

Alcohol addiction of adolescents and risk factors related to this habit

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Key words: alcohol, drugs, risky behavior, adolescents, schoolchildren.

Summary. Objective of this study was to assess the prevalence of alcohol use among schoolchildren and to determine its factors. The study was conducted in schools of Kaunas city and its region among schoolchildren of 7th, 9th and 11th grades – overall 410 pupils. Most of schoolchildren (93.4%) acknowledged that they had used some alcohol drinks; 37.6% of boys and 27.3% of girls ($p < 0.05$) used alcohol especially large number of times (40 and more). Every second pupil, irrespective of his sex, stated being intoxicated with alcohol in the last month. Main motives that induced to use the alcohol were: wish to relax, curiosity, having nothing to do as well as wish to experience the state of intoxication, wish not to differ from group friends. The logistic analysis demonstrated a statistically significant relation between alcohol use and smoking, and positive point of view to drugs and people who use them. The summarized data could serve in planning well-founded prevention programmes.

Conclusion. The alcohol addiction of schoolchildren at higher grades is very prevalent and correlates with smoking and drugs usage. Therefore, the implementation of effective health promotion programmes that include alcohol and drug prevention at school is urgently needed.

Introduction

World Health Organization declares with great concern about serious danger of alcohol to health (1–3). Its effects, estimated by the lost years of life, come up to the rate of all deaths from measles and malaria and are more severe by far than the effects of smoking and illegal drug addiction. The data of world databases show that alcohol drinking is rapidly increasing in the countries of Central and Eastern Europe (3). In Europe the death of every fourth (every third in Eastern Europe) 15–29 years old man is caused by alcohol; in 1999 totally 55 thousand young people died from the reasons caused by alcohol.

It is recognized that drinking alcohol is a kind of drug addiction (4–6). The data announced in literature show that people start drinking this kind of intoxicants being younger than eleven years old (7–9). In the teen years drinking alcohol develops rapidly: at this age transition stage from episodic excessive drinking to alcoholism lasts only several years. Morbid inclination for alcohol and syndrome of abstinence in juveniles develop more rapidly than in adults. Health of young people who become alcohol addicts declines rapidly, and personal degradation is also very fast. Drinking

alcohol greatly increases the risk of traumas. One of the essential reasons of juvenile's delinquency is also drinking alcohol (10–15).

The data of scientific research prove that the greatest problem in Lithuania is frequent drinking of strong alcohol in large quantities (16, 17). According to the data of the Department of Statistics production and sales of strong alcohol are gradually decreasing while production and sales of different kinds of wine and beer are increasing (18).

Distribution of drinking individuals according to their age is uneven. Statistics shows that the age of alcohol drinkers is becoming younger and younger (19, 20). Alcohol has become a mean of communication among young people; especially beer became very popular (4, 8, 9, 21, 22). Habit of the youth to drink alcohol in large quantities on weekends and during celebrations is being replaced by frequent (several times per week or even daily) drinking weak alcohol (beer or wine) in small quantities. It was found out that children usually taste intoxicants for the first time treated by their own parents during celebrations (19, 22).

Two international studies of schoolchildren's lifestyle are carried out in Lithuania: "International

Study of Health Behavior in School-Aged Children – HBSC” (20) and “European School Survey Project on Alcohol and Other Drugs – ESPAD” (5, 8). The data of both studies show high and still increasing prevalence of alcohol drinking among school-aged children in the country. Therefore, it is very important to find out the factors inducing juveniles to drink alcohol and use other drugs, to work out scientifically grounded references for the programmes of alcohol drinking prevention at schools (8, 21, 23, 24). Unfortunately, such kind of studies carried out in the Republic was insufficient during the recent years. Therefore, the problems of drinking alcohol are being solved slowly without any clear strategy and tactics.

Taking into account the importance of the given problem we have set the aim in this work – to estimate the spread of alcohol drinking among school-aged children and to determine its factors.

Material and methods

In 2001/02 school year, 432 schoolchildren of the 7th, 9th and 11th grades were randomly selected from the secondary general education schools of Kaunas city and its region. A questionnaire survey of schoolchildren and qualitative study of school social educators were carried out during the study.

The questionnaire given to schoolchildren was anonymous. It consisted of 23 questions divided into the following parts:

- General questions (sex, age, etc.)
- Questions about drinking alcohol and taking other narcotic substances in the last month and in the past.
- Questions about the reasons for drinking alcohol and taking other narcotic substances.
- Questions allowing analyzing the attitude of schoolchildren towards alcohol and other narcotic substances.

The primary questionnaire was tried in one class and its final version was distributed to all participants

of the study. The questionnaire survey was carried out in the classroom. Class masters helped to carry it out.

After checking the data quality the filled-in questionnaires of 410 schoolchildren were used for final analysis (response frequency was estimated by 95%). Distribution of schoolchildren who participated in the study according to their sex and forms is given in Table 1. It should be noticed that distribution of schoolchildren according to their sex was even (50% of boys and 50% of girls). Their age varied from 14 to 18 years (average 16.0 ± 0.1 years) but the group of older schoolchildren was relatively smaller than younger ones. Because of this reason direct standardization of data according to the age was applied in estimation of general frequency of factors in population.

Statistic analysis of the data was carried out by applying SPSS software (version 11.5).

Two groups of schoolchildren were singled out in the analysis of factors related with drinking alcohol: 1) those who drank any alcohol in the last month (333 children – 81.5%); 2) those who did not drink any alcohol in the last month (77 children – 18.5%). The influence of factors on alcohol addiction was studied by the method of logistic regression by estimating the odds ratio (OR) and its 95% confidence interval.

Hypotheses on interdependence of the features were tested using χ^2 test, hypotheses on the equality of estimations (percents or averages) in the groups of the study – using t-test. Level of significance was defined at $p < 0.05$.

During the qualitative study individual interviews with social educators were carried out. The following matters were discussed:

- Reasons for taking drugs: what reasons induce school-aged children to take narcotic substances (alcohol, tobacco); by which methods it is tried to eliminate the reasons, how busy children are at school.
- Circumstances of taking narcotic substances: when

Table 1. Characteristics of the studied contingent

Grade	Boys			Girls			Total		
	n	%*	%**	n	%*	%**	n	%*	%**
7	75	50.0	36.6	75	50.0	36.6	150	100.0	36.6
9	87	55.8	42.4	69	44.2	33.6	156	100.0	38.0
11	43	41.3	21.0	61	58.7	29.8	104	100.0	25.4
Total	205	50.0	100.0	205	50.0	100.0	410	100.0	100.0

*distribution of schoolchildren according to their sex (%); **distribution of schoolchildren according to the grade (%).

and in what places children usually drink alcohol and smoke; how they purchase narcotic substances.

- Control and prevention of taking narcotic substances: what kind of prohibition and other helping measures are applied at school; how parents are informed; what events and actions against taking narcotic substances are necessary.

The data of qualitative study were analyzed by applying the principles of *content analysis* (25).

Results

Alcohol drinking prevalence

The schoolchildren were asked how many times they tried to drink alcohol (beer, wine, champagne or strong drinks) in their life. In Table 2 the distribution of answers to this question is given depending on sex and grade.

It was found out that most of schoolchildren had tried to drink alcohol. The number of children who did

not try any alcohol was small: 5.4% of boys and 7.8% of girls. Other respondents admitted to drinking alcohol for many times; 37.6% of boys and 27.3% of girls ($p < 0.05$) used alcohol especially large number of times (40 and more). Comparing boys and girls it can be noticed that girls as well as boys specified less than 40 times in their life. Therefore, the problem of trying to drink alcohol is equally significant for both sexes of juveniles.

This rate apparently depended on children's age or grade. For example, an especially large number of times (40 and more) of drinking alcohol were specified by 16.7% of seventh-formers and 53.8% of eleventh-formers.

Table 3 shows the data how many times the schoolchildren felt being intoxicated with alcohol in their life, in the last 12 months and in the last one month. It can be noticed that approximately every fourth schoolchild (23.0% of boys and 28.8% of girls) never experienced

Table 2. Distribution of the number of times of drinking alcohol in the life of schoolchildren (%) depending on their sex and grade

How many times they tried alcohol in their life	Sex*		Grade**		
	boys	girls	7th grade	9th grade	11th grade
Never	5.4	7.8	14.0	2.6	1.9
1–2 times	9.3	6.8	16.6	3.8	1.9
3–5 times	11.2	12.7	18.7	9.6	5.8
6–9 times	9.3	14.1	16.0	10.3	7.8
10–19 times	16.1	11.8	7.3	21.2	12.5
20–39 times	11.2	19.5	10.7	19.2	16.3
40 times and more	37.5	27.3	16.7	33.3	53.8

* Comparing boys and girls, $\chi^2=13.28$; $df=6$; $p < 0.05$.

**Comparing schoolchildren of different grade, $\chi^2=96.34$; $df=12$; $p < 0.001$.

Table 3. Distribution of schoolchildren (%) who stated how many times they were intoxicated with alcohol in their life, in the last 12 months and in the last month depending on their sex

How many times they were intoxicated	Totally in their life*		In the last 12 months**		In the last month***	
	boys	girls	boys	girls	boys	girls
Never	23.0	28.8	33.0	32.0	52.8	57.9
1–2 times	19.1	24.9	23.2	28.1	16.1	19.3
3–5 times	12.3	7.8	11.3	9.9	10.1	11.4
6–9 times	7.4	3.9	6.9	8.9	13.6	5.9
10–19 times	6.9	11.2	7.9	10.8	6.0	2.5
20–39 times	8.3	6.3	15.3	7.9	0.5	1.0
40 times and more	23.0	17.1	2.5	2.5	1.0	2.0

*Comparing boys and girls, $\chi^2=11.54$; $df=6$; $p > 0.0$; **comparing boys and girls, $\chi^2=7.44$; $df=6$; $p > 0.05$;

***comparing boys and girls, $\chi^2=11.18$; $df=6$; $p > 0.05$.

this feeling in their life, and every second schoolchild (52.8% of boys and 57.9% of girls) – in the last month. It should be noted that the number of boys and girls intoxicating themselves with alcohol had no significant difference.

We asked the schoolchildren how many times they drank weak alcohol (beer), stronger alcohol (wine and champagne) and strong alcohol (vodka, cognac, whisky, etc.) (Table 4).

The data show that the most popular drink among school-aged children is beer. Only 22.1% of boys and 34.6% of girls ($p < 0.05$) did not drink it in the last month. We can see that mostly boys like the beer – 24% of them stated that they drank it 10 times and more. The number of such girls was twice less (12.7%) but even

such rate shows that girls drink alcohol rather frequently.

The distribution of boys and girls who tried alcohol stronger than beer had no significant difference according to the frequency of drinking such drinks.

Beginning of drinking alcohol

The data given in Fig. 1 show the age of juveniles in which they tried beer and strong alcohol for the first time and the age in which they felt being intoxicated with alcohol for the first time. It can be noticed that almost every second boy (45.6%) and every third girl (30.4%) tried beer being younger than 11 years old. In the teen years the number of juveniles who tried alcohol is increasing rapidly. Almost all sixteen years old boys (93.2%) and 79.4% of girls had tried drinking

Table 4. Frequency of drinking different alcoholic beverages in the last month (%)

Drinks	Sex	Never drank	1–2 times	3–5 times	6–9 times	10 and more times
Beer*	Boys	22.1	32.4	12.3	9.3	24.0
	Girls	34.6	27.8	15.6	9.3	12.7
Wine, champagne**	Boys	42.9	24.1	9.9	15.8	7.4
	Girls	42.4	31.7	9.8	8.8	7.3
Strong drinks***	Boys	54.0	18.8	14.9	8.4	3.0
	Girls	55.1	23.9	14.6	4.9	1.0

*Comparing boys and girls, $\chi^2=14.40$; $df=4$; $p < 0.01$; **comparing boys and girls, $\chi^2=6.16$; $df=4$; $p > 0.05$; ***comparing boys and girls, $\chi^2=6.26$; $df=4$; $p > 0.05$.

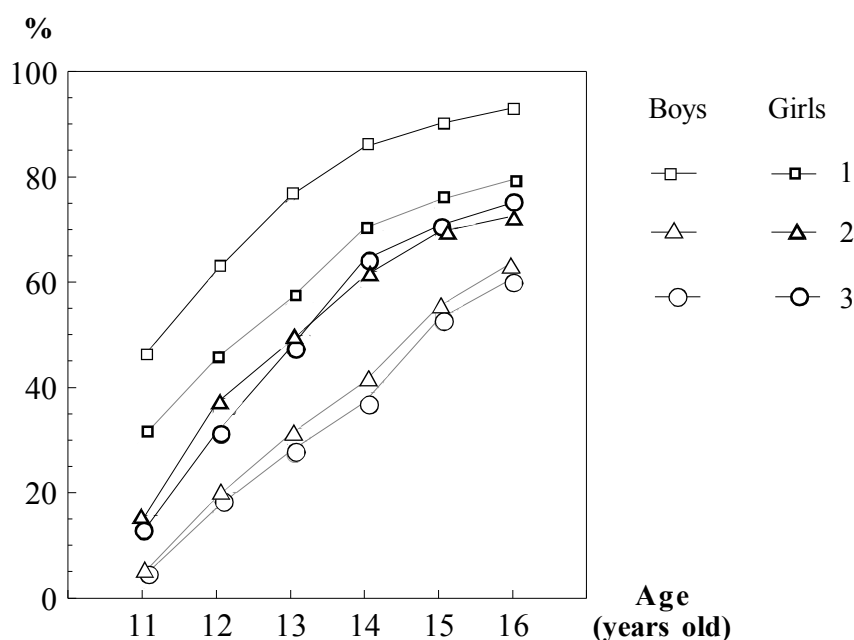


Fig. Age when schoolchildren tried alcohol or felt intoxicated for the first time

1 – drank beer for the first time; 2 – drank strong alcohol for the first time;
3 – felt intoxicated for the first time.

beer. Only several juveniles admitted to drinking strong alcohol being younger than 11 years old while there were only 27.6% of sixteen years old boys and 36.5% of girls ($p < 0.05$) who did not try such drinks. The data show that the age of the first intoxication with alcohol coincides with the first trial to drink strong alcohol.

Reasons inducing drinking alcohol

In the survey it was cared for the reasons inducing school-aged children to drink alcohol. The findings are given in Table 5.

As it can be seen from the given results the greatest number of schoolchildren was tempted by the wish to relax from the tension discomforting them. Girls specified this reason more frequently than boys (48.3% and 41.3%, respectively; $p > 0.05$). Another frequent reason is curiosity; this reason is more typical for boys than girls (40.3% and 34.1%, respectively; $p > 0.05$). The following reasons for drinking alcohol are also frequent and typical for approximately every fourth school-aged child: having nothing to do, wish not to be different from friends, wish to become intoxicated.

Influence of group friends and elder brothers or sisters on juveniles' alcohol drinking is great. The survey disclosed that the most juveniles (51.1%) get drinks from their group friends by sharing them with each other. Older friends also often (46.2%) provide alcohol and 18.0% of juveniles stated that they received alcohol from their elder brother or sister.

It is well known that alcohol drinking often conditions different problems: personal problems, problems of intercommunication and delinquency.

From personal problems children most frequently stated that they experienced accidents (20.4%). It was noticed that juveniles often blamed alcohol on lower learning results (17.9%). From other personal problems the following can be singled out: 18.9% of juveniles have broken something, 10.5% were robbed or cleaned out.

From the problems of intercommunication the schoolchildren mostly stated that drinking caused quarrels (25.3%). 20.1% of juveniles stated the problems of intercommunication caused by alcohol drinking and 10.0% of juveniles - problems with teachers.

Mostly boys experience problems of criminal nature: 21.8% were embroiled in fights, 15.5% had to explain their behavior at the police.

Risk factors of alcohol drinking

The findings of the study showed that alcohol drinking is statistically significantly linked with many factors: smoking, attitude towards narcotic substances and individuals taking them. The data given in Table 6 show that many social factors of juveniles' lifestyle and attitude towards drugs statistically significantly increase possibility that an adolescent would have been drinking alcohol in the last month. The effect of these factors on boys and girls was almost the same.

The data of quantitative or schoolchildren's survey study were supplemented with qualitative study where social educators of schools participated. It was found out that educators feel the need of prevention of drinking alcohol, smoking and taking illegal drugs at school and quite actively organize preventive work: give the lessons of healthy lifestyle, participate in the events of the city together with the schoolchildren, organize competitions of paintings, lectures and discussions, to which medics, psychologists and other specialists are invited. Seeing that the knowledge of juveniles about narcotic substances is poor they try to fill this vacancy with information about the damage of narcotic substances to the health. Qualitative study also showed the weak points of preventive work: educators mostly lack knowledge about the problem of drug addiction and methodical information how to work with

Table 5. Reasons inducing to drink alcohol (%)

Reasons	Boys	Girls
Wished to relax	41.3	48.3
Wished to feel happier	19.4	18.5
Were forced to drink	10.2	7.3
Wished to feel intoxicated	25.2	24.9
Did not want to differ from group friends	26.7	21.5
Had nothing to do	29.6	21.5
Out of curiosity	40.3	34.1
Wished to forget problems	20.4	25.4
Other reasons	17.5	24.4

Table 6. Factors related to the inclination of adolescents for drinking alcohol in the last month

Factors	Sex	Odds ratio*	
		estimation	95% confidence interval
Smoked at least once in their life	Boys	6.09	2.97–12.5
	Girls	4.15	2.14–8.07
Smoked in the last month	Boys	12.9	6.49–25.7
	Girls	8.81	4.65–16.7
Are dissatisfied with relations with their mothers	Boys	7.45	3.14–17.7
	Girls	2.76	1.31–5.83
Are dissatisfied with relations with their fathers	Boys	4.30	2.04–9.06
	Girls	2.91	1.50–5.66
Parents do not know where they spend evenings	Boys	4.29	2.55–9.76
	Girls	7.08	3.48–14.4
Think that a man has a right to take narcotic substances	Boys	3.62	1.92–6.84
	Girls	3.70	1.72–7.95
Think that an individual taking narcotic substances is the same as others	Boys	12.6	5.90–27.0
	Girls	8.01	4.08–15.7
Positive attitude towards narcotic substances	Boys	12.9	5.86–28.3
	Girls	11.7	5.53–24.7

* Comparing with the rest of adolescents, who were not stated presence of listed factors.

juveniles in this field. There is a lack of rational solutions how to improve schoolchildren's employment during their holiday and on weekends.

Teachers think that the topics of health education (including prevention of alcohol and other drugs) should be integrated with other subjects in primary schools. In 5–10 grades the most of educators specified separate lessons of health education as the best way to teach to live healthy. Additionally it is suggested to apply the methods of integration and optional course of health. Educators think that during the whole period of education the hours of tutorial classes should be used for health education.

Discussion

Typical schools of Kaunas city and its region were chosen for this study. An important group of risk to drink alcohol and take other kinds of narcotic substances of 14–18-year-old adolescents was studied.

Analysis of findings shows that alcohol drinking has become a problem among school-aged children. It is urgent at the schools of Kaunas as well as of its region. Basing on the survey it can be asserted that the most of schoolchildren had tried

alcohol in their life. Alcoholic drinks are popular among the youth and alcohol is a necessary mean of their communication. Almost a quarter of schoolchildren stated that they drank alcohol for 40 times and more. It is a dangerous behavior in teen years and development of dependence threatens (4, 9, 10, 14).

It can be asserted that not only the age of juveniles is becoming younger but also the number of girls drinking alcohol is rapidly increasing. This analysis shows that alcohol drinking among the youth has already reached the limit. It should be explained to girls separately how alcohol could affect their future baby.

The findings of this study could be compared with the findings of international studies HBSC and ESPAD, where Lithuania participated as well. According to the findings of HBSC study (7, 20), 14.3% of 15-years-old boys and 13.3% of girls have never drunk any alcohol. This nicely coincides with the findings of our study. But the rate of those who had ever experienced intoxication with alcohol is less than it is in our study (58.8% of boys and 45.7% of girls). The participants of ESPAD study (5, 8) were 15–18 years old schoolchildren. 96.5% of respondents of ESPAD study had tried alcohol at least one time in their life (according to the findings of our study – 93.4% of

the respondents). It was found out that 50–70% of thirteen years old schoolchildren had already tried beer and wine, more than 30% – strong alcohol and more than 20% of them had already been drunk at least one time. Almost half (45.5%) of respondents of these studies stated that the main reason of drinking alcohol was a wish to relax (in our study such juveniles made up 44.8%). Comparing the findings of ESPAD study of 1995 and 1999 it is important to emphasize rapidly increasing alcohol drinking among the juveniles of Lithuania and other European countries. Today's increase of alcohol drinking during the recent years correlates with the spread of smoking and drug addiction (12, 23).

Data analysis shows that there are a lot of reasons inducing juveniles to drink alcohol. According to our findings, as it is stated by other authors as well (4, 9, 12–15), juveniles tasted alcohol for the first time usually wishing to relax, out of curiosity and having nothing to do. This shows how important it is to form social skills of individuals, their ability and readiness to resist social pressure to intoxicate with alcohol, ability to say 'no', to recognize and solve their psychological problems, ability to organize their leisure ingeniously and purposefully.

It is important to know which factors have the greatest effect on the prevalence of addiction in different period of human life. The findings of our former study proved that alcohol drinking is the first sign of drug addiction (21, 22). It was noticed that many school-aged children have wrong attitude towards narcotic substances and lack attention to an individual taking them. These factors increase the risk not only of drinking alcohol but taking narcotic substances as well. This shows that in execution of health education program at school it is necessary to pay greater attention to comprehensive exposition of the effect of alcohol, smoking and illegal drugs to the schoolchildren, to correct the attitude of schoolchildren towards this.

In 1999 the Government of the Republic of Lithuania approved National Alcohol Control Programme. Its basic objective is to decrease alcohol supply and drinking. The Ministry of Health is responsible for the implementation of this programme. In implementation of this programme methodical materials were published for prevention of schoolchildren's alcohol use and it is a manual for general practitioners on the harm of alcohol and prevention of drinking it (6).

The Ministry of Education and Science carry out primary prevention of tobacco, alcohol and other drugs. Preventive education of taking narcotic substances

(alcohol, tobacco, illegal drugs) at general education schools is integrated into health education, and the latter is integrated into many subjects or lectured as a subject of supplementary education or an optional subject (8, 9, 11, 23, 24).

At first sight it seems that there are a lot of different programmes and projects on prevention of alcohol, tobacco and other drugs pursued in Lithuania. There is also some methodical literature published for implementation of these programmes. But many of them involve only a small number of participants and majority of juveniles get knowledge from their older friends and unreliable sources (7, 12, 20).

The study proves that there is a close relation between drinking alcohol and smoking and taking other kinds of drugs. Therefore, it should be tried to supplant these addictions by common means. The number of juveniles taking narcotic substances is not decreasing and this shows that the prevention is not sufficient. The given data confirms that it is necessary to strengthen practical preventive activities at educational institutions, to ensure that the fight against narcotic substances would be one of the priority tasks in domestic and foreign actions. Moreover, the findings could serve in estimation of the policy of alcohol and tobacco control and in determination of strategic trends and the methods of primary prevention for future.

Conclusions

1. Most of schoolchildren (93.4%) of Kaunas city and its region admitted to drinking alcohol. Every second pupil, irrespective of his sex, stated being intoxicated with alcohol in the last month; 37.6% of the boys and 27.3% of the girls ($p < 0.05$) used alcohol especially large number of times (40 and more).

2. The main reasons that induced juveniles to drink alcohol are: wish to relax, curiosity, having nothing to do, wish to experience the state of intoxication, wish not to differ from group friends.

3. Alcohol drinking is related to many social factors of juveniles' lifestyle but the most significant of them are smoking and inadequate attitude towards narcotic substances and individuals taking them.

It is advisable to implement complex preventive programmes of alcohol, smoking and other drugs at schools taking into account the following trends of activities: formation of negative attitude of schoolchildren towards drug addiction, increase of schoolchildren's employment, improvement of educators' professional skills.

Paauglių polinkis vartoti alkoholinius gėrimus ir ši poelgi skatinantys veiksniai

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Santrauka. Tyrimo tikslas. Įvertinti alkoholinių gėrimų vartojimo paplitimą tarp moksleivių bei nustatyti jo veiksnius. Tyrimas atliktas Kauno miesto ir rajono mokyklose apklausus 7, 9 ir 11 klasės moksleivius – iš viso 410 moksleivių. Dauguma (93,4 proc.) Kauno miesto ir rajono moksleivių prisipažino, jog yra vartoję kokių nors alkoholinių gėrimų; iš jų 37,6 proc. vaikinių ir 27,3 proc. merginų ($p < 0,05$) – labai daug (40 ir daugiau) kartų. Kas antras moksleivis, nepriklausomai nuo lyties, teigė, jog per pastarąjį mėnesį buvo nors kartą apsvaigęs nuo alkoholio. Pagrindinės priežastys, paskatinusios alkoholinių gėrimų vartojimą, noras atsipalaiduoti, smalsumas, neturėjimas ką veikti. Kitos tiek pat dažnos priežastys: siekimas apsvaigti, nenorėjimas išsiskirti iš draugų. Daugiaveiksnių statistinės analizės metodu nustatyta, jog alkoholinių gėrimų vartojimas statistiškai reikšmingai siejosi su rūkymu ir teigiamu požiūriu į narkotines medžiagas bei jas vartojančius asmenis. Tyrimo duomenys galėtų būti panaudoti planuojant profilaktikos programas.

Išvada. Įprotis vartoti alkoholinius gėrimus tarp vyresnių klasių moksleivių yra plačiai paplitęs ir susijęs su rūkymu ir narkotinių medžiagų vartojimu, todėl mokyklose būtina įgyvendinti efektyvesnes profilaktikos programas siekiant užkirsti kelią alkoholio ir kitų narkotinių medžiagų vartojimui.

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References

- WHO. A summary of Global Status Report on Alcohol. Geneva: World Health Organization, 2001 (WHO/NCD/MSD/2001.2). Available from: URL: <http://www.kaiserfoundation.ca/uploads/pc020930alc.pdf>. 2004.
- WHO. Global Status Report on Alcohol. Geneva: WHO; 1999 (document WHO/HSC/SAB/99.11).
- WHO European Ministerial Conference on Young People and Alcohol. Available from: URL: http://www.whomsa.org/it/bulletin9_msa.html. 2004.
- Ganeri A. Narkotikai: Specialistės patarimai. (Drugs. Specialist's advices). Vilnius: Egmont Lietuva; 1999.
- Hibell B, Andersson B, Ahlström S, Balakireva O, Bjarnasson T, Kokkevi A, et al, editors. The ESPAD report: Alcohol and other drugs among students in 30 European countries. Stockholm, Swedish Council for Information on Alcohol and Other Drugs, Pompidou Group, Council of Europe; 2000.
- Grimaliauskienė O, Bulotaitė L, Subata E, Javtokas Z, Davidonienė O, Vainauskienė R. Narkotikų vartojimo prevencija bendruomenėje. Pirminės sveikatos priežiūros darbuotojo žinynas. (Prevention of drug usage in the community. A handbook of workers in primary health care.) Vilnius; 2002.
- Nic Gabhainn S, François Y. Substance use. In: Currie C, Hurrellmann K, Settertobulte W, Smith R, Todd J, editors. Health and health behaviour among young people. Copenhagen: WHO Regional Office for Europe; 2000. p. 97-114 (Health Policy for Children and Adolescents, No. 1. Available from: URL: <http://www.who.dk/document/e67880.pdf>
- Davidavičienė AG. Alkoholį ir kitus narkotikus vartojantys moksleiviai: Tyrimų duomenys. (The use of alcohol and other drugs among schoolchildren: Survey data.) Vilnius; 1999.
- Davidavičienė AG. Tėvams apie narkotikus. Kaip apsaugoti vaikus? (Information for parents about drugs. How to protect children?) Vilnius; 2001.
- Schulenberg JE, Maggs JL. A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. J Stud Alcohol 2002;14S:54-70.
- Bulotaitė L. Moksleiviai ir narkotikai: Tyrimų duomenys. (Schoolchildren and drugs: Survey data.) Vilnius; 2001.
- Harkin AM, Anderson P, Goos C. Smoking, drinking and drug taking in the European Region. Copenhagen: WHO; 1997.
- Wechsler H, Davenport A, Dowdall G, Moeykens B, Castillo S. Health and behavioral consequences of binge drinking in college. A national survey of students at 140 campuses. JAMA 1994;272(21):1672-7.
- Weitzman ER, Wechsler H. Alcohol use, abuse, and related problems among children of problem drinkers: findings from a national survey of college alcohol use. J Nerv Ment Dis 2000;188(3):148-54.
- Weitzman ER. Poor mental health, depression, and associations with alcohol consumption, harm, and abuse in a national sample of young adults in college. J Nerv Ment Dis 2004; 192(4):269-77.
- Klumbienė J, Tamošiūnas A, Petkevičienė J, Misevičienė I, Milašauskienė Ž. Alkoholinių gėrimų vartojimo įpročiai ir jų pokyčiai (1987–1993). (Habits of the usage alcoholic beverages and its trends in 1987–1993.) Medicina (Kaunas) 1997; 33(10):950-8.
- Grabauskas V, Zaborskis A, Klumbienė J, Petkevičienė J, Žemaitienė N. Lietuvos vaikų ir suaugusių žmonių gyvenimo pokyčiai 1994–2002 m. (Changes of health behaviour of Lithuanian adolescents and adults over 1994–2002). Medicina (Kaunas) 2004;40(9):884–90.
- Dėl valstybės alkoholio kontrolės programos patvirtinimo. Lietuvos Respublikos Vyriausybės nutarimas Nr. 212, 1999 02 25. (Order of the Government of the Republic of Lithuania

- nia "State programme for alcohol control".) Valstybės žinios 1999;21:603.
19. Davidavičienė AG. Narkotinių medžiagų vartojimo prevencija švietimo įstaigose: 2002 m. monitoringo duomenų analizė. (Prevention of narcotic substances at institutions of education: Analysis of the monitoring data in 2002.) Vilnius; 2002. p. 24.
 20. Zaborskis A, Makari J. Lietuvos moksleivių gyvenšana: raida 1994–1998 metais ir vertinimas tarptautiniu požiūriu. (Health behaviour of school-aged children: trends in 1994–1998 and cross-national comparison.) Panevėžys: E. Vaičekausko leidykla; 2001.
 21. Bielskutė J. Narkotinių medžiagų vartojimo tarp moksleivių sprendimo būdai ir kontrolės programos poreikis Kauno miesto ir rajono mokyklose. Magistro tezės. (The challenges of drug usage prevention and needs for control programme in schools in the Kaunas city and region. Master degree thesis.) Kaunas: Kauno medicinos universitetas; 2003.
 22. Bielskutė J, Zaborskis A. Paauglių narkomanija ir jos veiksniai. (Assessment of illicit drug use and related problems among adolescents.) Sveikatos mokslai 2003;4:7-15.
 23. Aškenytė R, Bulotaitė L. Mokykla be narkotikų. (School without drugs.) Vilnius; 2002.
 24. Černiauskienė M. Apie priklausomybę sukeliančias medžiagas ir jų vartojimo prevenciją ugdymo institucijose. Metodinė medžiaga. (Drug addiction substances and its prevention at institution of education. Methodical materials.) Vilnius; 2000.
 25. Žydzūnaitė V. Komandinio darbo kompetencijų edukacinė diagnostika ir jų vystymo, rengiant slaugytojus, pagrindimas. Daktaro disertacija. (Development of nurses' competencies in teamwork: educational diagnostics and training aspects. Doctoral dissertation.) Kauno technologijos universitetas; 2003.
 26. Bulotaitė L. Alkoholio ir kitų narkotikų vartojimo prevencija mokykloje. (Prevention of the use of alcohol and other drugs at school.) Vilnius; 2000.

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