Risk and protective factors of alcohol consumption among students of Varaždin County: a cross- sectional analysis

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Abstract

Background: Because of its availability, alcohol has become one of the most abundant substances among young people. It is the teenage age of young people who experiment with alcohol. The Varazdin environment is proverbially considered an area where alcoholic beverages are heavily consumed by the population. This study explored the views of alcohol consumption among high school students. The authors have determined which are risk and protective factors associated with the consumption of alcohol among students.

Methods: The sample included students of the entire generation of the third year of high school in Varaždin County (n= 1352). In the bivariate analysis, we used an independent test t-test and a chi-square. In the multivariate analysis, we used logistic regression.

Results: 92.4% of students have already consumed alcoholic beverages in their lifetime. We found that most alcohol was consumed by vocational school students, followed by gymnasium students and medical school students. If both the father and mother are tougher and if the mother is more determined, the student will be less likely to enjoy alcohol. The strongest factor affecting alcohol consumption is the presence of alcohol in the father (rarely and often).

Conclusions: For the first time, the medical school was included in the study, and the results showed a surprisingly high alcohol consumption among these students. In the study, we also proved that psychosocial factors have the greatest influence on alcohol consumption among students. It is important to strive to maintain healthy family relationships, communication, and family support, as well as to provide a better quality of leisure time. It is also necessary to encourage the development of prevention and education programs in schools.

Background

Croatia has a population of 4.3 million. The proportion of the young population (under 15 years) to the total population is 645000 : 3655000 [1]. Varaždin County is located in the northwestern part of Croatia. The city of Varaždin, one of the oldest Croatian cities, has always been administrative, cultural and educational headquarters Varaždin county [2]. There is a long tradition of grape-growing and wine production in Croatia. Wine production in Croatia has been increasing in recent years and amounted in 2011 to 1.4 million hectolitres, representing an increase of 15% compared to 2005. Wine production and viniculture is a traditional way of life. In homes and restaurants, local wines are commonly served. The Varaždin and Međimurje areas are the main vineyards of northern Croatia [1]. Because of this geographical location and drinking habits, we decided to research about drinking habits among high school students. Alcohol is the fifth leading risk factor for mortality and disease in the world; 5.1% of disability adjusted life-years (DALYs) and 5.9% of deaths are caused by the harmful use of alcohol. In Europe, risky and harmful use of alcohol is still the most important cause of death among young people between the ages of 15 and 29) [3]. Among European youngsters, the use of alcohol is high. In 2003, a study in 35 European countries revealed that Dutch students are in the lead with regard to binge drinking, together with students from Ireland, the Isle of Man, the United Kingdom and Germany [4]. In central and eastern Europe, alcohol is the fourth leading risk factor for disease and mortality [5]. The drinking habits of school children in Croatia are monitored through the ESPAD (European School Survey Project on Alcohol and Other Drugs), which has been conducted every four years since 1995 in over 30 European countries. In 2015, the study was conducted for the sixth time. Overall, 55% of students reported drinking alcohol in the past 30 days in 2015. The results from 2015 showed that the prevalence of reported drunkenness in the past 30 days was 16% for all students (17% of boys and 14% of girls). The proportion of boys and girls who reported having been drunk in the past 30 days was higher than the average among all participating countries (average 13% and 12%, respectively) [6].

The wide array of risk factors involved can be condensed into three main domains: constitutional predisposition, environmental factors (family and peers) and life events [7]. Kolšek reports in his study that by the age of 10, 73.4% of children have tried alcohol[8]. In Australia, several risk factors for starting up drinking in adolescence have been identified: use of alcohol in the family, specific communication (refers to the extent to which adolescents feel free to talk to their parents about actual information, for example about what they do, or on more emotional topics), general discipline and parental control, quality of a parent-child relationship, family conflicts, parental involvement in everyday activities of adolescents [9]. Many parents believe that they are responsible for the attitude of young people to alcohol, or when, where and how their children drink [9, 10]. Adolescence is a developmental period when physical and cognitive abilities are optimized when social skills are consolidated, and when sexuality, adolescent behaviors, and frontal cortical functions mature to adult levels. Population studies find that early age of drinking onset correlates with increased lifetime risks for the development of alcohol dependence, violence, and injuries [11]. Drinking during adolescence increases the hazardous or harmful alcohol use, heavy episodic drinking, alcohol dependence, injuries and psychological distress [12].

In order to prevent negative consequences and reduce alcohol consumption among young people, various preventive programs are introduced in schools. In England, an alcohol abuse prevention program (STAMPP (Steps Towards Alcohol Misuse Prevention Programme)) was created, combining the school curriculum on alcohol and various interventions. The results of the study showed that students developed positive behavioral changes with respect to alcohol, but preventive programs do not reduce the harmful effects of alcohol on young people

[13]. Parents also have an influence on alcohol consumption. Supervision and good communication between parents and adolescents can delay the start of drinking [14]. A Croatian campaign for the prevention of sales and serving of alcohol to persons under the age of 18 years was launched in 2015, entitled "Turn on your conscience – sometimes you need to say NO to children". The campaign called for consistent implementation of the law banning the serving and selling of alcoholic beverages to persons under the age of 18 years [15].

The aim of this study was to determine the prevalence of drinking among the students of Varaždin County, and possible associations of risky drinking with sociodemographic characteristics of the students. Added value is that we asked the questions related to electronic media addiction. There are new and important data about drinking in medical schools.

Methods

Study population

The survey was conducted on 1352 respondents (students) from 13 schools. It covered the entire generation of 3rd-year students in the 2018/2019 school year from thirteen high schools in Varaždin County. We divided students by type of school into grammar schools, vocational schools and medical schools (nurses, laboratory assistants, physiotherapists). The age of students is in the range of 15 to 20 years. The number of boys and girls is equal by gender. There are 692 young men (51.2%), while 660 (48.8%) are girls.

Prior to conducting the research, we requested a signed consent from the Ethics Committee of the Ministry of Science and Education of the Republic of Croatia, as these were underage students. In the Republic of Croatia, for the purposes of research in schools, a certificate from the competent Ministry is required for students under 18 years of age. This study was approved by the Ethics Committee of the Ministry of Science and Education of the Republic of Croatia on 27 September 2018 and number (533-05-18-004). As we received a positive response from the Ministry, in this case in the Republic of Croatia no parental consent is required for the research (according to the Code of Ethics for Research with Children [16] in Croatia, a child over the age of 14 gives written or oral consent for research by themself). We verbally informed the parents about the research. The research was in concordance with https://fra.europa.eu/en/publication/2014/child-participation-research.

In writing, we have fully respected the Code of Ethics for Research with Children [16].

Full anonymity was ensured for all students involved in the survey. The questionnaire contains questions such as year of birth and gender, on the basis of which the identity of the person completing the questionnaire could not be established.

We used a derivative of the questionnaire used in the doctoral thesis by prof. Marko Kolšek, PhD [8]. We added the questions related to electronic media addiction. The author of the questionnaire has already given oral consent to the use of his questionnaire. The questions in the questionnaire are closed and students can answer some of them. The students received a questionnaire in class and immediately after signing the informed consent, they started to fill it out. Students had 45 minutes to complete the questionnaire. Each respondent received an envelope containing a questionnaire with answers. The survey was filled out in paper form with a pen.

Students who did not want to take the survey had the right to refuse to participate. In all schools, almost all students approached the survey. Those students who were not present at the time of the survey did not subsequently complete the questionnaire. 8 surveys were incomplete and these surveys were not included in the analysis.

The study was conducted from September 2018 to February 2019. Data were processed from March to May 2019.

Measures

Alcohol consumption

The primary dependent variable for this study was the current drinking status. Students were asked about their drinking habits " Have you ever tried any alcoholic beverages (beer, wine, brandy, liqueur, whiskey, cider, cheesemaking ...)?". Students had to say "yes" or "no". Students that indicated any consumption were asked to report the number of drinks that they had in each of the last 7 and 30 days; "How many glasses of alcohol they had consumed in the last 30 and 7 days". We also asked the students "What type of alcoholic drinks do you drink most?" The answers offered were "beer", "wine (and champagnes)", "spirits (brandy, whiskey, liqueur ...)", "cider", "cocktails", "gemst", "rum-cola", "alcohol in tea" and "I don't drink alcohol at all". "Now I drink alcoholic beverages approximately: several times a year, several times a month, several times a week, every day, I do not drink alcohol at all; When I drink alcohol, I usually drink: less than one glass, one glass, one to two glasses, two to three glasses, more than three glasses, I don't drink alcohol at all".

Demographic Variables

We divided students by type of school into gymnasiums, of which were 334 (24.7%) students, vocational schools with 803 (59.4%) students and 215 (15.9%) students from medical schools.

The Central value (median) age of students is 18 years (interquartile range 17 to 18) in the range of 15 to 20 years.

Psychosocial Variables

In terms of life satisfaction, in principle, all students are satisfied. In 9% of cases in vocational schools, parents talk to students never or rarely. In vocational schools, compared to other schools, in a slightly smaller percentage (91.3%) parents sometimes or almost always talk to students (medical schools 93.7%, high schools 95.4%). There is no statistically significant difference by type of school and father's alcohol consumption. 42% of high school fathers drink alcoholic beverages only on special occasions, while 44% of medical school fathers occasionally drink alcoholic beverages. There was a statistically significant difference depending on the type of school and how the mother drinks alcohol (p = 0.006, χ2 test). Most often they are drunk only on special occasions (51.8%). Mothers of high school students who never go to medical schools never drink alcohol (32%). Mothers of high school students drink only on special occasions (60%) (Table 4).

Table 4

	Gymnasiums	Vocational schools	Medical schools	Total	P
How satisfied are you with living in your family [Medijan (25%-75%)]	10 (8–10)	9 (7–10)	9 (7–10)	9 (8–10)	0.001[†]
My parents talk to me [n(%)]					
never	4 (1)	14 (2)	2 (1)	20 (1.5)	0.02[*]
rarely	10 (3)	55 (7)	11 (5)	76 (5.6)	
sometimes yes. sometimes not	175 (52)	338 (42)	106 (49)	619 (45.8)	
almost always	145 (43.4)	396 (49.3)	96 (44.7)	637 (47.1)	
Total	334 (100)	803 (100)	215 (100)	1352 (100)	
My father is indulgent (1) – strict (5) [Mean (SD)]	3.77 (1.1)	3.55 (1.1)	3.62 (1.1)	3.62 (1.2)	0.02[†]
My mother is indulgent (1) – strict (5) [Mean (SD)]	3.94 (1.1)	3.83 (1.1)	3.61 (1.1)	3.82 (1.1)	0.003[†]
My father [n(%)]					
never drinks alcohol	36 (11)	92 (12)	33 (17)	161 (12.4)	0.08[*]
drinks alcohol only on special occasions	138 (42)	281 (36)	62 (31)	481 (36.9)	
occasionally drinks alcoholic beverages	124 (38)	313 (40)	87 (44)	524 (40.2)	
often drinks alcoholic	29 (8.9)	90 (11.6)	17 (8.5)	136 (10.4)	
Total	327 (100)	776 (100)	199 (100)	1302 (100)	
My mother [n(%)]					
never drinks alcohol	83 (25)	229 (29)	67 (32)	379 (28.5)	0.006[*]
drinks alcohol only on special occasions	198 (60)	400 (51)	91 (43)	689 (51.8)	
occasionally drinks alcoholic beverages	44 (13)	146 (19)	48 (23)	238 (17.9)	
often drinks alcoholic	6 (1.8)	12 (1.5)	6 (2.8)	24 (1.8)	
Total	331 (100)	787 (100)	212 (100)	1330 (100)	

The role of individual factors in predicting alcohol consumption (regression analysis)

Logistic regression assessed the impact of multiple factors on the likelihood that students would taste the alcohol. The model contains eight independent variables (gender, school, satisfaction with life in the family, conversation with parents, father characteristics, mother characteristics, father and mother alcohol consumption). The significance of individual predictors in predicting alcohol consumption is shown in Table 5.

Table 5
Predicting the probability that a student will taste alcohol (univariate regression analysis)

Parameter	β	Standard error	Wald	P	The odds ratio (Exp β)	95% CI for Exp β
Gender - male	0,46	0,208	4,77	0,03	1,58	1,05−2,37
School - gymnasium						
vocational	0,67	0,24	8,31	0,004	1,97	1,24−3,13
medical	-0,02	0,28	0,007	0,94	0,98	0,56−1,70
Satisfaction with life in your family	-0,14	0,07	4,32	0,04	0,87	0,76−0,99
My parents talk to me						
rarely	1,5	0,76	3,92	0,05	4,5	1,02−19,93
sometimes yes, sometimes no	1,4	0,58	6,2	0,02	4,3	1,36−13,6
almost always	0,85	0,57	2,2	0,14	2,4	0,76−7,28
My father is						
unkind - kind	-0,08	0,26	0,10	0,75	0,92	0,56−1,53
hesitant - determined	-0,26	0,28	1,01	0,32	0,76	0,45 − 1,29
careless - diligent	-0,01	0,25	0,001	0,97	0,99	0,61−1,61
not interested for me - interested for me	0,11	0,24	0,24	0,62	1,12	0,71 − 1,78
doesn't love me - loves me	0,15	0,24	0,36	0,55	1,16	0,72−1,86
nervous - calm	-0,38	0,20	3,75	0,05	0,68	0,46−1,005
indulgent - strict	-0,46	0,12	14,4	< 0,001	0,93	
unjust - just	-0,01	0,20	0,005	0,95	0,98	0,50−0,79
rough - gentle	-0,185	0,19	0,92	0,34	0,83	0,67−1,46
My father consumes alcohol						
conveniently	1,20	0,26	22,03	< 0,001	3,33	2,02−5,51
rarely	1,95	0,29	42,79	< 0,001	7,0	3,91−12,54
often	1,79	0,46	15,28	< 0,001	6,02	2,45−14,80
Constant	3,864	12,114	0,102	0,750	47,669	0,979-1,044
My mother consumes alcohol						
conveniently	0,38	0,22	2,92	0,09	1,47	0,95−2,27
rarely	1,07	0,38	7,96	0,005	2,92	1,39−6,14
often	0,23	0,76	0,09	0,76	1,26	0,29−5,57
My mother is						
unkind - kind	-0,75	0,32	5,35	0,02	0,47	0,025−0,89
hesitant - determined	0,57	0,24	5,61	0,02	1,78	1,10−2,89
careless - diligent	0,22	0,28	0,62	0,43	1,25	0,72−2,17

Parameter	β	Standard error	Wald	P	The odds ratio (Exp β)	95% CI for Exp β
not interested for me - interested for me	0,36	0,30	1,39	0,24	1,43	0,79−2,58
doesn't love me - loves me	0,07	0,29	0,06	0,80	1,07	0,61−1,88
nervous - calm	-0,43	0,22	3,99	0,05	0,65	0,42−0,99
indulgent - strict	-0,64	0,14	21,33	< 0,001	0,53	0,40−0,69
unjust - just	-0,18	0,25	0,52	0,47	0,83	0,51−1,37
rough - gentle	-0,08	0,28	0,09	0,77	0,92	0,54−1,58

	Number (%) of students according to whether they have ever tasted any alcoholic beverage			P*
	No	Yes	Total	
Do they own a smartphone				0,06
Yes	97 (94,2)	1217 (97,4)	1314 (97,2)	
No	6 (5,8)	32 (2,6)	38 (2,8)	
Do they use the internet				0,09
Yes	99 (96,1)	1229 (98,4)	1328 (98,2)	
No	4 (3,9)	20 (1,6)	24 (1,8)	
Total	403 (100)	400 (100)	803 (100)	

As a model, we looked at predictors that are significant. The model was statistically significant overall, χ2 = 24.78, P = 0.002, indicating that it can distinguish students who drink from those who do not drink. The model as a whole explains between 8.1% (by Cox & Snell) and 19.6% (by Negelkerke) of the variance in the presence of students who consume alcohol, and accurately classifies 92.5% of the cases.

Only four independent predictors made a unique statistically significant contribution to the model. If the father and mother are tougher, and if the mother is more determined, the student will be less likely to consume alcohol. Also, the strongest predictor that affects a student's alcohol consumption is their father's alcohol consumption (rare and frequent). There is no correlation between whether students have ever tried which alcoholic beverage and owning a smartphone or using the internet (Table 5).

Statistical Analyses

Categorical data are represented by absolute and relative frequencies. Differences of categorical variables were tested by the χ 2 test. The normality of the distribution of numerical variables was tested by the Shapiro-Wilk test. Numerical data are described by the arithmetic mean and standard deviation in the case of distributions that follow the normal and, in the other cases, the median and the limits of the interquartile range. Differences between normally distributed numerical variables between two independent groups were tested by Mann Whitney's U test, and between three independent groups, differences in numerical variables were tested by analysis of variance, and in the event of deviation from the normal distribution by the Kruskal Wallis test. Logistic regression assessed the impact of multiple factors on the likelihood that students would consume alcohol. We took eleven independent variables (gender, school, life satisfaction) as a model in his family, parental assistance, talking with parents, alcohol consumption with relatives, father characteristics, mother characteristics, alcohol consumption of father and mother), with the dependent variable alcohol consumption. The statistical program MedCalc Statistical Software version 18.11.3 (MedCalc Software bvba, Ostend, Belgium; https://www.medcalc.org; 2019) and SPSS Statistics 23 (IBM Corp.Released 2015. IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp.).

Results

Types Of Schools And Participants

The number of boys and girls is equal by gender. There are 692 young men (51.2%), while 660 (48.8%) are girls. Girls are significantly more represented in high schools, while boys are significantly more likely to attend vocational schools (χ2 test, P < 0.001).

Alcohol Consumption Habits

92.4% of students tried alcoholic beverages. Most are in vocational schools (94%), followed by gymnasiums (90%) and medical schools (89%).

The median of drunk glasses of alcohol in the last 30 days for all types of schools is 10. The interquartile range is different: for gymnasiums it ranges from 2 to 19, vocational schools range from 3 to 30, and for medical schools from 3 to 25. The median of drunk glasses of alcohol in the last 7 days is 2 for high schools, 3 for vocational and medical schools. The interquartile range for high schools ranges from 0 to 5, vocational schools range from 0 to 10, and for medical schools from 0 to 5 (Table 1).

Table 1

	Median (interquartile range)				P*
	Gymnasiums	Vocational schools	Medical schools	Total	
How many glasses of alcohol (alcoholic beverage) he has drunk in the last 30 days	10 (2−19)	10 (3−30)	10 (2−20)	10 (3−25)	0,001
How many glasses of alcohol (alcoholic beverage) he has drunk in the last 7 days	2 (0−5)	3 (0−10)	3 (0−5)	3 (0−7)	< 0,001
*Kruskal Wallis test					

Table 2

shows that third-grade students drink mostly beer (38.8%), then cocktails, gemst, rum-cola, alcohol in tea (18.6%), spirits drink 18.5%, wine and 12.5% of champagnes and 3% of cider. 8.7% of them do not drink alcohol at all.

	Number (%) of students by type of school				P*
	Gymnasiums	Vocational schools	Medical schools	Total	
What type of alcoholic drinks do you drink most?					< 0,001
beer	99 (30)	357 (44)	68 (32)	524 (38,8)	
wine (and champagnes)	38 (11)	95 (12)	36 (17)	169 (12,5)	
spirits (brandy, whiskey, liqueur ...)	79 (24)	134 (17)	37 (17)	250 (18,5)	
cider	14 (4,2)	17 (2,1)	9 (4,2)	40 (3)	
cocktails, gemst, rum-cola, alcohol in tea	68 (20,4)	137 (17,1)	46 (21,4)	251 (18,6)	
I don't drink alcohol at all	36 (10,8)	63 (7,8)	19 (8,8)	118 (8,7)	
Total	334 (100)	803 (100)	215 (100)	1352 (100)	
*χ^2 test					

Most often, students drink several times a month (41.4%). The highest number of students in this group is medical school students (47%) and the lowest is in vocational schools (39%). 26.6% of them drink weekly, 30% of whom attend vocational schools, 25% of medical schools and 19% of high schools. A few times a year, 18.6% of them drink, of which 25% are high school students, 17% from vocational schools and 15% from medical schools. 33.1% of students reported that when they drink alcohol, they usually drink more than three glasses, two to three glasses drink 22.9% and one to two glasses 22.3%. More than three glasses are mostly drunk by high school students (37.4%), but two to three glasses are from high school students (27.9%). One to two glasses are most commonly drunk in high schools (27%) (Table 3).

Table 3

| | Number (%) of students by type of school | | | | P* |
	Gymnasiums	Vocational schools	Medical schools	Total	
Now I drink alcoholic beverages approximately:					< 0,001
several times a year	84 (25)	134 (17)	33 (15)	251 (18,6)	
several times a month	145 (43)	315 (39)	100 (47)	560 (41,4)	
several times a week	63 (19)	243 (30)	53 (25)	359 (26,6)	
every day	5 (1,5)	41 (5,1)	10 (4,7)	56 (4,1)	
I do not drink alcohol at all	37 (11,1)	70 (8,7)	19 (8,8)	126 (9,3)	
When I drink alcohol, I usually drink:					0,002
less than one glass	8 (2)	22 (3)	7 (3)	37 (2,7)	
one glass	43 (13)	72 (9)	24 (11)	139 (10,3)	
one to two glasses	91 (27)	162 (20)	48 (22)	301 (22,3)	
two to three glasses	65 (19,5)	184 (22,9)	60 (27,9)	309 (22,9)	
more than three glasses	90 (26,9)	300 (37,4)	57 (26,5)	447 (33,1)	
I don't drink alcohol at all	37 (11,1)	63 (7,8)	19 (8,8)	119 (8,8)	
Total	334 (100)	803 (100)	215 (100)	1352 (100)	
*χ^2 test					

Discussion

Early identification of risk factors for adolescents can help prevent and/or reduce the risk [17]. Alcohol consumption by young people (particularly early initiation) is a predictor for poorer health in later life [18]. Concerns about frequent and excessive alcohol abuse in young people are increasing. The average age at which young people start drinking alcohol in Europe is twelve and a half years. Over the last decade, the amount of alcohol present among adolescents in the United Kingdom has increased [19]. In my research, I find that given the attitudes and characteristics of parents (if father and mother are tougher and if mom is more determined), the student is less likely to consume alcohol. The father's alcohol consumption is the most powerful factor in transferring this property to the child/student (rare and frequent). Limiting the availability of alcohol to the child, parental monitoring, parent−child relationship quality, parental involvement, and general communication reduces alcohol consumption in adolescence [20]. In 2015, compared to 2011, Croatia saw a slight decrease in the accessibility of alcohol to young people. The availability of alcohol is still very high, even though it is regulated by laws that prohibit the sale and service of alcohol to minors [21]. The survey covers all types of high schools that exist- gymnasiums, vocational schools, and medical schools. The medical schools included all nurses, laboratory assistants, and physiotherapists. Medical school students usually drink several times a month, two to three glasses of alcohol. Moore et al. in their research, they found that domestic violence and conflict, parents' more liberal attitude to alcohol use, and family history of substance abuse were positively correlated with one another and with higher rates of drinking [22]. Parental drinking, harsh parenting discipline, and adolescent antisocial behavior have an impact on adolescent alcohol consumption [23]. In a survey I did, 92.4% of students reported having tried alcoholic beverages. Already 94% have tried alcohol in vocational schools, 90% in high schools and 89% in medical schools. The latest ESPAD study, conducted in 2015, reports that 92.3% of students have tried alcoholic beverages [21]. The use of cell phones and the internet among young people is increasingly present in their daily lives and often causes addiction. Electronic media addiction has a great impact on students in terms of their mental health, time allocation and management, school performance, interpersonal relationships and health [24]. It is important to strengthen mental health because with increased and improved mental health, the rate of mobile addiction in students decreases [25].

The study has significant power because it included a large proportion of the population of the entire Varaždin County. The overall reliability rating of the full scale is expressed over the Cronbach Alpha coefficient. There are, however, some limitations. This study relies on students' self-perceptions of drinking habits, and their subjective satisfaction with family life and relationships with parents, which need not necessarily be objective, although full anonymity is provided to reduce this potential bias. In the survey may also be that students did not respond to what was happening; that they answered a little falsely. Also, the research focused more on psychosocial predictors and excluded some other factors that may play a role in alcohol consumption among young people, including the media, advertising and the area in which they live.

Conclusions

Addictions are a global problem these days, especially in the Western world. Addiction to substances that cause addiction is high because we have substances that are legal and addictive (alcohol, nicotine). Alcohol use has become widespread in recent decades. Modern times bring new and numerous reasons why addictions are a global problem and are strongly represented. Some of the reasons this has happened are new styles and lifestyles, new ways of having fun, new trends looking for new forms of endurance at a fast pace of life. All this contributes to the likelihood that young people will attempt some substance addiction during their growth and development. Therefore, the challenge of the modern world is to confront the problem of addiction and the fight against addiction, because addictions are different, conditioned by many factors, and thus the fight against addiction is more complex than it used to be. Today the family is certainly the starting point, but the problem has long since become a problem of the wider community with its size and complexity. Maintaining healthy family relationships, communication and family support is of great importance. At present, it is very important to enable a better quality of leisure (more attractive facilities for young people). Also, when we set bans and limits, we have to keep in mind that this is not enough and can often be counterproductive. More development of prevention and education programs in schools should be encouraged. Adolescents need to attract attention and satisfy their curiosity in a positive way, enabling them to make healthy decisions and choices for themselves.

Abbreviations

ESPAD: European School Survey Project on Alcohol and Other Drugs, STAMPP: Steps Towards Alcohol Misuse Prevention Programme.

Declarations

Ethics approval and consent to participate

This study was approved by the Ethics Committee of the Ministry of Science and Education of the Republic of Croatia on 27 September 2018, number (533-05-18-004). As we received a positive response from the Ethics Committee of the Ministry, in this case in the Republic of Croatia no parental consent is required for the research (according to the Code of Ethics for Research with Children [16] in Croatia, a child over the age of 14 gives written or oral consent for research by themself). The research was in concordance with https://fra.europa.eu/en/publication/2014/child-participation-research. We verbally informed the parents about the research. In writing, we have fully respected the Code of Ethics for Research with Children.

Consent to publish

Not applicable.

Availability of data and materials

The file will be available immediately after the defense of the PhD hypothesis. Data is currently available from the corresponding author on a reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

The authors participated in the redesign of the questionnaire. JŠP and DRP completed the study write-up and data analysis. Data analysis was conducted by KK. The authors read, contributed substantially to the draft and approved the final manuscript.

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