22% of 10-13 year old, 17% of 14-15 year old, 41% of 16-18 year old, 69% of 19-24 year old, and 79% of 25-29 year old respondents had correct knowledge regarding the methods for protection from sexually transmitted infections (i.e. answered all questions correctly). Questionnaires for 10-13 year old respondents asked about three and for older respondents about four methods.
- As compared to 2005, the knowledge level has not changed.
- Female respondents were better informed regarding the methods for STI prevention than males.
- Among Estonians the percentage of respondents having correct knowledge was higher as compared to representatives of other nationalities (except in the age group 14-15).
- As compared to the two lower education groups, 19-29 year old respondents with higher education had better knowledge regarding STI prevention. As concerns status groups, the knowledge level of 19-29 year old unemployed respondents was significantly lower.

- Among young people who had correct knowledge regarding HIV transmission, the percentage of respondents who were aware of the methods for avoiding STIs and reducing the risk of MTCT was also higher. Such relation, however, cannot be identified in the case of 14-15 year olds (see Figures 6 and 7).

Table 9: 10-13 year old respondents who answered correctly to questions regarding methods for avoiding STIs, 2003-2007 (%)

Method	2003	2005	2007
condom (<i>affirmative answer</i>)	71.7	74.7	69.4
abstaining from sex (<i>affirmative answer</i>)	45.7	57.9	56.3
oral contraceptives (<i>negatory answer</i>)	31.9	38.9	34.9
Correct answers regarding all three methods	17.0	24.1	21.7

Table 10: 14-29 year old respondents who answered correctly to questions regarding methods for avoiding STIs, 2003-2007 (%)

Method	14-15			16-18			19-24			25-29		
	2003	2005	2007	2003	2005	2007	2003	2005	2007	2003	2005	2007
condom (<i>affirmative answer</i>)	89.1	95.2	98.0	96.1	98.2	97.5	97.4	98.2	98.6	97.4	98.2	98.9
oral contraceptives (<i>negatory answer</i>)	50.1	67.8	65.6	71.0	86.8	85.4	86.2	91.8	91.5	87.7	93.6	93.4
coitus interruptus (<i>negatory answer</i>)	37.9	36.5	43.3	59.4	60.1	64.9	79.4	82.2	80.6	86.4	90.6	90.0
intrauterine spiral (<i>negatory answer</i>)	26.8	32.4	29.3	51.1	62.7	56.2	76.6	81.7	79.5	86.5	91.1	89.3
Correct answers regarding all four methods	13.1	16.4	16.9	34.7	44.0	40.8	62.6	69.3	68.6	71.3	80.2	78.5

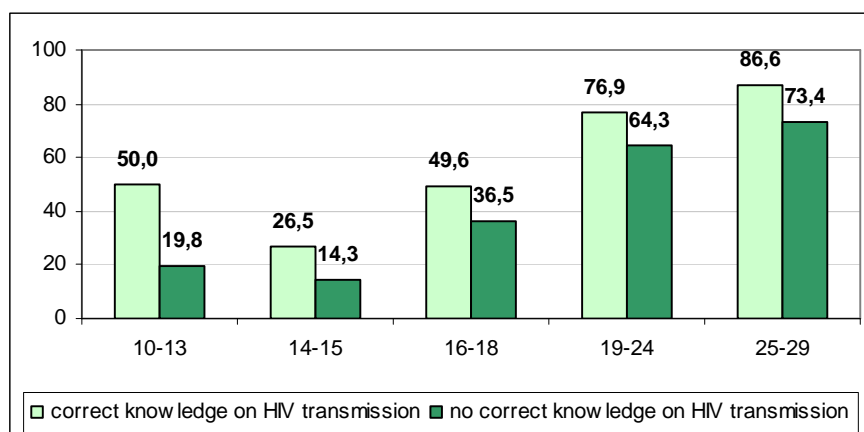


Figure 6: Correct knowledge on avoiding STIs in connection with knowledge on HIV transmission, by age group (%)

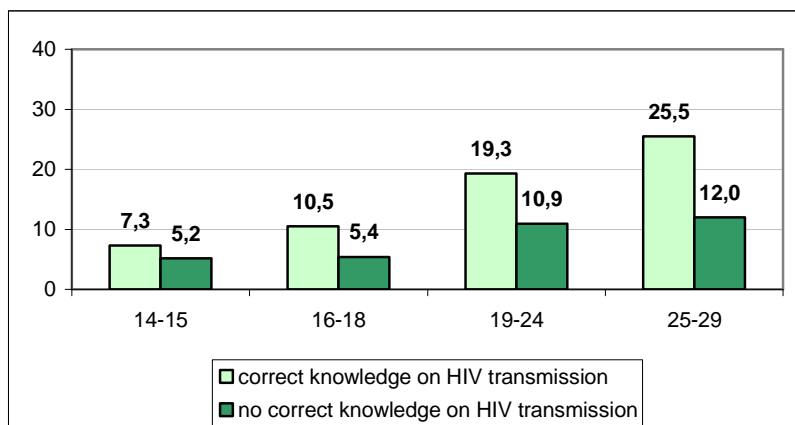


Figure 7: Correct knowledge on reduction of the risk of MTCT in connection with knowledge on HIV transmission, by age group (%)

Subjects Discussed at School

- Similarly to the previous survey years the subjects discussed at school most often were puberty and harmfulness of drugs. In the opinion of 10-13 year old respondents, the subjects discussed less included the need to use condoms, STIs and HIV/AIDS. 14-18 year old respondents were of opinion that STIs had not been discussed thoroughly (see Figures 8 and 9).
- As compared to 2005, in the age group 10-13 the number of respondents who stated that the subjects suggested in the questionnaire had been discussed thoroughly at school decreased. In the age group 14-18, as compared to the previous survey year, there were more young people who were of opinion that puberty and condom use had been discussed thoroughly. However, the percentage of young people in that age group who were of such opinion has decreased in case of the following subjects: HIV and AIDS, STIs, harmfulness of drugs.
- In the case of older school children (age group 14-18) several subjects had been discussed more thoroughly with country youth as compared to city youth – for example relationships between men and women, sexually transmitted infections, need for condom use.
- When comparing the data by nationality groups, the most evident difference is that 10-13 year old non-Estonians state that nearly all subjects suggested in the questionnaire have been discussed in school more thoroughly than in the opinion of Estonians.
- 10-13 year old children from Harju County have expressed the opinion that the subjects have been discussed more thoroughly than schoolchildren living elsewhere in Estonia.
- Among 14-18 year old pupil who said that HIV/AIDS, STIs and condom use had been discussed thoroughly at school, the percentage of respondents who had correct knowledge on HIV transmission and methods for avoiding STIs was also larger (see Figures 10 and 11).

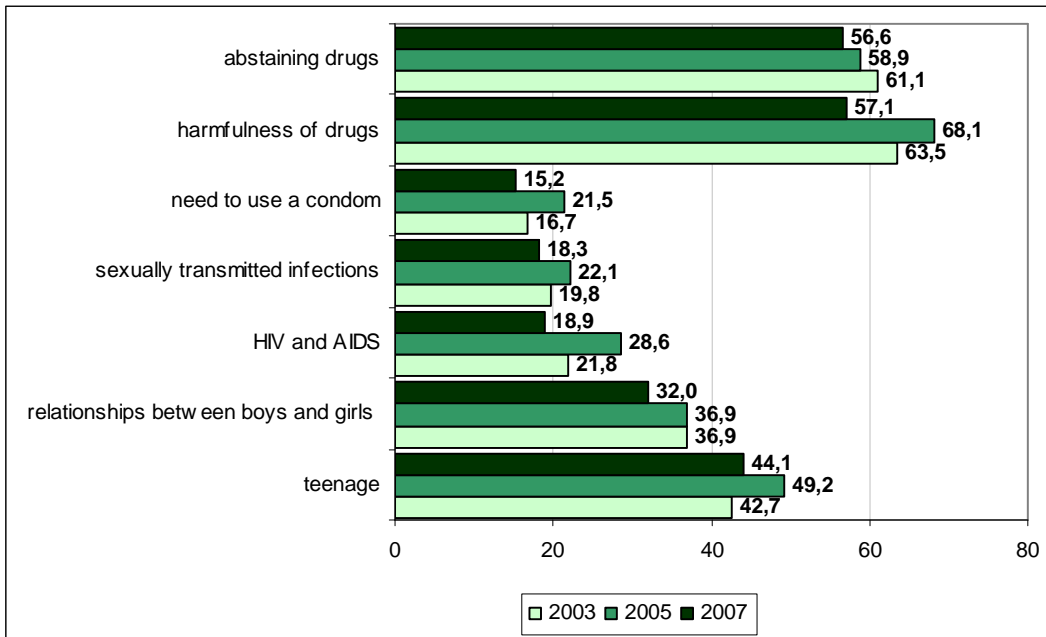


Figure 8: Subjects discussed thoroughly at school in the opinion of 10-13 year old respondents, 2003-2005 (%)

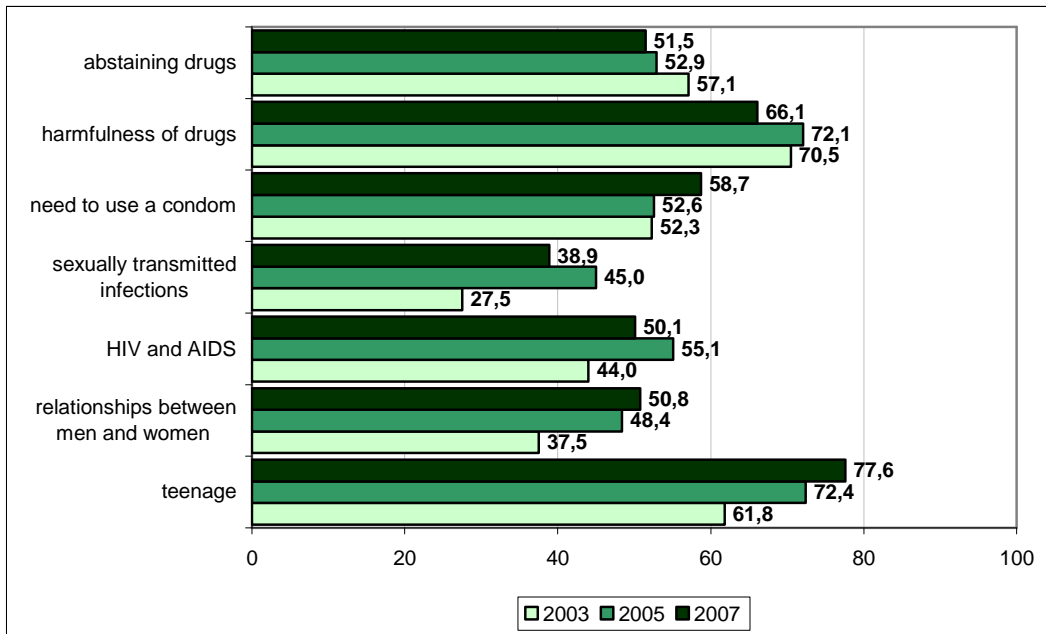


Figure 9: Subjects discussed thoroughly at school in the opinion of 14-18 year old respondents, 2003-2007 (%)

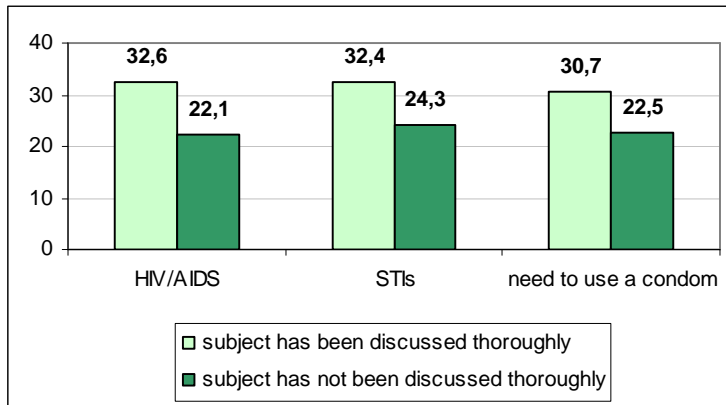


Figure 10: Correct knowledge on HIV transmission among 14-18 year old respondents in connection with subjects discussed at school (%)

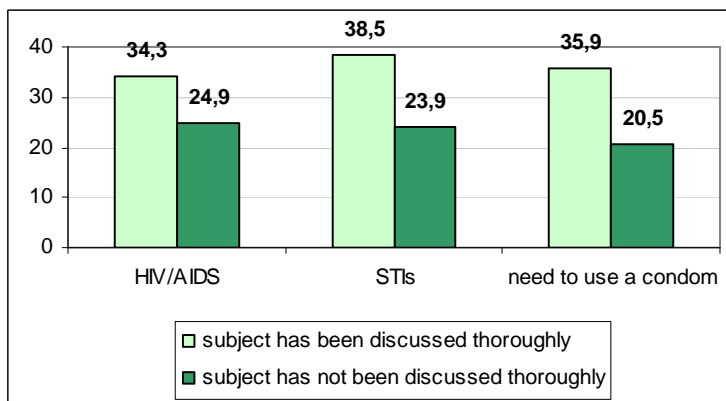


Figure 11: Correct knowledge of the methods for avoiding STIs among 14-18 year old respondents, in connection with subjects discussed at school (%)

Need for Information

- In their own opinion young people need more information on HIV/AIDS treatment, avoiding STI-s, HIV transmission and possibilities for HIV-testing.
- Schoolchildren were less interested in subjects associated with puberty and relationships between men and women. Among young adults there were fewer respondents who require additional information regarding harmfulness of drugs (see Table 11).
- In the pupil's group (10-18 year old) males were more interested in puberty-related information than females.
- Youth of other nationalities have much greater need for information regarding several subjects than Estonians.
- As compared to city youth, 10-13 year old respondents living in the country considered the need for HIV/AIDS-related information very substantial. In the age group 14-18 the situation is contrary: in the case of several subjects city youth had greater need for information.
- Among 16-18 year old youth living in the Harju County and Ida-Viru County there were much more respondents who needed additional information as compared to the rest of Estonia.

Table 11: Young people who consider their need for information on suggested subjects very substantial, by age group (%)

<i>Subject</i>	10-13	14-15	16-18	19-24	25-29
puberty and puberty-related changes	15.3	8.5*	4.7	-	-
relationships between men and women	15.0	12.0	12.1	-	-
proper use of condom	13.4	15.4	10.1	-	-
how to ask your partner to use a condom	11.5	16.2	9.9	-	-
HIV and AIDS	30.3	22.5	15.2	13.2	14.2
HIV transmission	35.8	31.1	22.9	26.7	24.1
avoiding STIs	34.6	36.0	27.4	23.2	19.2
possibilities for HIV-testing	24.0	30.0	27.2	31.8	22.7
treatment of HIV and AIDS	39.8	42.7	32.5	35.0	30.2
harmfulness of drugs	24.8	15.8	10.6	11.7	9.2

* The statistically significant differences ($\alpha \leq 0.05$) within the two largest age groups (14-18 and 19-29) are marked in bold.

5. UNDERSTANDINGS AND BELIEFS REGARDING HIV INFECTION

Misconceptions about HIV Transmission

- The most common misconception among the youth was that it is possible to get HIV by eating from the same tableware with an HIV-infected person. One-half of 10-13 year old, one-fifth of 14-15 year old and 15% of 16-18 and 19-29 year old respondents were of such opinion. A substantial percentage of 10-13 year old children also considered it possible to get HIV when swimming in the same pool with an infected person. In the rest of the age groups another common misconception was getting HIV through the use of a common toilet.
- The least common misconception is contracting HIV by embracing. One-third of 10-13 year old respondents and less than one-tenth of older respondents considered it possible (see Table 12).
- The percentage of youth without misconceptions (i.e. who gave correct answers to all four statements) increased among school children with age. In the age groups 16-18 and 19-24 the share of young people without misconceptions was equal; the best results were achieved in the age group 25-29 (see Figure 12).
- As compared to 2005, the share of youth without misconceptions has not changed.
- In several age groups (14-15, 19-24, 25-29) there were more Estonians with accurate understandings in comparison with youth of other nationalities.
- There were significantly more young people who knew that it is impossible to get HIV through ordinary daily contacts among 19-29 year old respondents with higher education or acquiring a higher education in comparison with other education levels.
- As compared to other status groups, the share of young unemployed respondents without misconceptions was significantly smaller. The status group division concerns 19-29 year old respondents.
- Among young people who had correct knowledge on HIV transmission, the percentage of those who were aware that HIV does not transmit through every-day contacts was significantly higher.

Table 12: Respondents agreeing with the possibility of getting HIV through ordinary daily contacts, by age group, 2003-2007 (%)

Statement	10-13			14-15			16-18			19-29		
	2003	2005	2007	2003	2005	2007	2003	2005	2007	2003	2005	2007
swimming in a pool together	32.1	36.8	41.9	13.4	17.6	14.0	9.0	6.7	10.8	6.2	11.8	12.4
embracing	24.1	28.7	34.9	8.1	13.2	9.0	4.8	5.0	7.2	2.3	9.1	8.5
eating from the same tableware	45.1	46.3	49.3	28.6	27.6	21.7	21.0	14.8	15.0	12.5	16.0	15.1
use of common toilet	27.3	34.6	34.5	19.0	23.8	23.0	21.3	15.5	15.1	10.9	15.5	15.5

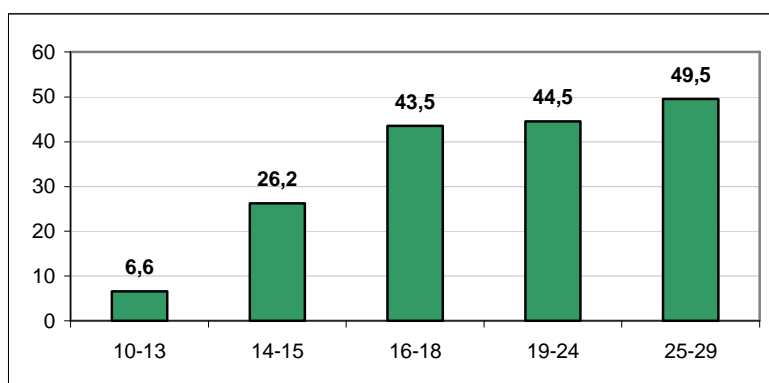


Figure 12: Respondents without misconceptions regarding HIV transmission through every-day contacts, by age group (%)

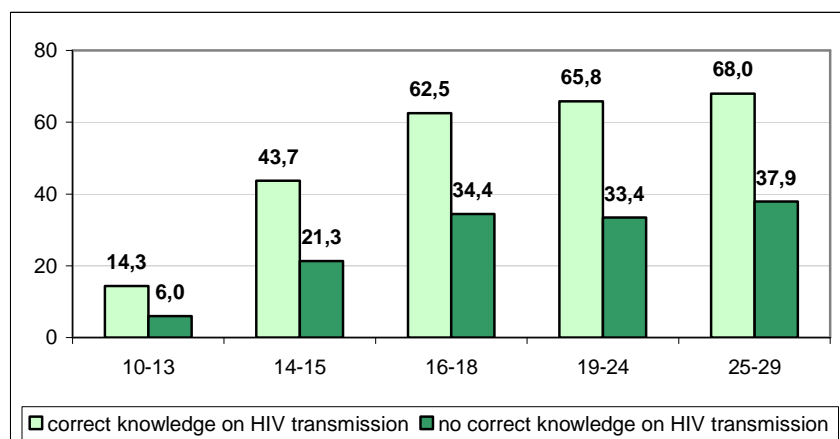


Figure 13: Respondents without misconceptions regarding HIV transmission through ever-day contacts, in connection with knowledge on HIV transmission, by age group (%)

Attitude towards People Living with HIV and AIDS

- The share of young people who would not stop to communicate with an acquaintance or friend who has HIV was the greatest. More than one-half of 10-13 year old children, 82% of 14-15 year olds and 90% of the respondents in older age groups claimed so.
- The smallest was the percentage of youth who agreed that an HIV infected teacher could continue to work at school – one-fourth of 10-13 year old, one-half of 14-15 year old and approximately 60% of older respondents (see Table 13).
- 7% of 10-13 year old, 27% of 14-15 year old, 40% of 16-18 year old, 39% of 19-24 year old and 44% of 25-29 year old people provided tolerant replies to all five statements concerning the attitude towards PLWHA.
- As compared to 2005, the percentage of young people with tolerant attitude towards PLWHA has increased among 25-29 year olds. There is a 6% positive change.
- Females tend to be more tolerant towards PLWHA than males (with the exception of 25-29 year olds).
- As compared to young people of other nationalities, the percentage of tolerant respondents is higher among Estonians. In the older age groups (16-18, 19-24, 25-29) there were less respondents with tolerant attitude in Ida-Viru County than in the other regions.
- 19-29 year old people with higher education were much more tolerant towards PLWHA than those belonging to the two lower education groups. Based on social status, 19-29 year olds acquiring an education (students) formed the most tolerant group.
- Young people who had correct knowledge on HIV transmission and no misconceptions on transmission of HIV through ordinary daily contacts were also more tolerant towards PLWHA (see Figure 14).

Table 13: Respondents who have tolerant attitudes towards PLWHA, by age group (%)

<i>Statement</i>	<i>10-13</i>	<i>14-15</i>	<i>16-18</i>	<i>19-29</i>
I would agree to dine at the same table with an HIV-infected person (<i>affirmative answer</i>)	22.5	59.2	69.5	75.4
I would agree to work/study in the same collective/class with an HIV-infected person (<i>affirmative answer</i>)	35.2	66.7	73.8	71.9
a teacher who is infected with HIV should be allowed to continue to teach at school (<i>affirmative answer</i>)	22.8	49.6	60.5	59.4
I would stop purchasing foodstuffs from a store where salesperson is HIV-infected (<i>negatory answer</i>)	30.4	55.1	66.3	62.9
I would stop communicating with my acquaintance or friend if he/she contracted HIV (<i>negatory answer</i>)	52.7	82.1	90.1	90.1
Tolerant answers to all five statements	6.7	27.4	40.0	40.2

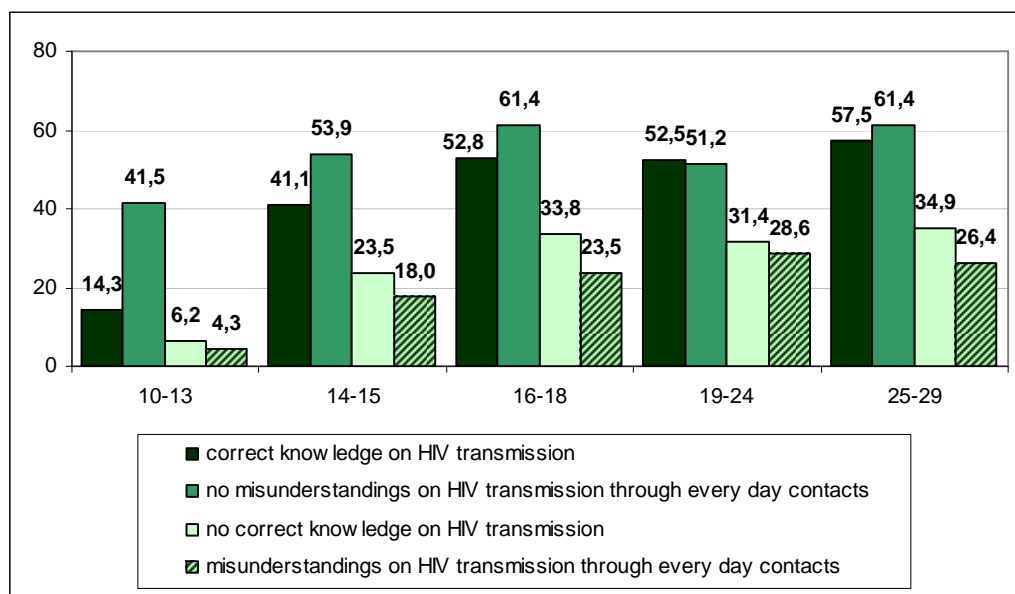


Figure 14: Tolerance level in connection with knowledge on HIV transmission and understandings on HIV transmission through every-day contacts, by age group (%)

Beliefs Associated with HIV and AIDS

- Young people most often agreed with the statement that PLWHA can only blame themselves for that. 41% of 10-13 year old respondents and more than one-half of the representatives of other age groups were of this opinion.
- Less young people believed that HIV and AIDS is a problem that concerns homosexuals only. About one-fifth of 10-13 year old respondents and a few per cents of respondents belonging to older age groups agreed with this statement.
- In most of the age groups the percentages of young people sharing certain HIV/AIDS-related beliefs have decreased (except 16-18 year olds) when compared to 2005 (see Table 14).
- In general HIV and AIDS-related beliefs were more common among males than females.
- In most cases young people of other nationalities tended to agree more often with statements regarding HIV/AIDS-related beliefs than Estonians.

Table 14: Respondents agreeing with HIV and AIDS-related beliefs, by age group, 2003-2007 (%)

Statement	10-13			14-15			16-18			19-29		
	2003	2005	2007	2003	2005	2007	2003	2005	2007	2003	2005	2007
HIV-infected people can only blame themselves for that	53.7	46.5	41.1	58.0	53.3	53.3	53.7	51.9	57.4	55.3	51.7	50.9
when a person contracts HIV, his/her life no longer has meaning	30.3	36.3	29.4	24.8	28.0	22.7	20.7	20.9	22.8	20.5	22.5	18.3
HIV/AIDS is a problem of homosexuals only	-	14.8	16.1	-	5.2	3.2	-	2.6	1.2	-	2.0	1.7
HIV/AIDS is a problem of drug users only	-	21.6	18.8	-	15.9	11.3	-	8.9	7.9	-	6.2	6.4

6. SEXUAL RELATIONS AND CONDOM USE

10-13 year olds were not asked questions associated with sexual life.

Attitude towards Condom Use

- In connection with the two statements given a large number of youth expressed their positive attitude towards condom use. Approximately 90% of 16-18 and 19-29 year old respondents claimed to be prepared to discuss condom use with their partner and were of opinion that they should use a condom upon casual relations. In the age group 14-15 approximately three out of four respondents answered accordingly.

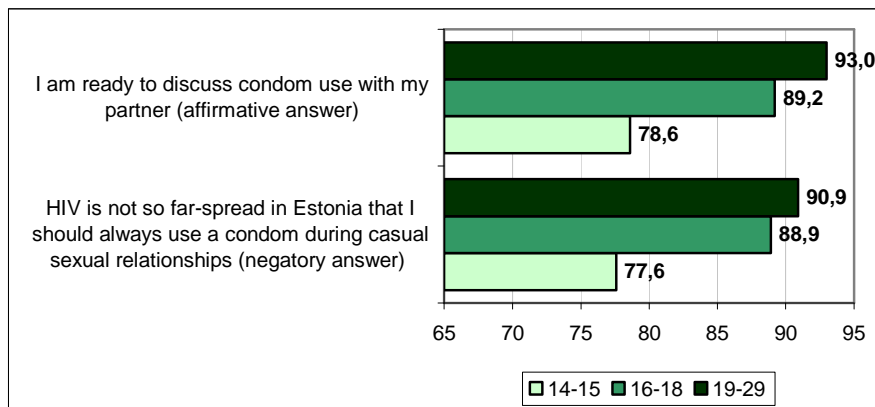


Figure 15: Respondents having positive attitude towards condom use, by age group (%)

Sexual Partners

- One-fifth of 14-15 year old and approximately one-half of 16-18 year old school children have had sexual intercourse. In the two older age groups the overwhelming majority of respondents state so (see Figure 16).
- The average age at the time of the first sexual intercourse was 13.7 in the age group 14-15, 15.3 in the age group 16-18, 16.8 in the age group 19-24 and 17.4 in the age group 25-29.
- The average number of partners of young people who had experienced sexual intercourse in the last 12 months was 2.05 in the youngest age group, 1.81 in the age group 16-18, 1.79 in the age group 19-24, and 1.56 in the oldest group.
- 56% of 14-15 year old people, 36% of 16-18 year old, 32% of 19-24 year old and 21% of 25-29 year old respondents with sexual intercourse experience had had sex with more than one partner during the last 12 months (see Figure 17).
- In the 12 months, approximately 40% of school children had intercourse with a casual partner. More than one-fourth of 19-24 year old and one-fifth of 25-29 year old respondents had been engaged in such relations (see Figure 18).
- 5% of 14-18 year old respondents and 1% of 19-29 year olds had sexual intercourse with a partner of the same sex during the last 12 months.
- 3% of 19-29 year old people had sexual intercourse with a partner who was paid for sex in money or some other way in the last 12 months (school children were not asked this question).
- As compared to 2005, the above indicators on sexual partners have not changed.
- There were more female respondents who had had sexual intercourse as compared to males in the age groups 16-18 and 19-24. In the case of young adults (19-29) men had more sexual partners than women. In all age groups female respondents had less casual relations than males. The overwhelming majority of 19-29 year old respondents who had paid for sex in the preceding 12 months were men.

- In the age groups 16-18 and 19-24 the percentage of city youth who had experienced sexual intercourse was higher as compared to country youth. Two-thirds of 19-29 year old respondents who had paid for sex in the last year lived in a city.

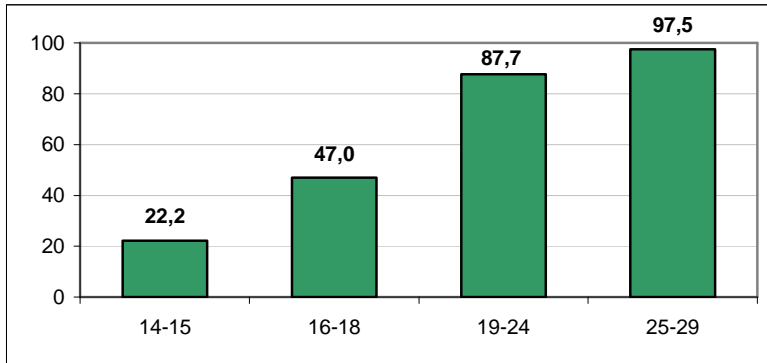


Figure 16: Respondents who had had sexual intercourse, by age group (%)

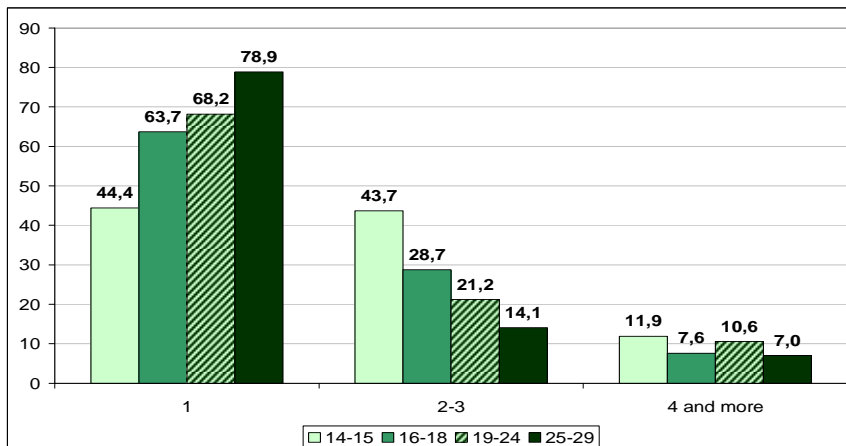


Figure 17: Number of sexual partners in the last twelve months, by age group (% of those who have had sexual intercourse)

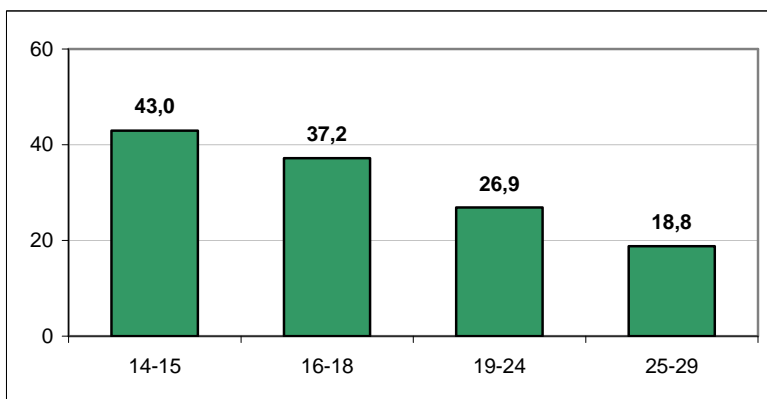


Figure 18: Respondents who had casual partners in the last 12 months, by age group (% of those who have had sexual intercourse)

Condom Use

- Among school children there were more respondents who had used a condom upon their first sexual intercourse than among young adults. Two-thirds of 14-15 year old and 75% of 16-18 year old respondents used a condom. More than one-half of the respondents in the age group 19-24 and more than one-third of the people in the age group 25-29 answered accordingly (see Figure 19).
- In the age group 19-29 young people with higher education prevailed among respondents who had used a condom upon their first intercourse.
- 56% of 14-15 year old, 58% of 16-18 year old, 45% of 19-24 year old and 39% of 25-29 year old youth who had had sexual intercourse with a casual partner used a condom during every intercourse in the last 12 months.
- 71% of 14-15 year old, 77% of 16-18 year old, 68% of 19-24 year old and 64% of 25-29 year old respondents used a condom during the last sexual intercourse with a casual partner.
- As compared to 2005, the above indicators have not changed.
- 81% of 19-29 year old respondents who had paid for sex had always used a condom in the last 12 months and 99% used a condom during the last intercourse. When compared to 2005, this indicator has improved significantly.
- In the age group 19-29 the frequency of condom use in the preceding 12 months was also inquired in connection with different types of sexual intercourse. A condom is least often used in the case of oral intercourse – 83% of the respondents who had had oral intercourse had never used a condom in the preceding year. 63% of the youth in this age group had oral intercourse.
- A condom was most often used in the case of vaginal intercourse – 31% of the 19-29 year old respondents who had vaginal intercourse had never used a condom in the preceding year. 94% of the respondents experienced vaginal intercourse during last 12 months.
- 61% of 19-29 year old people who had anal sex in the last 12 months had never used a condom. 24% of the respondents had anal intercourse during that period (see Figure 20).
- As compared to 2005, in the age group 19-29, the number of respondents who had never used a condom upon engaging in different types of sexual intercourse has decreased. In the case of this analysis, no distinctions were made between casual and regular partners.

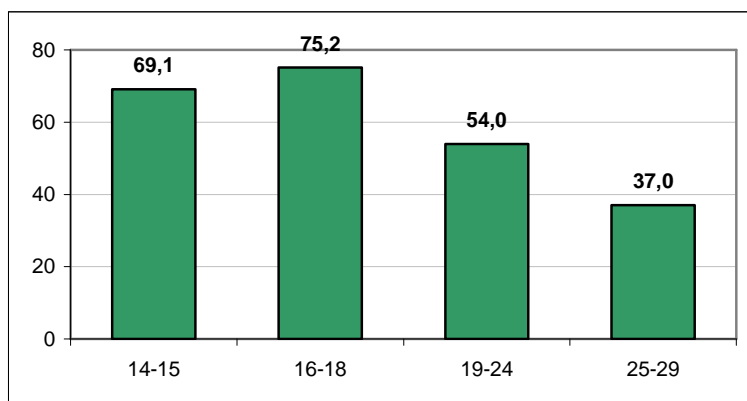


Figure 19: Respondents who used a condom during their first sexual intercourse, by age group (% of those who have had sexual intercourse)

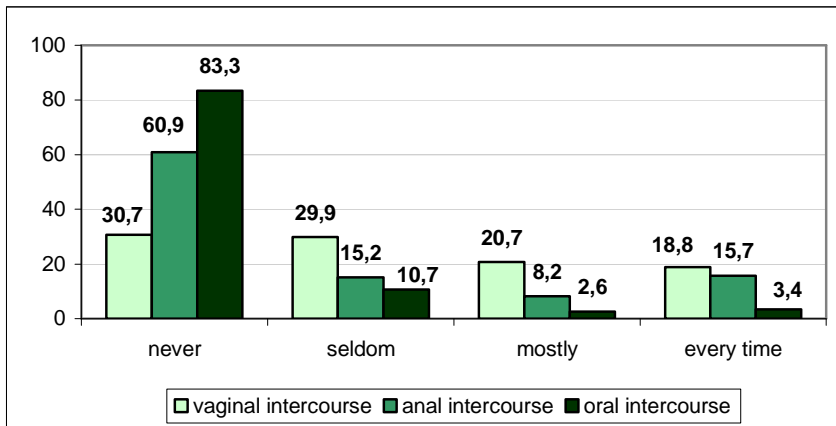


Figure 20: Frequency of condom use among 19-29 year old respondents in the preceding 12 months in connection with different types of sexual intercourse (% of respondents who had respective intercourse)

Carrying Condoms

- 18% of 10-13 year old children had purchased condoms. This was mainly done for fun or out of curiosity. One-tenth claimed to have purchased condoms for use in connection with sexual intercourse.
- The percentage of respondents who do not carry condoms with them increase with age. One-fifth of the school children, 41% of 19-24 year old and more than one-half of 25-29 year old respondents never carry condoms with them. The overwhelming majority of young adults who did not carry condoms had a regular partner.
- 19-29 year old respondents who always carried condoms with them in the 12 months used them more often when having sex with a casual partner (see Figure 21).

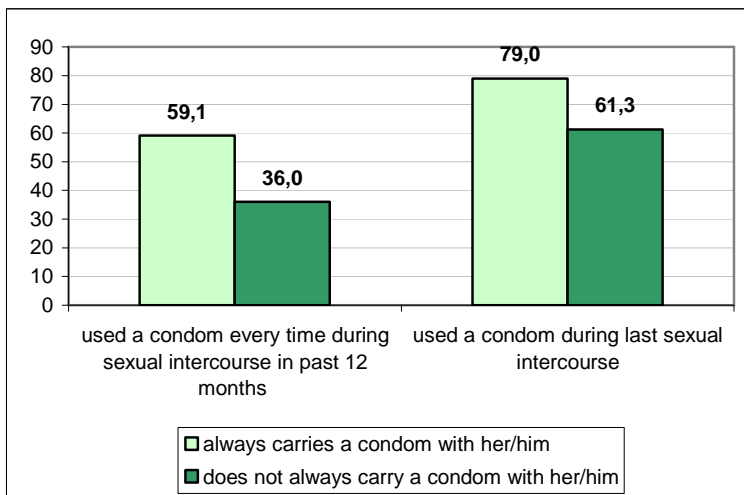


Figure 21: Relation between condom use and condom carrying (% of those who had sexual intercourse with a casual partner)

Reasons for Not Using a Condom

- The reason for not using a condom referred to most often was existence of a regular partner and mutual trust – 86% of 25-29 year old, 3/4 of 19-24 year old, two-thirds of 16-18 year old, and more than one third of 14-15 year old respondents. The reasons mentioned more often

also were: condom reduces the feeling of pleasure, my partner does not have HIV or STIs (see Table 15).

- Since reasons for not using a condom can also be related to consumption of alcohol before sexual intercourse, 14-18 and 19-29 year old respondents were asked whether they had consumed alcohol (e.g. beer, wine, vodka) before the last intercourse. Approximately one-half of school children, 37% of 19-24 year old and 30% of 25-29 year old respondents had consumed alcohol before the latest sexual intercourse. In the respondents' opinion they consumed a little alcohol or did it moderately.

Table 15: Reasons for not using a condom during the last sexual intercourse, by age group (% of those who had sexual intercourse)

<i>Reason</i>	<i>14-18</i>	<i>19-24</i>	<i>25-29</i>
I have a regular partner and we trust each other	57.4	78.4	86.3
my partner was unwilling to use a condom	7.8	12.4	9.8
condoms reduce the feeling of pleasure	33.4	31.2	25.4
putting a condom on during the sexual intercourse is troublesome	9.7	12.2	10.1
I do not believe that my partner has HIV or some other sexually transmitted disease	31.6	31.7	30.6
I am ashamed to use a condom	0.3	0.4	0.1
we use other contraceptives	9.0	9.4	3.1
I am ashamed to buy a condom	3.8	0.1	-
my friends and acquaintances do not use condoms as well	0.4	0.5	-
they never use condoms in films	1.5	-	-
wish to become pregnant	-	2.2	3.9
other reasons	12.6	5.0	4.4

7. TESTING FOR HIV

Suspicion of STIs

- 8% of 14-18 year old and 12% of 19-29 year old youth who had sexual intercourse had suspected contraction of some kind of a STI in the last twelve months. The value of this indicator was the same in 2003. In 2005, this question was not asked.
- In the case of suspicion, the respondents most often turned to a specialised doctor (like gynaecologist, urologist). However, 42% of 14-18 year old and one-fourth of 19-29 year old respondents who suspected contraction of STI did nothing about it (see Figure 22).
- Among 19-29 year old females there were significantly less respondents who had done nothing in the case of suspected STI contraction than among males.

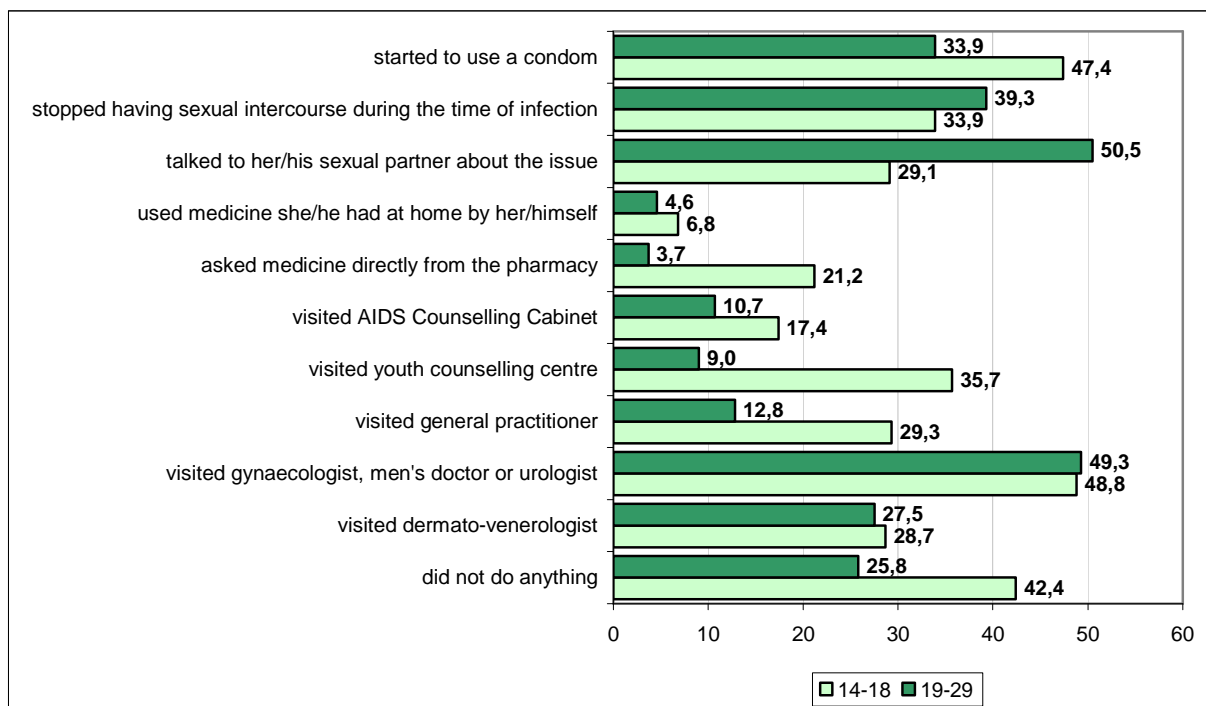


Figure 22: Behaviour in the case of suspected STI contraction, by age group (% of those who had such suspicions)

Possibilities for HIV-testing

- In Estonia it is possible to test for HIV at AIDS Counselling Cabinets, youth counselling centres, specialised doctors and general practitioners. Respondents were best aware of that it is possible to test for HIV at specialised doctors (like dermato-venereologist or gynaecologist) and AIDS Counselling Cabinets. Approximately 3/4 of 14-18 and 19-29 year old respondents were aware of the possibility of testing for HIV at the specialised doctor and more than one-half knew about AIDS Counselling Cabinets. More than 40% of 10-13 year old children checked AIDS Counselling Cabinets (see Table 16).
- The percentage of school children (10-13 and 14-18 year old) informed of AIDS Counselling Cabinets as a place for HIV-testing has decreased compared to 2005. In the age group 19-29 the situation is contrary. As concerns Youth Counselling Centres, the awareness has improved in the age groups 14-18 and 19-29. 19-29 year old respondents were less aware of the possibility for HIV testing at specialised doctors.
- In general females know better than males where it is possible to test oneself for HIV.
- In general non-Estonians were more aware of AIDS Counselling Cabinets and youth counselling centres as places for HIV testing, while Estonians were more aware of HIV testing services provided by general practitioners and specialised doctors.
- When compared to youth living in the country, in the age groups 14-15, 16-18 and 19-24 there were more respondents among city youth who were aware that it is possible to be tested for HIV at AIDS Counselling Cabinet and youth counselling centre. As concerns specialised doctors, the tendency is contrary.
- When compared to the two lower levels of education there were more respondents aware of AIDS Counselling Cabinets and general practitioners as places for HIV testing among young adults (19-29 year old) with higher education.

Table 16: Awareness of places for HIV testing, by age group, 2003-2007 (%)

Testing place	10-13			14-18			19-29		
	2003	2005	2007	2003	2005	2007	2003	2005	2007
AIDS Counselling Cabinet	36.5	53.4	43.6	65.3	58.9	54.8	85.5	66.0	69.1
Youth counselling centre	17.6	20.2	16.6	25.3	18.0	21.8	24.3	19.9	31.0
General practitioner	23.9	43.8	43.1	20.0	20.6	22.0	17.3	17.5	19.7
Specialised doctor	-	-	-	64.7	76.5	72.9	68.9	74.1	71.5

Taking HIV Test

- 3% of 14-18 year old, 21% of 19-24 year old and 33% of 25-29 year old Estonian youth had been tested for HIV during their life. 43% of 19-24 year old and 32% of 25-29 year old respondents had taken HIV test in the year preceding the survey.
- In the age group 19-29 the share of female respondents who had taken HIV test exceeded that of the male respondents.
- 19-29 year old non-Estonians had taken the test more often than Estonians. In the same age group the percentage of respondents who had taken HIV test at least once in their life was higher in Ida-Viru County when compared to Harju County and the region „rest of Estonia“.
- Among economically inactive youth aged 19-29 (incl. those on pregnancy or parental leave) the percentage of respondents who had been tested for HIV was higher than in other status groups.
- 8% of 14-18 year old and 15% of 19-29 year old respondents claimed that there have been situations where they had failed to take an HIV test even though they were willing to do the test.
- The above mentioned data on HIV testing have not changed during the three study years.
- Lack of time and lack of information on the possibilities for testing were most often mentioned as the reasons for failing to take an HIV test.

8. RISK GROUPS

Next the various levels of sexual risk behaviour will be described. For this purpose a sexual risk behaviour score was calculated on the basis of following components:

- number of sexual partners in the last year
(0 = one sexual partner or no partners; 1= two or more sexual partners);
- use of condoms in the last 12 months during sexual intercourse with casual partner
(0 = used a condom every time; 1 = did not use a condom every time);
- use of condom during the last sexual intercourse with a casual partner
(0 = used a condom; 1 = did not use a condom).

Adding of the three components results in the sexual risk behaviour score from 0 to 3. The larger the score, the more risk components it includes. Based on the score, the respondents were divided into three risk groups:

- 0 risk level group – young people who had never had sexual intercourse or whose total score was 0;
- low risk level group – young people with sexual risk behaviour score 1;
- high risk level group – young people with sexual risk behaviour score 2-3;

Levels of sexual risk behaviour were analysed based on data acquired from 14-18 year old and 19-29 year old respondents. Questions related to sexual life were not asked from 10-13 year old children.

- Majority of young people behave in a risk-free manner in their sexual life – 87% of 14-15 year old, 81% of 16-18 year old, 69% of 19-24 year old and 74% of 25-29 year old respondents belong to 0 risk level group.
- High-risk sexual behaviour was characteristic to 5-6% of school children and a little over one-tenth of young adults (see Figure 23).
- 19-29 year old females take fewer risks in their sexual life compared to males. In the age group 16-18 this situation was contrary.
- As compared to the year 2005, changes have taken place in the two older groups. The share of youth who do not take risks has increased in the 19-24 age group. In the age group 25-29 the share of risk-free behaviour has increased and high-risk behaviour decreased (see Figure 24).
- The level of knowledge on HIV transmission was uniform among youth in different risk level groups. Also there were no differences in attitudes towards PLWHA.
- In the age group 19-29 among the youth behaving in a risk-free manner there were more young people having correct knowledge of methods for avoiding STIs when compared to the other two groups. In the age group 14-18 the situation was contrary: the percentage of respondents having correct knowledge was significantly higher among higher risk level respondents when compared to young people in 0 risk level group.
- Respondents who did not take any risks in their sexual life consumed tobacco products, alcohol and drugs significantly less often than those belonging to the two other groups. The higher was the respondents' risk-taking level in sexual life, the larger was the share of frequent alcohol consumers among them (see Figures 25 and 26).

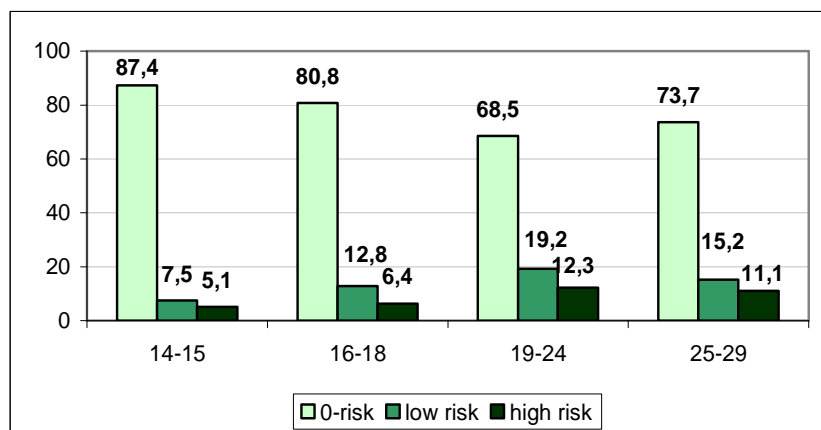


Figure 23: Distribution of respondents between risk groups, by age group (%)

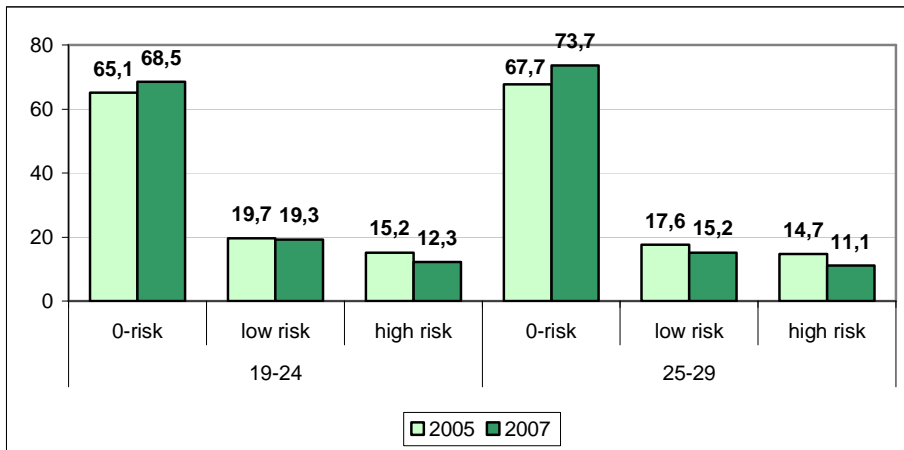


Figure 24: Distribution of respondents between risk groups, by age group, 2005-2007 (%)

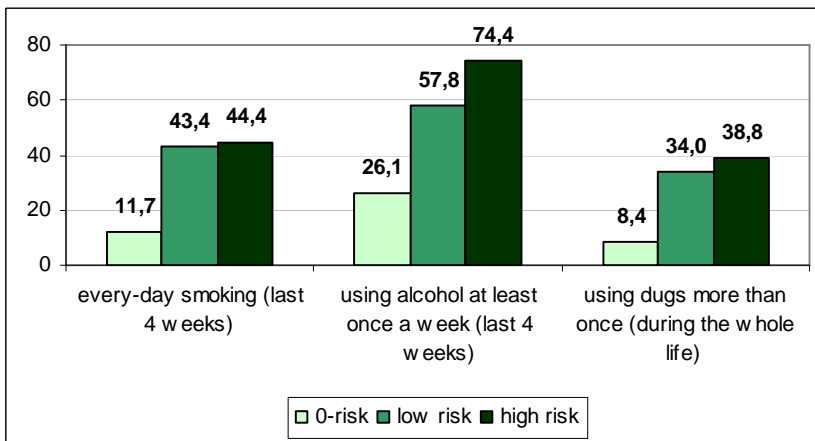


Figure 25: Use of drugs by 14-18 year old respondents, by risk group (%)

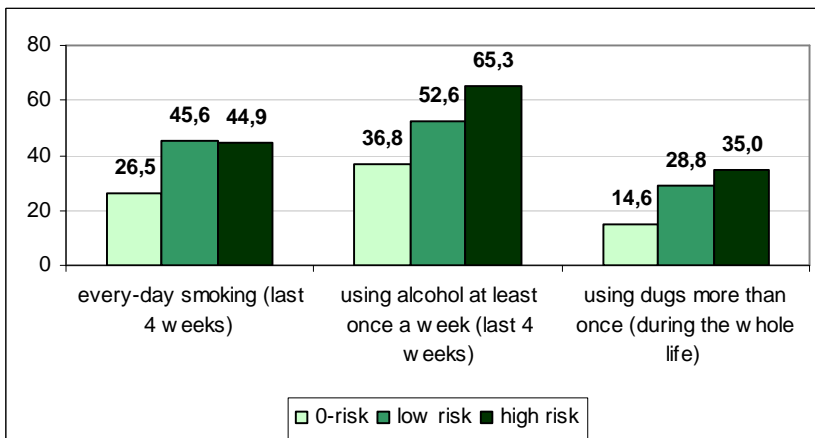


Figure 26: Use of drugs by 19-29 year old respondents, by risk group (%)

SUMMARY

The survey "HIV-related Knowledge, Attitudes and Behaviour among Estonian Youth" was conducted for the third time in 2007. Data were collected based on self-administered questionnaires to be filled during school visits (10-18 year olds) or sent by mail (19-29 year olds). 2007 data collection took place from April to June. Simple random sampling in the different layers was used and data of 4,291 10-29 year old respondents from all over Estonia have been analysed. The data collected was weighed according to the sociodemographic division of the population.

Consumption of Alcohol and Drugs

Similarly to the previous surveys, the percentage of school children who have smoked, consumed alcohol, been drunk and used drugs increases quickly with age. The level of using before mentioned substances among the youth is high, which continues to be a very serious problem.

Less than one-tenth of 10-13 year old children, about one-third of 14-15 year olds and more than forty percent of 16-28 year old youth had smoked during last four weeks before the study. About one-fifth of 14-15 and 16-18 year old school children are every-day smokers. More than one-tenth of 10-13 year old children have used alcohol in last four weeks. Of 14-15 year olds, more than one-half had consumed alcohol and one-fourth had done it at least once a week. In the age group 16-18 three out of four respondents had consumed alcoholic drinks and more than one-third had done it once a week or more often. A large percentage of school children had also been drunk. The level of alcohol consumption and being drunk in the last four weeks were approximately the same among young adults (19-29 year old) as in the older school children group. Almost one-fifth of 14-15 year old and nearly one-third of 16-18 year old respondents had used drugs at least once during their life. Two percent of 10-13 year old children claimed the same and in the age group 19-29 the value of the indicator was about forty percent.

Among 14-15 year old school children contacts with drugs have increased year by year. The percentage of respondents who had been offered drugs in the previous month and whose circle of acquaintance included people using drugs (not intravenously) has increased. By 2007 the percentage of 14-15 year old respondents who have never tried drugs had decreased when compared to 2003. In the case of 10-13 year olds, changes can be noticed in connection with alcohol consumption. The percentage of children who had consumed alcohol in the preceding four weeks has not increased when compared to 2005, but the frequency of alcohol consumption and getting drunk had increased among those children who consume alcohol.

Knowledge and Attitudes

One-fifth of 10-13 and 14-15 year old, forty percent of 16-18 year old, two-thirds of 19-24 year old and more than three-fourths of 25-29 year old young people have correct knowledge on methods for avoiding STIs. While the knowledge level had improved in nearly all age groups by 2005, in 2007 the value of the indicator remains the same as in 2005.

In 2005 and 2007 the overwhelming majority of youth was aware that it is possible to get HIV by injecting with a syringe that has been used by someone else before and that the risk of infection can be reduced by using a condom during every sexual intercourse. The question whether it is possible to get HIV through mosquito bite continues to puzzle young people the most. This question also influences the value of the knowledge indicator. In the case of five questions six percent of 10-13 year old, more than one-fifth of 14-15 year old and approximately one-third of older respondents had correct knowledge of HIV transmission. If the mosquito bite question is left out from the indicator, more than twice as many young people answer all four remaining questions correctly.

When compared to 2005, changes can be seen in two groups – the knowledge level on HIV transmission has improved among 25-29 year old and decreased among 16-18 year old respondents. The positive changes in the age group 25-29 concern female respondents, Estonians and city youth. Negative changes among 16-18 year olds concern non-Estonians, respondents from the Ida-Viru County and the region "rest of Estonia" and city youth. In 2005 the level of correct knowledge on HIV transmission was the best among 16-18 year old respondents. Due to a decrease in 2007 the knowledge level was equal to that of young adults (19-29).

The most common misconception in all age groups is that HIV can be contracted through eating from the same tableware with a person infected with the virus. The least common misconception is contracting HIV by embracing. Less than one-tenth of 10-13 year old, one-fourth of 14-15 year old, more than forty percent of 16-18 and 19-24 year old and more than one-half of 25-29 year old respondents had no misconceptions. When compared to 2005, the share of young people without misconceptions has not changed.

Approximately sixty per cent of the youth did not agree with the statement that HIV infected pregnant woman cannot do anything for reducing the risk of mother-to-child transmission. However, less than one-tenth of 14-18 year old school children and less than one-fifth of young adults had correct knowledge on the methods for reducing the risk of MTCT (the question was not asked from 10-13 year old children). The respondents were best aware of the fact that it is possible to avoid MTCT through abstaining from breastfeeding.

Although the value of the aforementioned indicator is low the percentage of young people with correct knowledge has somewhat increased in all age groups when compared to 2005. Among 16-18 year olds the positive change concerns males, non-Estonians, respondents living in Ida-Viru County and city youth. In other age groups such differences by sociodemographic data cannot be identified.

The share of young people who would not stop to communicate with an acquaintance or friend who has HIV was the greatest. Respondents disagreed the most with the statement that an HIV-infected teacher could continue to work at school. The share of youth who provided tolerant replies to all statements expressing attitude towards PLWHA was rather small – less than one-tenth of 10-13 year old, about one-fourth of 14-15 year old, forty percent of 16-18 and 19-24 year old people and a bit more 25-29 year old respondents. When compared to 2005, the indicator has increased among 25-29 year olds. This change concerns males, inhabitants of Harju County, city youth and respondents with higher education.

Sexual Partners and Condom Use

10-13 year old children were not asked questions about sexual life. More than one-fifth of 14-15 year old and one-half of 16-18 year old young people had experienced sexual intercourse. In the case of 19-24 year respondents the value of this indicator was close to ninety percent and among 25-29 year old respondents approximately hundred percent. Among young people who had had sexual intercourse, the share of respondents who had more than one sexual partner during last twelve months was the largest among 14-15 year olds – more than one-half. In the age groups 16-18 and 19-24 the share of such respondents amounted to one-third and in the oldest age group to one-fifth. More than forty percent of 14-15 year old, more than one-third of 16-18 year old, more than one-fourth of 19-24 year old and one-fifth of 25-29 year old respondents who had had sexual intercourse reported having sex with a casual partner in the last year.

The level of condom use was significantly higher among school children when compared to young adults. Two-thirds of 14-15 year old and 3/4 of 16-18 year old respondents had used a condom during their first sexual intercourse. More than one-half of the respondents in the age group 19-24 and one-third of the youth in the age group 25-29 answered accordingly. More than one-half of school children, less than one-half of 19-24 year old respondents and approximately forty percent of 25-29 year olds had used a condom during every sexual intercourse with a casual partner in last twelve months (of those who had had sexual intercourse with a casual partner). 3/4 of school children and approximately 2/3 of young adults used a condom during last intercourse with a casual partner. Value of the indicators associated with sexual partners and condom use have not changed in comparison to 2005.

The most referred reason for not using a condom upon the last intercourse was regular partner and mutual trust. The reasons mentioned more often also included the opinion that condom reduces the feeling of pleasure and confidence that the partner does not have HIV or STIs. The percentage of youth who never carry condoms with them increased with age. The overwhelming majority of young adults who did not carry condoms with them had a regular partner. 19-29 year old respondents who always had condoms with them in the year preceding the survey had used them more often when having sex with casual partners (such association cannot be identified in the case of school children).

Testing for HIV and STIs

Approximately one-tenth of school children and 19-29 year old respondents who had experienced sexual intercourse had suspected contraction of some kind of STI during the last twelve months. In this case young people most often turned to specialised doctor, but more than forty percent of 14-18 year old and one-fourth of 19-29 year old respondents did nothing about those suspicions.

Respondents were best aware that it is possible to test for HIV at specialised doctors and AIDS Counselling Cabinets. Few percents of 14-18 year old, one-fifth of 19-24 year old and one third of 25-29 year old Estonian youth had been tested for HIV during their life. This data has not changed during different survey years. Lack of time and information on the possibilities for testing were most often mentioned as reasons for failing to take an HIV test.

Comparison between survey years indicates that only few positive changes have taken place by 2007 – this can be seen most clearly in connection with knowledge related to methods of reducing the risk of mother-to-child transmission. It is a specific subject that has not been discussed widely. Nevertheless, it seems that somewhat more information on the issue has been reaching the youth lately. For example the aim of a charity concert in December 2006 dedicated to the World Aids Day and broadcasted on TV was to collect donations for purchasing of breast milk substitutes for newborn infants of HIV-infected women. The subject of HIV-infected infants has also been dealt with by the press.

Within the framework of the school curriculum the subject of HIV and AIDS may be discussed in grades V-VI or VIII-IX. The intensity of dealing with the subject greatly depends on choices made by the school and training of teachers. The issues that are considered to be problematic are uneven amount of classes related to sexual health education in different schools, insufficient attention on the issue and insufficient preparation of some teachers for dealing with sensitive subjects like sexual life, STIs and condom use.

For years this gap has been filled with the help of non-governmental organisations (NGOs) by arranging HIV/AIDS and safe sex related trainings for students at schools and vocational schools

and for conscripts. In the last four years this was mainly arranged within the framework of the Estonian Programme of Global Fund to Fight AIDS, Tuberculosis and Malaria. Programme activities were the most intensive in 2004 and 2005 when approximately 23,000 school children from grades V-XII and about 5,000 vocational school students and conscripts all over Estonia participated in the trainings. By the survey year 2005 the knowledge and tolerance levels of young people had improved when compared to 2003. In the mean time, however, the volumes of this kind of mass trainings have decreased (in connection with allocating additional resources to work with injecting drug users and PLWHA) and the data from 2005 and 2007 do not differ significantly. The coverage of such mass trainings arranged by organisations outside school settings is too small in order to exert long-term influence on the entire youth population of Estonia and does not replace systematic in-school sexual education. The HIV/AIDS-related training courses for school children last an hour and a half and for example in 2005 still only 16% of all Estonian school children in grades V-XII were covered by the training (the total number of such school children in the academic year 2004/2005 was 145,387).

The survey data confirm the efficiency of interventions that take place in schools. The data of a youth study conducted in 2005 allowed comparison between grades that passed the training courses provided by NGOs within the framework of the national prevention programme and grades that had not been provided with such training. The school children in grades V-XII who had participated in the training had better knowledge on HIV transmission, less misconceptions on getting HIV through every-day contacts and more tolerant attitude towards PLWHA. In 2007 study, among 14-18 year old school children who stated that the subjects of HIV/AIDS, STIs and condom use had been discussed thoroughly at school the percentage of respondents who had correct knowledge on HIV transmission and avoiding STIs was larger. Young people who had correct knowledge on HIV transmission were more tolerant towards people living with HIV and AIDS. The same tendencies were evident in the year 2005. Such results indicate that subjects like sexual life, safe sex, HIV/AIDS and STIs must be approached systematically and in a consistent manner through different school levels, taking into account the development of children in different age groups. The related subjects should be already discussed with 10-13 year old children, since one-fifth of 14-15 year old people have already had sexual intercourse and teaching of subjects related to sexual relations should start few years before personal sexual experiences. Issues related to safe sex and infections can be related to wider subjects like feelings, love, faithfulness, etc. Young people who took part in the 2007 survey reported that they need more information on treatment of HIV/AIDS, avoiding STIs, ways of HIV transmission and possibilities for HIV-testing.

In many countries an important objective of the prevention work is postponing the first sexual intercourse and thereby reducing the potential risk of HIV and STI contraction. In this connection the percentage of young people who have had sexual intercourse before the age of 15 is an important indicator.³ In Estonia one-fifth of 14-15 year old respondents have had sexual intercourse. This indicator has remained at the same level throughout all three survey years. In all, 15% of 15-29 year old respondents had sexual intercourse before the age of 15.

A significant number of school children had more than one sexual partner last year. Having sex with more than one partner cannot be regarded as risk behaviour if it is accompanied by responsible condom use. Also, it is natural that teenage relationships are more short-lived or last for one night only and in the process of further development the relationships tend to endure longer. As concerns risk behaviour and transmission of infections, the most important factor is whether condoms are used in connection with such sexual relations. However, a comparison between the

³ See Joint United Nations Program on HIV/AIDS, 2007: Monitoring the Declaration of Commitment on HIV/AIDS. Guidelines on Construction of Core Indicators. Pg. 56

three survey years indicates that habits of condom use in casual intercourses have not changed. More than forty percent of school children do not always use a condom in the case of casual relationships and among young adults more than one-half of the people who have had casual relationships fail to always use a condom. Because of this, in the case of all interventions targeting the youth it is necessary to pay considerable attention on how to insure that the knowledge given also leads to changes in young people's behaviour.

A great problem that definitely influences risk behaviour of youth in sexual relations is widespread consumption of alcohol. The survey data of both 2005 and 2007 show that there is a connection between alcohol consumption and risk behaviour. The higher is the risk level of young people's sexual behaviour, the larger is the share of frequent alcohol consumers among them. Approximately one-half of school children and two-thirds of young adults used alcohol before the latest sexual intercourse. Although there are national strategies for preventing HIV/AIDS and drug addiction in Estonia, there is no state strategy dealing with issues associated with alcohol consumption.

Risk group analysis shows that nevertheless the majority of youth behave in a risk-free manner in their sex life – have never had sexual intercourse or always use a condom in the case of casual intercourse. More than eighteen percent of school children, two-thirds of 19-24 year old respondents and three-fourths of older respondents belong to this group. High-risk sexual behaviour is characteristic to less than one-tenth of school children and a little over one-tenth of young adults. In the age group 19-29 the general level of risk behaviour has decreased to some extent when compared to 2005.

In conclusion, the most significant differences by sociodemographic indicators will be presented.

Age-related Differences

As a natural tendency, the percentage of young people who have used tobacco products, alcohol or drugs in their life and have had sexual intercourse quickly increases with age. In general, the percentage of young people having correct knowledge on HIV transmission and methods for avoiding STIs increases with age as well. Such tendencies also appeared in previous surveys.

Similarly to the previous survey years, among school children (who had had sexual intercourse) there were more young people who had more than one sexual partner in the last twelve months and who had casual relationships when compared to young adults. This is associated with the fact that in the age group 19-29 the percentage of respondents with a regular partner was significantly larger.

Among school children there were much more respondents who used a condom during their first sexual intercourse when compared to 19-29 year old people. Although school children had more partners and casual relationships than young adults, they used condoms more often in the case of casual intercourse.

The school children's age group 16-18 is partly similar to 19-24 year old youth. This is so in the case of smoking, using alcohol and drugs, in case of knowledge on HIV transmission, misconceptions regarding possible HIV transmission through every-day contacts and attitude towards PLWHA. Also, the amount of respondents who had more than one sexual partner in the last twelve months was similar in the age groups 16-18 and 19-24.

Gender-related Differences

In general, it may be said that compared to male respondents, females tended to have better knowledge on HIV transmission (except age groups 10-13 and 25-29), possibilities for reducing the risk of MTCT (except age group 16-18), methods for avoiding STIs (except age group 10-13) and possibilities for HIV-testing. 16-18 and 19-24 year old female respondents had less misconceptions regarding possible transmission of HIV in ordinary every-day contacts, their attitudes towards PLWHA were more tolerant (except age group 25-29) and attitude towards condom use more positive. Such gender-based knowledge and attitudes-related differences were also identified in the previous survey years.

As concerns risk behaviour, there were no distinct differences between male and female respondents. Although male school children had experienced sexual life before girls, among 16-18 and 19-24 year old females there were more respondents who had had sexual intercourse. In the case of young adults men had more sexual partners in the last twelve months and females of all age groups had less casual relationships. Based on sexual behaviour risk score, among 19-29 year old women the percentage of respondents who behaved in a risk-free manner was larger and there were significantly more female respondents who had been tested for HIV. At the same time, in the age group 16-18 there were more males who belonged to the risk-free group (had not had intercourse or abstained from risk-taking in their sexual relationships).

Nationality-related Differences

In general, Estonians had better knowledge on HIV transmission (except age groups 10-13 and 19-24) and methods for avoiding STIs (except age group 14-15) than non-Estonians. Also Estonians had fewer misconceptions regarding the possibilities of HIV transmission in every-day contacts (except age groups 10-13 and 16-18), more tolerant attitude towards PLWHA and more positive attitude towards condom use. In general, young people of other nationalities had greater need for information as compared to Estonians. The lower knowledge level of non-Estonians was also evident in the surveys of 2003 and 2005. At the same time, the differences between nationality groups were not so evident in risk behaviour and no generalisations can be made here.

In the group of 14-15 year old non-Estonians, the percentage of respondents who had had sexual intercourse was larger, as well as the amount of young people who behaved in a risk-taking manner in their sexual relationships (based on the risk score). The group of 19-29 year olds also differs by some indicators. In this age group the percentages of respondents who had suspected an STI and had taken an HIV test in the last year were greater among non-Estonians. Among 19-29 year old non-Estonians there were more respondents who claimed that they failed to use a condom last year because there were no possibilities for its acquisition when compared to Estonians. 25-29 year old representatives of other nationalities had more casual relationships and the amount of respondents who used a condom during the first sexual intercourse was smaller among non-Estonians.

Differences Related to the Type of Habitation

As concerns country youth and city youth, there were no distinct differences applying to most of the age groups. 25-29 year old city youth had more sexual partners and casual relationships than youth living in the country. Also, a greater percentage of city youth had taken an HIV test and behaved in a more risk-taking manner in sexual relationships (based on risk behaviour score).

As concerns regions, there were no differences clearly distinguishing one region from the others.

Social Status-related Differences among 19-29 Year Old Respondents

Comparison of the status groups used in the analysis shows that economically inactive and unemployed youth differed from the rest of the groups. As compared to other status groups, inactive youth were better aware of how to reduce the risk of MTCT, the percentage of respondents who had been tested for HIV was relatively higher and the amount of those who did not behave in a risk-taking manner in their sexual life the highest. The aforementioned results can be explained through the fact that women on pregnancy or parental leave constitute a large part of the inactive youth group.

When compared to other status groups, among the unemployed there were less respondents who had correct knowledge about the methods for avoiding STIs and more people who had misconceptions regarding possible ways of HIV transmission through ordinary daily contacts. Among the unemployed the amount of respondents who had positive attitude towards condom use was smaller when compared to several other status groups (young people studying or working and acquiring education at the same time).

Education-related Differences among 19-29 Year Old Respondents

Youth with higher education or acquiring a higher education consumed less tobacco products and alcohol as compared to respondents with lower levels of education. They had better knowledge on HIV transmission and methods for avoiding STIs and less misconceptions regarding possible transmission of HIV through ordinary daily contacts. Respondents with the highest level of education were more tolerant towards PLWHA and considered their need for HIV and AIDS related information smaller than representatives of the two lower education groups.

The higher was the level of education, the larger was the percentage of respondents who had positive attitude towards condom use and the later had they experienced the first sexual intercourse. Among youth with the highest education there were more of those who had used a condom during the first intercourse and less people who claimed that in the last twelve month they had failed to use a condom because there were no possibilities for getting one.