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Alcohol consumption among Ukrainian adolescents: family and pandemic factors

Picie alkoholu przez ukraińską młodzież szkolną. Analiza czynników rodzinnych i pandemii COVID-19

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On September 27 this year, our Dear Colleague Professor Svitlana Shchudlo passed away after a long battle with a serious illness. Professor Shchudlo was the first author of this article and leader of the research team from Drohobych. The article's co-authors would like to say farewell to Svitlana in sadness, and to honour her memory!

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Abstract

Introduction: The first purpose of this research was to estimate the prevalence of alcohol drinking and drunkenness among adolescents in the urban, suburban and rural populations in the Lviv region of Ukraine. The second purpose was to analyse the relationship between family, pandemic, socio-demographic factors and alcohol-related behaviours among adolescents.

Streszczenie

Wprowadzenie: Pierwszym celem badań było oszacowanie rozpowszechnienia picia alkoholu i upijania się wśród młodzieży w populacji miejskiej, podmiejskiej i wiejskiej w obwodzie lwowskim na Ukrainie. Drugim celem była analiza czynników rodzinnych, pandemicznych i społeczno-demograficznych związanych z piciem alkoholu i upijaniem się przez dorastającą młodzież.

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Material and methods: Data were collected in 2020 in three populations of Ukrainian adolescents aged 13-15 living in Lviv (N = 1085) in the small town of Drohobych (N = 499) and surrounding countryside (N = 454). Due to pandemic restrictions, an online questionnaire was used in Lviv, while a traditional paper questionnaire was circulated in Drohobych and the countryside. The questionnaire and methodology were taken from the Polish Mokotów Study.

Results: The results of the study indicate that rural youth drink alcohol and get drunk significantly more often than their urban peers. Alcohol-use rates in the countryside were twice as high as in Lviv. About 47% of youth drank alcohol in the company of their parents, with significantly more girls drinking with their parents. Regression analysis suggested that parental factors play a significant role in adolescent children alcohol-related behaviours. Parental monitoring and support proved to be protective factors, but the tradition of drinking with parents appeared to be a strong risk factor for adolescent drunkenness. Poor pandemic coping was found to be a risk factor for adolescent alcohol use.

Discussion: The study confirms the significant role of the residential environment, family factors as well as the role of pandemic coping in adolescents' alcohol behaviour. Some Ukrainian parents share a culture of consuming light alcoholic beverages with their adolescent children, although this culture might be risky for adolescent children. Detailed discussion about all these issues is provided.

Conclusions: Our study provides an interesting contribution to research on adolescent alcohol use and abuse in Eastern Europe. The results indicate the need to develop and implement preventive measures aimed at strengthening parenting skills and help them to reduce negative social influences. Practical implications are provided.

Keywords: Adolescents, Alcohol use, Drunkenness, Prevalence, Family factors, Pandemic.

Materiał i metody: Dane zebrano w 2020 r. w trzech populacjach młodzieży w wieku 13–15 lat mieszkającej we Lwowie (N = 1085), w Drohobyczu (N = 499) i na wsiach wokół Drohobycza (N = 454). We Lwowie zastosowano kwestionariusz internetowy, w Drohobyczu i okolicach tradycyjny kwestionariusz papierowy. Kwestionariusz i metodologia zostały zaczerpnięte z polskiego badania znanego jako badanie mokotowskie.

Wyniki: Wyniki wskazują, że młodzież wiejska pije alkohol i upija się znacznie częściej niż młodzież z miast. Wskaźniki używania alkoholu na wsi były dwukrotnie wyższe niż we Lwowie. Około 47% młodzieży piło alkohol w towarzystwie rodziców, przy czym istotnie więcej dziewcząt piło z rodzicami. Analiza regresji wykazała, że czynniki rodzicielskie odgrywają istotną rolę w zachowaniach dotyczących alkoholu u dorastających dzieci. Rodzicielski monitoring i wsparcie okazały się czynnikami ochronnymi, ale tradycja picia z rodzicami okazała się silnym czynnikiem ryzyka upijania się młodzieży. Słabe radzenie sobie z pandemią okazało się czynnikiem ryzyka picia alkoholu przez nastolatków.

Omówienie: Wyniki potwierdzają znaczącą rolę miejsca zamieszkania, czynników rodzicielskich oraz umiejętności radzenia sobie z pandemią w zachowaniach alkoholowych dorastających dzieci. Niektórzy ukraińscy rodzice podzielają kulturę spożywania lekkich napojów alkoholowych ze swoimi dorastającymi dziećmi, chociaż ten zwyczaj może być ryzykowny dla dorastającej młodzieży. Artykuł przedstawia szczegółową dyskusję nad tymi zagadnieniami.

Wnioski: Badania stanowią interesujący wkład w rozwój wiedzy o piciu alkoholu przez nastolatków w Europie Wschodniej. Wyniki wskazują na potrzebę wdrożenia działań profilaktycznych mających na celu wzmocnienie umiejętności rodzicielskich i pomoc w ograniczeniu negatywnych wpływów społecznych. Artykuł zawiera rekomendacje dla praktyki.

Słowa kluczowe: młodzież, picie alkoholu, upijanie się, rozpowszechnienie, czynniki rodzinne, pandemia.

Introduction

Alcohol is the most widely used psychoactive substances among children and adolescents in Ukraine. According to the latest wave of the ESPAD survey, 85.7% of Ukrainian adolescents consumed alcoholic beverages at least once in their lifetime [1]. Almost all alcohol-use indicators in the 2019 survey were close to the average for ESPAD countries. For example, in Ukraine, 47% of adolescents

confirmed alcohol consumption during last 30 days against the average for ESPAD countries (44%) and 12% of Ukrainian adolescents reported getting drunk in the past 30 days against the average of 13% in ESPAD countries. It is noteworthy that significantly higher rates of use of alcohol in the past 30 days were reported among girls (48%) than among boys (39%) [2] in Ukraine.

It can be noted that youth drinking mirrors the drinking behaviours of the adult population. A comparative analysis of 195 countries and territories showed that Ukraine ranks first in terms of average daily consumption of standard drinks among women (4.2 drinks) and sixth among men (7.0 drinks) [3, 4]. In this context, the trends in Ukrainian society are alarming. From 2011 to 2016, the number of newly diagnosed teenagers suffering from alcohol problems in Ukraine increased 1.5 times to 10.5 per 100,000 teenagers. The expansion of the alcoholic beverage market, its variety and ease of purchase as well as the tradition of drinking alcohol, which is very widespread, are considered to be the reasons for this increase [5]. In addition, there is a tendency for earlier first attempts to drink alcohol. According to a study of schoolchildren, 82% of them have tried alcohol under the age of 16, while by the age of 12 almost half have done so at 41% [6].

The complexity of Ukrainian society, economic instability, Russia's military aggression, significant labour migration, the COVID-19 pandemic and other unfavourable factors do not stabilise society and have focused research attention on the problem of adolescent alcohol consumption. Some of the results of international projects indicated a serious threat to youth from the use of psychoactive substances, including alcohol [1, 7, 8].

Family strength, especially positive family relationships and skilful parenting practices, are among the important factors that protect adolescent children from engaging in risky behaviours that include alcohol use [9, 10]. Parenting skills protecting adolescent children from problems include, but are not limited to, providing emotional support to children, maintaining good relationships with them, monitoring, maintaining nonviolent discipline and communicating expectations about rules, values and problem behaviours [9, 11]. Among many aspects of parenting practices, some have identified effective monitoring as a key parenting skill from a perspective of youth risk-behaviour prevention [12, 13]. On the other hand, conflicts between parents are the one of the strongest predictors of problem and risky behaviours in adolescents [14]. Other research indicates that parental antisocial modelling, physical abuse, harsh or punitive discipline promote delinquency, substance use and other problem behaviours among adolescents [15].

The COVID-19 pandemic has posed new challenges for Ukrainian society and especially for schoolchildren who had to struggle with social isolation, remote education and restrictions. The special studies on the mental health of Ukrainian students were not conducted during COVID-19. Some general information about the mental health and behavioural risks to students associated with isolation can be gleaned from foreign studies. Results from a nationwide survey of parents and children in the United States during the COVID-19 pandemic indicate that 27% of parents reported deterioration in their mental health and 14% reported deterioration in their children's mental health [16]. According to this study on the effects of COVID-19 on mental health of in the United States, 71% of students reported experiencing increased stress and anxiety due to COVID-19 [16]. Factors that may have impacted the mental health of school-aged youth include school closures and limited opportunities to spend time away from home, with consequent uncertainty due to disruptions in education, limited opportunities for physical activity and isolation from peers [17, 18].

Another source of information about youth mental health is research conducted among high school students [19, 20]. According to the survey results, among the problems associated with distance learning, students mention a lot of homework, physical pain, distraction and technical problems (internet speed, notebooks) among others. At the same time, among the most positive effects of the pandemic situation were mentioned saving time and money, more time for oneself and loved ones and self-education [20]. In another study, the authors analysed the impact of pandemic-related restrictions on parent-child relationships. The researchers focused on the impact of the COVID-19 pandemic and restrictions on Ukrainian families' functioning and psychological well-being. They found that, in addition to the threat of coronavirus infection, a major challenge was the long stay of families in a confined space, combined with remote work and distance learning of children [19].

At the request of the Ministry of Education and Science of Ukraine, special studies of the school during the pandemic were regularly conducted by the Cedos Research Centre. Researchers focused on the organisation of the educational process, legal regulations on quarantine rules and distance learning and students' psychological well-being [21]. The value of this study lies in providing knowledge that the learning process takes place under conditions of uncertainty and unpredictability, which is a source of additional stress for students. Ukrainian students are also characterised by digital inequality, which has become another stressor. According to the State Service for Quality Education, 47% of school directors indicated that access to high-speed internet was a problem for teachers and students. About 22% of parents surveyed felt that the quality of the internet connection was poor. Unequal access to high-speed internet in online distance education settings and insufficient provision of computers and laptops for Ukrainian students is another stressor. About 62% of principals stated that most teachers and students do not have the necessary equipment [21].

Given the limited number of studies on students' risk behaviours during the COVID-19 pandemic, our pioneering study certainly has cognitive and applied value. The problem of alcohol consumption among adolescents and its relationship with various psychosocial factors is not well studied in Ukraine. The purpose of this study is to fill this gap. In addition, the regional aspect of alcohol consumption by adolescents and the influence of family factors have not been analysed except for several research works of the authors of this article [22-25]. The objectives of this study are threefold. First, we sought to determine the extent and patterns of alcohol use among adolescents in urban, suburban and rural populations in the Lviv region of Ukraine. Second, sex differences in adolescent alcohol use were analysed. Third, we sought to analyse the relationships between familial, pandemic, socio-demographic factors and alcohol consumption and drunkenness among 14- to 15-year-old adolescents.

Material and methods

The empirical data used in this article include questionnaire data obtained from a Ukrainian-Polish survey conducted in 2020 among 14 to 15-year-old adolescents from Ukraine and Poland. This study was based on the methodology the Mokotów Study which has been regularly conducted in Poland since the early 1980s [26].

The territorial boundaries of the Ukrainian survey include the Lviv Oblast region of Ukraine, which is closest to Poland and the European Union. The sample was selected to be representative of three types of location, including a large city (Lviv, population 721,151), a small city (Drohobych, population 74,610) and rural areas (Drohobych district, population 46,382).

The study was conducted in November and December 2020 by two groups of researchers. In Lviv, researchers from Lviv Polytechnic National University and Ivan Franko National University conducted the survey, while in Drohobych and rural areas, the survey was conducted by researchers from the Ivan Franko Drohobych State Pedagogical University. In Lviv, due to COVID-19 pandemic, the survey was conducted online. In Drohobych and rural areas, the surveys were conducted traditionally during school lessons. Due to these differences, the survey procedure is described separately for Lviv and the Drohobych region.

The Lviv survey procedure

The target population was 6,902 ninth graders studying in 265 classes from 110 schools in Lviv. Twenty-eight classes from 27 schools in different parts of the city were randomly selected to participate in the study. The directors of two schools refused to participate in the study, arguing that the questionnaire might trigger interest in psychoactive substances and/or because the confidentiality of the study was insufficient. Therefore the number of respondents was balanced by students from parallel classes of those schools that were selected and agreed. The all school directors were interviewed either face-to-face or by telephone, the procedure of the survey was explained and the class teachers and school psychologists in charge were designated.

The researchers prepared an online survey based on Google Forms and a packet of documents for directors, teachers and parents explaining the purpose, objectives and study procedure. A pilot survey was conducted in three ninth-grade classrooms in one of the schools not selected for the main study. The results of the pilot study helped prepare the online survey and questionnaire. In order to comply with

the legislation in force in Ukraine, the questionnaire was checked by specialists from the Cabinet of Psychology and Social Work of the Lviv Regional Institute of Postgraduate Pedagogical Training, who gave a positive opinion on the possibility of using the questionnaire for survey research in schools.

Prior to the study, informational meetings were held with school officials to discuss the procedure for obtaining parental consent and to establish schedules for the study in school classrooms. Information about the study was posted in parent groups (on Viber, Messenger) along with a parental consent form indicating the time when the study would be conducted with each class as well as contact information for the NU "Lviv Polytechnic" person. None of the parents refused to allow their child to participate in the survey.

During the survey, the researcher connected via the Zoom or Google Meet platform and instructed students on how to complete the survey and answered questions if additional clarification was needed for students. The survey coincided with the period of distance learning and the pre-holiday season. As a result, a group of students did not even participate in the online classes. In order to cover the required number of respondents, it was necessary to involve students from parallel classes. Finally, 1085 students from Lviv took part in the study. The response rate was 86%.

Drohobych survey procedure

Information about the population of ninth grade students from Drohobych and Drohobych district was obtained from local departments of education. The target population were 939 schoolchildren in Drohobych and 570 in Drohobych district. The sample was formed by two-stage random selection. Schools were selected in the first stage and the classes were selected in the second. Ninth graders of different types of schools attended by students aged 13-15 were included in the study. The sample included 15 schools in Drohobych (23 classes) and 33 in the Drohobych district (33 classes).

The school directors were informed by official letters about the study procedure. Consent was also obtained from classroom teachers and parents. There were no refusals from directors, teachers or parents. A pilot study was conducted in two classes (30 students) in one school in Drohobych not selected for the main study. Several adjustments were made to the questionnaire based on the results of the pilot study.

The survey in schools of Drohobych and the Drohobych district was conducted in classrooms using a paper-pencil questionnaire version. The interviewers were trained students from the Ivan Franko State Pedagogical University of Drohobych, who had signed an undertaking to follow the *Guidelines for Conducting Surveys in Schools during a Pandemic*. Each interviewer was assigned a school and a preliminary briefing was conducted.

The survey lasted for one typical class hour (45 minutes). After completing the survey, the student placed the survey in a sealed envelope. No refusals were recorded among the students. Finally, 499 students from Drohobych and 454 students in rural areas took part in the study. The response rate in the sample was 85%.

Measures

The majority of questions and scales were already used in other Polish studies [27, 10, 26] and in Ukraine in the 2016 survey [7]. The tools demonstrated good psychometric properties.

Dependent variables

The two dependent variables were alcohol use in the past 30 days and episodes of being drunk in the past 30 days.

Alcohol use in the past 30 days: Measured by a single question adapted from the ESPAD survey, about the frequency of any alcohol use in the past 30 days; with 7-point Likert type scale of answers from "1" – did not drink to "7" – 40 times or more [2].

Drunkenness in the past 30 day: Measured by a single question adapted from the ESPAD survey, about the frequency of drunkenness in the past 30 days; with 7-point Likert type scale of answers from "1" – did not drink to "7" – 40 times or more [2].

Answers for both these questions were dichotomised to indicate drinking/getting drunk at least once in the past 30 days.

Independent variables

The independent variables consisted of a set of family characteristics and an in-depth analysis of alcohol use patterns (with whom alcohol

was drunk). In addition, a few questions also addressed responses to COVID-19 pandemic restrictions and coping with the pandemic.

Family characteristics available in the database included:

1. Family composition (*two parents family* versus *other – single mother/father, step mother/father, living with other person(s)*).
2. Number of siblings (*none*, *1, 2* or *3+*).
3. Mother/father education (*university degree versus other/unknown*).
4. Mother/father employment (*no/unknown* or *yes*).
5. Cigarettes smoking by parents (dichotomized into *no* or *yes*).
6. Patterns of alcohol use – the questions on the company in which the student drank alcohol at the last occasion was derived from the "Beer-Wine-Vodka" questionnaire [28]. Answers to choose from for this question were: a) with parents, b) with peers, c) with other adults, d) alone. Responses were dichotomised to distinguish between a) those who drank with parents and b) those who drank with peers, other adults or alone.
7. Parental monitoring of outside home activities – a 9-item scale regarding parental behaviours/attitudes in the context of what adolescent child does outside the home and with whom they stay and how they spend their own money [29], with responses on a 5-point Likert type scale (from "0" = never to "4" = always), range 0-36, mean 24.39, SD = 8.64. In the study sample, this scale had high reliability (Cronbach α = 0.90). For comparisons between the three locations and for logistic regression analyses, results were divided by the distribution of responses into 3 groups of similar size across the sample: low parental monitoring (30.5% of sample with low end of the scale), moderate parental monitoring (32% of the sample with values around mean) and high parental monitoring (37.5% with high end of the scale).
8. Parental monitoring of internet use – 3 additional items added to the Parental monitoring scale (developed by a Polish team), asking about parental behaviours/attitudes in the context of child's activity in the internet with the same 5-point Likert scale (Cronbach α = 0,74), range 0-12, mean = 5.29, SD = 3.39. The results were divided by the distribution of responses into 3 groups of similar size: low internet monitoring (34% of sample with low end of the scale), moderate internet monitoring (31.5% of the sample with values around mean) and high internet monitoring (34.5% with high end of the scale).
9. Parental support – a 12-item scale derived from the FLQ-Family Life Questionnaire [30] measuring cohesiveness, expressiveness, conflict management within the family with the 4-point Likert type scale of answers from "0" = "definitely no" to "3" = "definitely yes", range 0-36, mean = 24,30, SD = 7.15; Cronbach α = 0,89. The results were sorted into 3 categories by the distribution of responses into 3 groups of similar size indicating low parental support (29% of sample with low end of the scale), moderate parental support (29.5% of the sample with values around mean) and high parental support (41.5% with high end of the scale).
10. Communication with mother/father in case of problems faced by a child – two questions developed by the survey team on the frequency of talks with mother/father in case of problems faced by an adolescent child with 5-point Likert type scale of answers from 1 = always to 5 = never. The answers were dichotomised into *always/often* or *from time to time/rarely/never*).
11. Dealing with COVID-19 pandemic – two sets of questions developed by the authors of survey to measure (1) the dissatisfaction with the COVID-19 pandemic limitations (12 items) and (2) the self-assessed coping with the constraints resulting from the "lockdown" (5 items). Both sets of questions used a 5-point scale of answers (range 0-58, mean = 30.03, SD = 9.64) and form a scale with high reliability (Cronbach's α = 0.83). Results were categorised by the distribution of responses into three groups indicating poor, average and well coping in these extraordinary circumstances, poor coping (32.5% of sample with low end of the scale), average coping (31.5% of the sample with values around mean) and coping well (35.5% with high end of the scale).

Analysis

First, we characterised the studied populations in terms of variables of interest alcohol, family and pandemic-related variables. The cross-location differences (between Lviv, the regional capital city, Drohobych town and Drohobych rural area) were assessed by z-test with the Bonferroni correction

for multiple comparisons. The differences calculated at a significance level of 0.05, between pairs of columns (for a given row) are marked in the cross-tab with subscript letters. Second, the binominal logistic regression analyses, with the forward stepwise option were conducted separately for both of the dependent variables (any alcohol use in the past 30 days and getting drunk in the past 30 days). The variables of study location, age, sex and family characteristics, pandemic reactions/coping were included, as described above, with the exception of the variable "alcohol use by an adolescent child in the company of parents vs. alcohol use in the company of peers, other adults or alone" in the first model which largely overlapped with the dependent variable "alcohol use in the past 30 days". This independent variable was included in the second model where "getting drunk in the past 30 days" was the dependent variable.

All analyses were conducted with the SPSS 22. The online questionnaire in Lviv did not allow questions to be omitted and in Drohobych area where the paper and pencil version of questionnaire was circulated, the project staff asked participants to answer all questions carefully; there were almost no missing data.

Results

Sociodemographic characteristics

Table I presents the sociodemographic characteristics of the sample in three locations. Although sex was balanced in the whole sample, the percentage

Table I. Socio-demographic differences across study locations

Factor	Drohobych, rural area (*N* = 454) %	Drohobych, town (*N* = 499) %	Lviv (*N* = 1085) %	Totally (*N* = 2038) %
Sex				
Boys	56.4[a]	49.3[a,b]	43.2[b]	47.6
Girls	43.6[a]	50.7[a,b]	56.8[b]	52.4
Age				
13-14	79.7[a,b]	83.7[a]	72.4[b]	76.7
15+	20.3[a]	16.3[a]	27.6[b]	23.3
Number of siblings				
0	12.8[a]	16.0[a,b]	19.8[b]	17.3
1	53.5[a]	57.9[a]	56.7[a]	56.3
2	20.7[a]	17.0[a]	15.8[a]	17.2
3 or more	13.0[a]	9.0[a,b]	7.7[b]	9.2
Family composition				
Both parents	85.9[a]	83.2[a]	83.5[a]	84.0
Only with mother	7.7[a]	9.0[a]	9.7[a]	9.1
Only with father	2.9[a]	1.6[a]	1.4[a]	1.8
Parental higher education				
Mother	26.7[a]	48.1[b]	55.4[c]	47.2
Father	13.2[a]	34.1[b]	44.1[c]	34.7
Parental employment				
Mother	78.2[a]	84.4[b]	86.1[b]	83.9
Father	85.7[a]	88.6[a,b]	90.6[b]	89.0
Parental smoking				
Yes	37.2[a]	43.1[a]	41.9[a]	41.2

Differences between column proportions (in a given row) calculated by z-test at 0.05 significance level with Bonferroni correction. Differences between columns are indicated by index letters (a, b, c). Marking all the results in the columns with the index letter "a" means that there are no significant differences between the proportions of the columns. Marking the columns with different letters e.g., [a] vs. [b], [a] vs. [c], [b] vs. [c], means significant differences between the columns thus marked.

Table II. Descriptive characteristics of family factors by study location and sex

Factor/Sex/Categories	Drohobych, rural area (*N* = 454) %	Drohobych, town (*N* = 499) %	Lviv (*N* = 1085) %	Totally (*N* = 2038) %
Parental monitoring of outdoor activities				
Boys				
Low	50.4[a]	42.7[b]	37.7[b]	42.3
Moderate	30.9[a]	35.8[a]	31.1[a]	32.2
High	18.8[a]	21.5[a]	31.1[b]	25.4
Girls				
Low	28.3[a]	22.1[b]	15.9[b]	19.7
Moderate	31.3[a]	34.8[a]	30.4[a]	31.6
High	40.4[a]	43.1[a]	53.7[b]	48.7
Parental monitoring of internet activities				
Boys				
Low	47.3[a]	38.6[b]	37.1[b]	40.2
Moderate	26.6[a]	33.7[a]	32.0[a]	31.0
High	26.2[a]	27.6[a]	30.9[a]	28.8
Girls				
Low	28.8[a,b]	36.0[b]	25.2[a]	28.4
Moderate	30.8[a,b]	40.7[b]	28.1[a]	31.6
High	40.4[a]	23.3[b]	46.8[a]	40.0
Parental support				
Boys				
Low	30.9[a]	24.4[a]	26.4[a]	27.1
Moderate	36.3[a]	30.9[a,b]	26.0[b]	30.0
High	32.8[a]	44.7[b]	47.5[b]	42.9
Girls				
Low	22.2[a]	35.6[b]	31.2[b]	30.6
Moderate	33.3[a]	28.9[a]	27.9[a]	29.1
High	44.4[a]	35.6[a]	40.9[a]	40.3
Communication with a mother in case of problems faced by a child				
Boys				
Never/Rarely	50.4[a]	36.2[b]	44.6[b]	44.0
Often/Always	49.6[a]	63.8[b]	55.4[b]	56.0
Girls				
Never/Rarely	35.4[a]	37.2[a]	38.5[a]	37.6
Often/Always	64.6[a]	62.8[a]	61.5[a]	62.4
Communication with a father in case of problems faced by a child				
Boys				
Never/Rarely	59.4[a]	54.9[a]	59.1[a]	58.1
Often/Always	40.6[a]	45.1[a]	40.9[a]	41.9
Girls				
Never/Rarely	68.7[a]	75.1[a]	71.6[a]	71.9
Often/Always	31.3[a]	24.9[a]	28.4[a]	28.1

Differences between column proportions (in a given row) calculated by z-test at 0.05 significance level with Bonferroni correction. Differences between columns are indicated by index letters (a, b, c). Marking all the results in the columns with the index letter "a" means that there are no significant differences between the proportions of the columns. Marking the columns with different letters e.g., [a] vs. [b], [a] vs. [c], [b] vs. [c], means significant differences between the columns thus marked.

Table III. Descriptive characteristics of copying with pandemic restrictions by study location and sex

Factor/Sex/Categories	Drohobych, rural area (*N* = 454) %	Drohobych, town (*N* = 499) %	Lviv (*N* = 1085) %	Totally (*N* = 2038) %
Dealing with the COVID-19 pandemic				
Boys				
Poor	23.4[a]	26.0[a]	26.7[a]	25.6
Average	32.4[a]	30.1[a]	31.1[a]	31.2
Well	44.1[a]	43.9[a]	42.2[a]	43.2
Girls				
Poor	42.9[a]	40.7[a]	37.3[a]	39.2
Average	32.3[a]	28.5[a]	33.8[a]	32.2
Well	24.7[a]	30.8[a]	28.9[a]	28.6

Differences between column proportions (in a given row) calculated by z-test at 0.05 significance level with Bonferroni correction. Differences between columns are indicated by index letters (a, b, c). Marking all the results in the columns with the index letter "a" means that there are no significant differences between the proportions of the columns. Marking the columns with different letters e.g., [a] vs. [b], [a] vs. [c], [b] vs. [c], means significant differences between the columns thus marked.

of rural-area male participants was significantly higher than in Lviv. Respondents in Lviv were slightly older than in other study sites. There were also significant differences between families of students in three study locations. Adolescents living in the countryside were more likely to have three or more siblings than students in Lviv. The percentage of parents with university education increases with the size of the place of residence. The percentage of mothers employed was higher in town/city than in rural areas, and fathers' employment rates differ significantly between Lviv and countryside. The majority of students lived with both parents (84%), about 9% lived only with a mother and about 2% with a father only. There were no cross-location differences in terms of family composition and parents who smoke cigarettes, although having both parents who smoke cigarettes regularly was more prevalent in town/city than in rural areas (data are not presented in the table).

Descriptive characteristics of family factors

Descriptive characteristics of family factors are presented in the Table II. More girls than boys perceive strong parental monitoring of their out of home activities (49% vs. 25%) and in the internet (40% vs. 29%). The lowest level of parental monitoring was reported by adolescents from rural areas and the highest among Lviv adolescents. The parental monitoring of boys activities in the internet was the weakest in rural areas as compared to Lviv students. Among girls higher rates of strong parental monitoring of internet use were observed in Lviv (47%) and villages (40%) as compared to Drohobych town (23%).

Among boys, the percentage of those who felt strong parental support was higher in the town/city than in rural areas (33% in rural areas, 45% in Drohobych and 48% in Lviv). Among girls, the lowest rates of weak parental support were reported in rural areas (22%).

Boys from Lviv and Drohobych town more often communicate with their mothers in case of problems than boys from rural places. Among girls, there were no differences by type of study location in frequency of communication in case of problems with mother. There were also no differences by study location in communication with fathers, however girls less often communicate with fathers in case of a problem than do boys.

Descriptive characteristics of dealing with pandemic

As the study took place during the COVID-19 pandemic, it is important to check how adolescents deal with this special situation. Data presented in the Table III indicate that self-assessed coping with the pandemic restrictions and obligations was better among boys (43% reported they coped well) than girls (29%). There were no significant cross-location differences in this aspect.

Table IV. Patterns of alcohol use by study location and sex

Factor	Drohobych, rural area (*N* = 454) %	Drohobych, town (*N* = 499) %	Lviv (*N* = 1085) %	Totally (*N* = 2038) %
Alcohol use in the last 30 days				
Boys	61.7[a]	44.7[b]	23.9[c]	39.1
Girls	70.2[a]	61.7[a]	35.2[b]	48.0
Total	65.4[a]	53.3[b]	30.3[c]	43.8
Getting drunk in the last 30 days				
Boys	21.1[a]	14.2[a]	6.0[b]	12.0
Girls	22.2[a]	20.2[a]	7.0[b]	12.9
Total	21.6[a]	17.2[a]	6.5[b]	12.5
Alcohol use in the company of parents in the last occasions				
Boys	30.5[a]	45.5[b]	34.5[a]	36.3
Girls	35.4[a]	58.1[b]	54.1[b]	51.5
Total	32.6[a]	51.9[b]	45.6[b]	47.4
Alcohol use in company of peers or other adults or alone in the last occasion				
Boys	51.6[a]	28.9[b]	18.6[c]	29.9
Girls	53.5[a]	32.4[b]	16.6[c]	27.2
Total	52.4[a]	30.7[b]	17.4[c]	28.5

Differences between column proportions (in a given row) calculated by z-test at 0.05 significance level with Bonferroni correction. Differences between columns are indicated by index letters (a, b, c). Marking all the results in the columns with the index letter "a" means that there are no significant differences between the proportions of the columns. Marking the columns with different letters e.g., [a] vs. [b], [a] vs. [c], [b] vs. [c], means significant differences between the columns thus marked.

Patterns of alcohol use

Alcohol-use patterns are presented separately for study locations and male and female participants (Table IV). The prevalence of alcohol use at least once in the past 30 days was the highest in rural area and the lowest in urban area of Lviv. The same is observed for the frequent alcohol use among boys. Both male and female students in Lviv got drunk less frequently than students in two other study locations. In all locations, the level of alcohol consumption by female students in the last 30 days was higher than among males.

As can be seen in the Table IV, the prevalence of alcohol use in company of parents was much higher among girls than among boys (51.5% vs. 36.3%). The rates of adolescent males who, at the last drinking occasion drank alcohol in company of parents, were significantly higher in Drohobych (45.5%) as compared to Lviv (34.5%) and rural areas (30.5%). Female adolescents more frequently drank alcohol with parents in town/city (58.1% in Drohobych and 54.1% in Lviv) than in villages (35.4%). It should be noted that the most common alcoholic beverage consumed with parents was wine (37.8%), followed by beer (17%) and low-alcohol cocktails (9.4%). The least frequently drunk alcoholic beverage with parents was vodka (2.5%). The structure of alcoholic beverage consumption with parents corresponds to the overall structure of alcohol consumption by teenagers as the most "popular" liquor was wine (39.9% of teenagers consumed wine in the last 30 days in the village, 27.3% – in Drohobych and 15.8% in Lviv), beer was in second place (village – 25.65%, Drohobych – 19.05%, Lviv – 9.85%), vodka in third place (village – 11.65%, Drohobych – 8.55%, Lviv – 2.75%). The data is not shown in the table.

Frequency of drinking and drunkenness by family characteristics and pandemic coping

Students whose parents smoke cigarettes had higher rates of alcohol use and drunkenness, and those who live in single or stepparent families had higher rates of drunkenness. Mother and father employment status did not differ adolescent alcohol use and drunkenness. In students who had adequate relationships with their parents (high support, conversations with parents in case of

Table V. Frequency of drinking and getting drunk in the past 30 days by family characteristics and pandemic coping

Categories	Alcohol use in the past 30 days (%)		Getting drunk in the past 30 days (%)	
	No	At least once	No	At least once
Family composition				
Both parents	83.8[a]	84.2[a]	84.7[a]	78.8[b]
Other	16.2[a]	15.8[a]	15.3[a]	21.2[b]
Mother employed				
Yes	84.7[a]	82.8[a]	84.0[a]	83.5[a]
No/Don't know	15.3[a]	17.2[a]	16.0[a]	16.5[a]
Father employed				
Yes	88.0[a]	90.4[a]	89.3[a]	87.1[a]
No/Don't know	12.0[a]	9.6[a]	10.7[a]	12.9[a]
Parents smoke cigarettes				
Yes	38.4[a]	44.7[b]	39.9[a]	49.8[b]
No	61.6[a]	55.3[b]	60.1[a]	50.2[b]
Parental monitoring of outdoor activities				
Low	26.8[a]	35.2[b]	27.5[a]	51.4[b]
Moderate	30.7[a]	33.4[a]	31.6[a]	33.7[a]
High	42.5[a]	31.4[b]	40.9[a]	14.9[b]
Parental monitoring of internet activities				
Low	30.0[a]	39.1[b]	31.5[a]	51.8[b]
Moderate	30.0[a]	33.0[a]	31.7[a]	28.2[a]
High	40.0[a]	27.9[b]	36.8[a]	20.0[b]
Parental support				
Low	26.0[a]	32.6[b]	26.2[a]	47.5[b]
Moderate	26.1[a]	34.0[b]	29.8[a]	27.8[a]
High	47.9[a]	33.4[b]	44.0[a]	24.7[b]
Communication with a mother in case of problems faced by a child				
Never/Rarely	37.1[a]	45.2[b]	38.6[a]	54.9[b]
Often/Always	62.9[a]	54.8[b]	61.4[a]	45.1[b]
Communication with a father in case of problems faced by a child				
Never/Rarely	62.1[a]	69.4[b]	64.2[a]	73.3[b]
Often/Always	37.9[a]	30.6[b]	35.8[a]	26.7[b]
Dealing with the COVID-19 pandemic				
Poor	30.6[a]	35.4[b]	32.8[a]	32.5[a]
Average	30.6[a]	33.2[a]	32.2[a]	28.2[a]
Well	38.7[a]	31.4[b]	35.0[a]	39.2[a]

Differences between column proportions (in a given row) calculated by z-test at 0.05 significance level with Bonferroni correction. Differences between columns are indicated by index letters (a, b). Marking all the results in the columns with the index letter "a" means that there are no significant differences between the proportions of the columns. Marking the columns with different letters e.g., [a] vs. [b] means significant differences between the columns thus marked.

problems, and adequate monitoring), drinking alcohol and drunkenness occurred significantly less often than in students whose relationships were less adequate. Table V shows the percentages of students who drank alcohol/got drank in the categories distinguished by parental variables. Students who coped well in the pandemic were less likely to drink alcohol in the last 30 days, but this variable did not differentiate the incidence of drunkenness in the last 30 days.

Table VI. The results of logistic regression explaining adolescent alcohol use in the past 30 days. The final step (*N* = 2038)

Variables/Category	Odds ratio	95% Confidence interval		Significance
		Lower	Upper	
Place of residence				
Lviv (ref.)				
Rural area	4.942	3.868	6.314	0.000
Drohobych	2.709	2.157	3.403	0.000
Sex				
Male (ref.)				
Female	1.711	1.404	2.086	0.000
Father employed				
No (ref.)				
Yes	1.659	1.217	2.262	0.001
Parental monitoring of internet use				
High (ref.)				
Moderate	1.395	1.096	1.776	0.007
Low	1.584	1.229	2.041	0.000
Parental support				
High (ref.)				
Moderate	1.624	1.287	2.051	0.000
Low	1.604	1.245	2.065	0.000
Parental smoking				
No (ref.)				
Yes	1.227	1.011	1.489	0.038
Dealing with COVID-19 pandemic				
Well (ref.)				
Average	1.415	1.119	1.788	0.004
Poor	1.456	1.152	1.841	0.002
Constant	0.084			0.000

Results of logistic regression

Model 1 – predictors of alcohol use in the past 30 days. The final model was reached after inclusion of seven variables (in seven steps) predicting between adolescents who abstain from alcohol or drink occasionally and those who drink alcohol frequently (at least once in the past 30 days). The model explained about 18% of the variance in the dependent variable (Nagelkerke's $R^2 = 0.182$) and had an adequate fit to the empirical data (Hosmer-Lemeshow test, χ^2 (df 8) = 4.921, $p < 0.766$). The results of the final step of regression modelling (Table VI) indicate that the risk of frequent alcohol use was nearly 5 times higher (OR 4.9) for adolescents living in rural areas as compared to Lviv students and almost 3 times higher (OR 2.7) among those who live in Drohobych town as compared to Lviv students. Being a female increases the risk of frequent drinking 1.7 times compared to males.

Among parental variables, the highest odds ratio was observed for low and moderate parental support as compared to high parental support (risk of drinking increases by 1.6). Also, parental monitoring of internet use was a significant predictor of adolescent alcohol use. Low level of internet monitoring (OR 1.6) or moderate (OR 1.4) increase the risk of alcohol use as compared to high level of parental monitoring of child's activities in the internet. Similarly, cigarettes smoking by parents increases the risk of alcohol use by an adolescent child (OR 1.2). Father's employment was

Table VII. The results of logistic regression explaining adolescent drunkenness in the past 30 days. The final step (N = 2038)

Variables/Category	Odds ratio	95% Confidence interval		Significance
		Lower	Upper	
Place of residence				
Lviv (ref.)				
Rural area	2.024	1.399	2.929	0.001
Drohobych	2.102	1.458	3.032	0.001
Sex				
Male (ref.)				
Female	1.465	1.071	2.005	0.017
Parental monitoring of outside activities				
High				
Moderate	2.272	1.477	3.495	0.001
Low	3.490	2.227	5.469	0.001
Parental support				
High				
Moderate	0.948	0.639	1.405	0.789
Low	1.773	1.206	2.605	0.004
The company in which alcohol was drunk during the last drinking occasion				
Did not drink				
In the company of parents	13.101	4.085	42.021	0.001
In another company (peers, other adults, alone)	54.396	17.111	172.928	0.001
Constant	0.001			0.000

a risk factor for frequent alcohol use and increases the risk of alcohol use 1.7 times. Poor or average coping with the pandemic situation increases risk of alcohol use by 1.4 as compared to coping well with this special context.

Other variables including (age, family structure, number of siblings, parent-child communication, parental monitoring of activities out of home) did not improve the model.

Model 2 – predictors of frequent drunkenness (in the past 30 days). The final model of logistic regression explaining frequent drunkenness (versus abstinence or occasional drunkenness) was reached in seven steps. The model explained about 31% of the variance in the dependent variable (Nagelkerke's $R^2 = 0.307$) and had an adequate fit to the empirical data (Hosmer-Lemeshow test, χ^2 (df 8) = 6.242, $p < 0.620$). The results of the final step of logistic regression analysis (Table VII) indicate that the risk of frequent drunkenness was about 13 times higher for adolescents who drank alcohol in the company of parents, and 54 times higher among adolescent who drank with peers, other adults or alone compared to those who did not drink. Results of regression also indicate that risk of frequent drunkenness was 2 times higher for adolescents who live in countryside or in Drohobych town as compared to Lviv students. Low or moderate parental monitoring of child's activities out of home increases the risk of getting drunk 3.5 and 2.3 times respectively as compared to high parental monitoring. The probability of frequent drunkenness was nearly 2 times higher for adolescents perceiving low parental support as compared to those who were strongly supported by parents. No other variables improve the model.

■ Discussion

Family practices significantly influence children's behaviour, including their attitudes and behaviours toward alcohol and other psychoactive substances. It is important to remember that these practices range from effective control over children's behaviour and the promotion of healthy lifestyles, to practices diametrically opposed when

parents neglect parental responsibilities and pass on to their unhealthy lifestyle childhood models. The influence of the family has had long-lasting effects, and behavioural patterns formed in childhood tend to continue into adolescence and adulthood. It should be noted that the influence of the family is not unidirectional as parental alcohol abuse may promote the adoption of such a pattern of behaviour by children and, conversely, serve as an example to discourage them from drinking alcohol.

Family interventions are one of the most effective ways of preventing alcohol use among adolescent children [11, 31, 32]. Early alcohol use leads to more problematic use and transition to alcohol use disorders in adulthood [33]. Therefore it is very important to identify family risk factors and protective factors associated with adolescent alcohol use. Using the methodology of the Mokotów Study, this study sought to analyse family factors in three populations of Ukrainian students aged 13-15: in the large city of Lviv, the small city of Drohobych, and the rural area around Drohobych. Family properties such as family composition, parental support and monitoring were analysed. To the best of our knowledge, this study was a unique attempt to examine adolescent alcohol use during the COVID-19 pandemic in Ukraine. In this context, we also analysed the extent to which pandemic factors contributed to explaining adolescent alcohol use and drunkenness.

Alcohol consumption: regional differences

Our findings indicate significant differences in adolescent alcohol use among the three different sub-populations. Rural youth drink alcohol most frequently and get drunk most often. Most rural students (about 65%) drank alcohol in the past 30 days and about 22% of youth got drunk in the past 30 days. This rate was twice as high as in Lviv and more than three times as high in terms of getting drunk. Students from a small city of Drohobych were in the middle of this statistic. The observed differences can be explained by the fact that the consumption of alcohol, especially homemade wine, is part of traditional culture in rural Ukraine. In addition, the consumption of wine and other low-alcohol beverages is often not considered as "real alcohol", drinking wine is considered an acceptable option for "gradual introduction of youth" to the adult world, or is simply not considered a threat to teenagers. Drinking patterns characterised by a wine preference is also observed in southern neighbouring countries (Romania and Slovakia) but not in Poland, where the most popular alcoholic beverage is beer [2].

This tradition and beliefs are also followed by adolescents, who are likely to participate in customs reserved for adults. Our results show that parental monitoring in rural areas is less perceived than in urban areas especially for boys. This may be another important factor contributing to higher alcohol consumption among rural Ukrainian adolescents. On the other hand, the prevalence of alcohol use with parents was lower in rural areas than in Drohobych and Lviv, which is associated with a more traditional, patriarchal family type. More frequent drinking and drunkenness among rural adolescents can be explained by their living conditions with a very limited choice of leisure activities, which situation was exacerbated during the pandemic. The Lviv adolescents had much greater opportunity to fill their free time with constructive activities that do not lead to risky behaviours which can be treated as a protective factor [34]. This is one of the reasons why urban adolescents from Lviv had markedly lower level of alcohol consumption and drunkenness than their peers from rural areas. One must also take into account the higher socio-cultural level of Lviv parents, who probably were more aware of the dangers of neglecting their children and therefore paid more attention to monitoring their behaviour in their free time.

Alcohol consumption: sex differences

The observations by sex are also interesting. In each of the three sub-populations studied, the prevalence of alcohol drinking was significantly higher in girls. There were no differences in drunkenness by sex, with the exception of the study participants from Drohobych, where girls were more likely to get drunk than boys. Moreover, in all three populations, girls are more likely than boys to drink alcohol in the company of their parents. These findings are consistent with the results of the national ESPAD UA-2019 survey, that also show that girls drink alcohol more often than boys [1]. The significantly higher prevalence of alcohol drinking among Ukrainian female adolescents is a clear sign of the cultural and moral changes that are likely to be taking place in Ukraine. Girls are

increasingly adopting patterns of behaviour that until recently were reserved for boys or men [1]. These changes largely occurred somewhat earlier in Western and Central Europe [2]. Young people in Ukraine are joining them.

Another factor that may account for the higher levels of alcohol consumption in teenage girls is their greater need to socialise and communicate with peers. Moreover, teenage girls more often drink alcohol in the company of parents which may simply increase the prevalence of alcohol use among girls. These social and family factors, along with girls adopting new (Western) behavioural patterns, produce a synergy effect leading to a high prevalence of alcohol consumption. In this context, there is quite controversial, but notable, explanation for the female increased alcohol use in the presence of their parents. Teenage girls are prepared for the role of housewives. In these efforts, parents may inadvertently pass on to them a pattern of "cultural" alcohol consumption worthy of a future housewife. According to another Ukrainian research, parents are twice as likely to allow girls to drink light alcoholic beverages than boys, and boys are eight times more likely than girls to be warned by parents about the possible consequences of drinking. This apparently has to do with the stereotypical perception of a greater risk of alcohol problems among men [35].

Alcohol consumption in the company of parents

About 47% of Ukrainian youth participating in our study drank alcohol in the company of their parents on their last drinking occasion. This is significantly higher than, for example, in Poland [36]. This difference between Ukrainian and Polish adolescents may be explained by the specific socialisation methods used in Ukrainian families. Ukrainian parents prefer that their children have their first experiences with alcohol use under their control. Parents believe that they, and not the authorities, should decide the age at which a child can drink alcoholic beverages [37]. For example, about half of Ukrainian families allow children to consume light alcoholic beverages on holidays [34]. In this way, parents share a culture of alcohol consumption, although this culture may be risky for growing children. At that time in Ukraine, private farms produced many types of homemade wine from grapes and other berries, which are often drunk at family gatherings. This is confirmed by the data obtained in this study that among alcoholic beverages, wine was most often consumed by adolescents with their parents.

Pandemic-related influence and alcohol consumption

The study was conducted while the COVID-19 pandemic was ongoing in Ukraine, so it is worth discussing the possible impact of the pandemic on drinking rates among adolescents. According to data available from two waves of the survey in Lviv region, the reduction of the pandemic had little or no effect on alcohol consumption among schoolchildren. Youth alcohol consumption prevalence rates in 2016 (before the pandemic) and 2020 (during the pandemic) were generally similar, showing some increases rather than decreases [7]. These observations are surprising because pandemic restrictions significantly reduced alcohol consumption in a similar adolescent population in Warsaw [38] and elsewhere [39]. There is some indication that pandemic restrictions had effect on alcohol consumption among teenagers in Lviv, where the prevalence of alcohol use decreased. In Drohobych and rural areas (where alcohol consumption increased), pandemic restrictions did not work in this direction. Although in Ukraine, as in many European countries, a fairly strict quarantine was in force, Ukrainians did not always comply with the restrictions, especially in rural areas [40].

Factors related to adolescent alcohol use and abuse

Parental support and monitoring, especially parental supervision of how an adolescent child spends time on the internet, were important protective factors in reducing the risk of alcohol use and drunkenness among Ukrainian adolescents. On the other hand, alcohol use in the company of parents was a strong risk factor for drunkenness among adolescent children, and parental smoking (an overt anti-health behaviour) was a risk factor for adolescent alcohol use. Thus, our study confirms the significant role of family factors in adolescents' alcohol behaviour, even after taking into account socio-demographic factors (place of residence, sex, parental employment) [11-13, 32].

It is worth adding that poor pandemic coping was found to be a risk factor for adolescent alcohol

use. This means that there is a higher degree of dissatisfaction with the restrictions associated with the pandemic, the higher risk of alcohol use among study participants. On the other hand, the pandemic and administrative restrictions on social contacts promoted a reduction in psychoactive substance use by weakening negative social influences [38]. Thus, the pandemic impact on youth alcohol use was bidirectional and therefore it is difficult to determine its real impact on adolescents' risk behaviours. Obviously, further research is required to study the influence of various psychosocial factors on alcohol consumption among the study groups.

Our analysis indicated that place of residence affects the risk of alcohol use and drunkenness among young people. Living in the countryside and Drohobych was associated with a much higher risk of alcohol use and drunkenness than in Lviv. This can be explained by the greater availability of alcohol to young people in the countryside and in the small town, as well as the tradition of drinking homemade wine. In this context, the case of Drohobych is interesting and unexplained. In 2020, Drohobych was among the top ten most prosperous small cities in Ukraine [41], so the higher risk of alcohol consumption and youth intoxication cannot be explained by the region's economic depression.

Study limitations

Among the limitations of our study were implementation difficulties associated with difficult access to schoolchildren during the pandemic. This translated into a weaker implementation of the research sample in Lviv and forced in some cases the abandonment of our firm policy of not involving teachers in the data collection process.

Moreover, the research was cross-sectional in nature, so it cannot be considered to analyse cause-and-effect relationships. In turn, the use of a survey in which the respondent describes his or her behaviour is subject to measurement error due to imperfections in this research method. Some of the survey questions addressed "sensitive" issues such as substance abuse and mental health problems. To encourage open-ended responses, participants were assured of the complete anonymity of the survey, the voluntary nature of participation was emphasised as was the confidential nature of the study.

Limitations also include the lack of detailed results for individual alcoholic beverages across socio-demographics, locations and family factors. The obvious requirements for the size of the manuscript have forced a selection of the content contained in the article. Therefore a detailed description of the consumption of wine, beer, vodka and other types of alcoholic beverages in the studied sub-populations is only outlined here and not discussed properly. It is a material for a separate article.

■ Conclusions and practical implications

Despite several limitations, our study provides an interesting contribution to research on adolescent alcohol use and abuse in Eastern Europe. The study confirms the significant role of the residential environment, family factors as well as the role of pandemic coping in adolescents' alcohol behaviour. The results indicate the need to develop and implement preventive measures aimed at strengthening parenting skills and help them to reduce negative social influences.

First, the evidence suggests that the family protective practices such as parental monitoring and support are associated with lower level of alcohol use and drunkenness. In other words, our findings may serve as a preliminary recommendation for Ukrainian local governments and school authorities to support family-based strategies for adolescents.

Second, our findings support prevention strategies focusing on assets and resources (such as relevant parental practices) because they create a positive climate to compensate for negative social influences among adolescent populations. These prevention strategies implemented together with measures designed to reduce negative social influences, especially peer and familial adult influences, can make a real difference among Ukrainian adolescents.

Third, youth living in rural places and small towns in Ukraine have a higher risk for alcohol consumption and alcohol intoxication than youth who live in urban centres. In the light of these findings, implementation of preventive interventions are especially needed in rural areas and small towns in Ukraine, including family-based prevention programs, extracurricular activities and more

effective measures to reduce alcohol availability for minors.

Fourth, attention should be paid to the organisation of teenagers' leisure time, involvement in sports and physical activity, personal development programs and trainings. The goal is to create spaces in rural areas where teenagers could spend their leisure time. Such activities will not only contribute to reducing alcohol problems among adolescents but will have a much broader positive impact on their healthy development and preparation for adult life. Mobile groups could be used to carry out such programs in rural areas, making visits to various localities. Another priority, especially in rural areas and small towns, should be additional efforts to control the availability of alcohol to teenagers.

Fifth, having identified that a large group of Ukrainian parents share a culture of alcohol consumption with their adolescent children, our study raises an important question about the role of parents in the alcohol initiation and culture. This question requires further research and cross-cultural investigations because these practices might promote alcohol responsible drinking in the adulthood but, on the other hand, might be risky for adolescent children. In this context, an important task is to transform parents' attitudes toward the culture of alcohol consumption. There are viable and affordable opportunities to feast, relax and socialise without alcohol. Social media can be used to promote such measures in order to shape new alternative leisure activities for both parents and children.

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Conflict of interest/Konflikt interesów

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Ethics/Etyka

The project "The Mokotów Study 2020. Monitoring risk behaviours, addictive behaviours and mental health problems among 15-year-old adolescents", also framed the Ukrainian research and was approved by the Bioethics Committee of the Institute of Psychiatry and Neurology in Warsaw, Resolution No. 18/2012. Permission to conduct research has been extended until 14.06.2022 by a letter from the President of the Commission on 10.09.2020.

Projekt „Badania mokotowskie 2020. Monitorowanie zachowań ryzykownych, zachowań nałogowych i problemów zdrowia psychicznego wśród 15-letniej młodzieży", w ramach którego realizowano również badania na Ukrainie, uzyskał zgodę Komisji Bioetycznej Instytutu Psychiatrii i Neurologii w Warszawie: Uchwała nr 18/2012. Pozwolenie na prowadzenie badań zostało przedłużone do 14.06.2022 pismem Przewodniczącej Komisji z 10.09.2020.

The work described in this article has been carried out in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki) on medical research involving human subjects, Uniform Requirements for manuscripts submitted to biomedical journals and the ethical principles defined in the Farmington Consensus of 1997.

Treści przedstawione w pracy są zgodne z zasadami Deklaracji Helsińskiej odnoszącymi się do badań z udziałem ludzi, ujednoliconymi wymaganiami dla czasopism biomedycznych oraz z zasadami etycznymi określonymi w Porozumieniu z Farmington w 1997 roku.

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