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ILLICIT DRUG USE AMONG UNIVERSITY STUDENTS IN LITHUANIA: AGE, GENDER DIFFERENCES AND CORRELATION WITH LIFESTYLE

Liudmila Rupšienė, Regina Saveljeva,
Ingrida Baranauskienė, Aleksandra Batuchina
Klaipėda University, Lithuania

Abstract

The article presents the research aiming at answering the question *What is the illegal drug use among university students in Lithuania and what is its correlation with the age, gender and lifestyle*? The research data was obtained from 18 Lithuanian universities involved in the research. The questionnaire's questions were answered by 1087 students: 37% male and 63% female students. The average age of the respondents was 21 years; minimal age was 18, maximum was 29. The ESPAD questionnaire *was adapted for the research. Some research results proved earlier results of research studies carried out in Lithuania; however, new tendencies significant to practice of prevention of drug use were revealed as well.*

Keywords: *illicit drug use, students, higher education.*

Introduction

According to the data of majority of research studies carried out in Lithuania, including longitudinal research (Miniauskienė & Jurgaitienė, 2013; Dobrovolskij & Stukas, 2014; Pukinskaitė & Bandzevičienė, 2016 etc.), it can be stated that illicit drug use among the Lithuanian youth and students remains a problem to be solved. In the context of such research, it is emphasised that there are quite few of research studies carried out to reveal the relation between the illicit drug use among the Lithuanian university students and their age, gender, lifestyle. **The scientific problem of** our **research** is characterised by the search of answers to the question "What is the illicit drug use among Lithuanian students and what is the relation with students' age, gender and lifestyle?" To answer the problem question, three sub-questions

have been raised: 1. What is the difference in the university students' illicit drug use in the aspect of gender? 2. What is the difference in the university students' illicit drug use in the aspect of age? 3. What is the relation between the illicit drug use by university students and their lifestyle?

Literature Review

On the ground of both Lithuanian and foreign scientific sources, we can state that a number of factors related to the use of legal and illicit drugs, other abuse-causing substances have been revealed. The research study revealed that the factors mentioned could be divided into three groups:

1) encouraging involvement into the illicit drug use,
2) helping to avoid illicit drug use,
3) neutral which depend on circumstances, influence of social environment or simply on a coincidence.

We would attribute *lack of activities*; *wish to relax*; *negative self-help* to the factors encouraging involvement into the illicit drug use (more detailed information is provided in Table 1).

Physical activity; *development of a healthy lifestyle*; *fear to harm one's health*; *religion as a protective factor* could be considered the factors helping to avoid the illicit drug use. There are no doubts about the relationship between these factors (e.g. between physical activity and development of a healthy lifestyle; it is likely that a person going in for sports will follow other principles of a healthy lifestyle too; however, in young age, as some authors put it, sport is an essential factor helping resist illicit drugs (Kwann, Bobko, Faulkner, Donnelly, & Cairney, 2014). As contemporary research carried out in Denmark shows, the factor *development of a healthy lifestyle* is primarily linked to creation of new social norms and their intervention into schools (Stock, Vallentin-Holbech, & Rasmussen, 2016), cf. Table 1.

The neutral factors would include *curiosity* (this factor can encourage involvement into the drug use; however, it can be referred to when involving young individuals into preventive activities, too, cf. Table 1); *family life model* (family as either good or bad example, application of any situation in preventive activities). As the research carried out back in 1997 revealed, loneliness was also a factor (we attributed it to the *family life model*) which can involve into the drug use (Bachman, Wadsworth, O'Malley, Johnston & Schulenberg, 1997); *changed circumstances of studying* (personal condition, traditions of another country, values, culture etc., cf. Table 1).

All these factors are encompassed by a concept "lifestyle". Therefore, our research treats lifestyle as a factor of either use or disuse of narcotic substances and is chosen as a criterion under investigation (definition of a lifestyle is presented in the section "Research Instrument"). Other criteria are students' gender and age, as already mentioned.

Table 1. The factors influencing involvement or non-involvement into the illicit drug use

Factors	Proving statement
Physical activity	"(…) physical activity is a highly important factor making impact on others' health" (Poškienė & Černiauskienė, 2009, p. 67). "(...) sport can prevent from drugs and alcohol use among young individuals" (Kwann et al., 2014, p. 499-501). "50 per cent of research works found out the negative association between participation in sports activities and marihuana use" (Kwann et al., 2014, p. 499-501).
Development of a healthy lifestyle	"High spread of addictions among students of various specialities (…) allows drawing an assumption about insufficient development of a healthy lifestyle in families and schools" (Poškienė & Černiauskienė, 2009, p. 67). "According to stability of use of substances causing students' addiction we can make an assumption that there is a balance between social offer of these substances and measures restricting dissemination, use of these substances; this increases a risk to get ill with a chronic disease" (Goštautas, Povilaitis, Pilkauskienė, Jakušovaitė, & Statkevičienė, 2009, p. 522). "(…) research studies show that prevention is efficient, and education of students is its inseparable part" (Kavitha, 2016, p. 38). "(...) to create new social norms, (...) to form new values and attitude" (Stock et al., 2016).
Lack of activities	"Major reasons stimulating use of drugs (…) lack of activities" (Bielskutė & Zaborskis, 2003, p. 14).
Wish to relax	"Major reasons for using substances making impact on psyche are a wish to relax" (Narkauskaitė, Juozulynas, Jurgelėnas, & Venalis, 2011, p. 96). "(...) increases social and physical pleasure (...) (Bulotaitė & Baltrušaitytė, R. 2010, p. 83). "(…) there is a bond with drugs as a stimulator of entertainment" (Bradley, 2014, p. 120).
Curiosity	"(...) usually drugs are used out of curiosity" (Narkauskaitė et al., 2011, p. 96). "(...) respondents paid most of their attention (...) to topics on consequences of drug use and features of drug use (...) (Jurgaitienė, Andrejevas, & Grubliauskienė, 2011, p. 48).
Family life model	"A positive example of parents or other relatives is a major element of prevention in family" (Narkauskaitė et al., 2011 p. 96). "(...) a family having a history of (...) abuse draws preconditions for vulnerability" (Pilatti, Caneto, Garimaldi, Vera, & Pautassi, 2014, p. 128-137). "(...) a tendency is emphasised that both young men and young women spend their free time alone" (Bachman et al., 1997, p. 17).
Negative self-help	"(...) research results show that students of Mykolas Romeris University (MRU) feel stress caused by social relationships, daily tension and studies in the university. MRU students are characteristic of three strategies to cope with stress: positive self-help, search for help addressing others or elsewhere (people, God, medicine); negative self-help" (Dudaitė & Ustilaitė, 2014, p. 633-647). "(...) when a bad mood prevails and negative feelings appear" (Bradley, 2014, p. 120). "(…) stimulator of energy" (Bradley, 2014, p. 120).
Fear to harm one's health	"(...) make harm to physical health (...) fear to harm mental health" (Brandt, Taverna, & Hallock, 2014, p. 272-276).
Religion as a protective factor	"(...) research estimated that religion may be a firm protecting factor for Brazilian students trying to avoid drug use" (Gomes, Guerra de Andrade, Izbicki, Almeida, & Garcia de Oliveira, 2013, p. 29-37).
Changed circumstances of studying	"(...) meta-analysis shows that when students move to study in a foreign country, this can become a high risk factor due to many reasons" (Aresi, Moore, & Marta, 2016).

Methodology

Organisation of the survey. The current article presents and analyses the part of the data obtained in the autumn of 2016 as a result of the survey of university students. First of all, implementation of the survey was coordinated with the heads or managers of the Lithuanian universities. Having received permissions of the heads of the institutions, the proceeding of the survey was further coordinated with contact people appointed by the heads of the institutions; these contact people mediated the access to their university students for the research team. Randomly selected students were sent invitations via e-mail to take part in the survey, including an active link to the questionnaire to fill in. In all stages of the research, anonymity of students, free-will participation, respect to the respondents and institutions they represented were ensured.

Sample. When forming the research sample, it was aimed to make it representative. In ensuring the latter, several aspects were important: revision of the population, sample size and method of sampling. The population of university students was limited by a region and study mode. Since the survey was held having won the funding by the Ministry of Education and Science of Lithuania, it took place in Lithuania. In compliance with the conditions of the competition, the population had to be limited according to the study mode, choosing undergraduate (Bachelor's) cycle students only. In 2016, the period when the research was being conducted, there were 20 universities operating in Lithuania; 18 universities out of the total amount gave consent to take part in the research (the remaining two universities had such a low number of students that it made no statistical impact on overall population of students). In these universities full-time undergraduate studies were attended by 46,652 students. This population of students was a ground to make the research sample, proportionately representing all universities. The research sample included 1,087 students: 37% male and 63% female. The average age of the respondents was 21 years, the minimal age was 18, the maximum age was 29. The vast majority (95%) consisted of students under 24 years. Since young individuals over 21 are treated as completely matured and able to assume full responsibility for their actions, the respondents were divided into two groups: the first group consisted of 18–20-year-old students (40%), the second of 21–29-year-old students (60%).

The instrument. Students illicit drug use. Analysis of students' illicit drug use was carried out according to the responses concerning the use of the most popular narcotic substance, cannabis. Also, questions on the use of less popular narcotic substances, such as ecstasy, amphetamine, methamphetamine, cocaine, crack, heroin, GHB, LSD and other hallucinogens, inhalants and new psychoactive substances. The respondents were asked questions on frequency of the drug use in their lifetime, e.g. "How many cases were there (if any) when you used cannabis (marihuana, hashish, "grass") in your lifetime?" and 7 answering options in increasing order were available: 0 – none of such cases, 1–2 cases, 3–5 cases, 6–9 cases, 10–19 cases, 20–39 cases, 40 and more. The question and answer formats have been taken from the ESPAD questionnaire (http://www.espad.org/). *According to the ESPAD procedure, there is no need to obtain a separate permission to use the instrument or its parts.*

Students' leisure time activities. The survey of students' leisure time was carried out also employing the ESPAD scale. The scale consists of 8 rating variables characterising diversity of leisure time: *active sports, training, drills, *reading of books (not course-books) for pleasure, *playing the computer games, *attendance of discotheques, cafes, parties and other similar events held in the evening, *having hobbies (playing any music instrument, singing, drawing, writing), *strolling with friend in shopping malls, parks, streets etc. for own

pleasure, *browsing the Internet (chatting, listening to the music, games, involvement in social networks, search for and watching films etc.), *playing with gambling machines to win some money. The respondents were asked if they frequently were involved in the listed activities, and it was suggested to select one out of five options: *never, *several times per year, *one or two times per month, *at least once per week, *almost every day.

Methods of data analysis

Assessing the reliability of the *Lifetime use of illicit drugs scale*, it has been found that the coefficient of *Cronbach's alpha* is 0.714, it is considered acceptable in most science research situations (Pakalniškienė, 2012). It is estimated that, if one variable from scale had been removed, it would have slightly increased the coefficients of Cronbach's alpha. Moreover, there was no variable that would have its resolution r/itt smaller than 0.2. Considering the above mentioned facts, it can be stated that scale is characterised by an internal coherence and is suitable mean for measurement.

First of all, derivative variable of *Lifetime use of illicit drugs scale* has been designed. Since it was intended to compare the differences between gender and age groups, statistical assumptions have been examined in order to choose the methodology for calculation of differences. Kolmogorov-Smirnov criterion has been used to test the normality of distributions. Since, the assumption of normality of derivative and primary variables had been violated (K-S $Z=0.321$, $p< \alpha=0.05$), Mann-Whitney U test has been used to determinate differences in the derivative variable of two groups.

Spearman's rank correlation coefficient has been used to summarise the strength and direction of a relationship between two variables – Lifetime use of illicit drugs and students' leisure time activities.

Results

Aiming to answer the research questions, a general review of the illicit drug use by the Lithuanian students was carried out (Figure 1). It was found out that cannabis (also called marihuana, hashish, "grass") was the most popular illicit drug among the respondents. It was used at least once in lifetime by 40% of respondents. The use of other drugs was unpopular among respondents. 7.7 per cent of respondents used tranquilisers, sedatives without doctor's prescription. Some 4 per cent of respondents had used amphetamine, ecstasy, LSD and other hallucinogens.

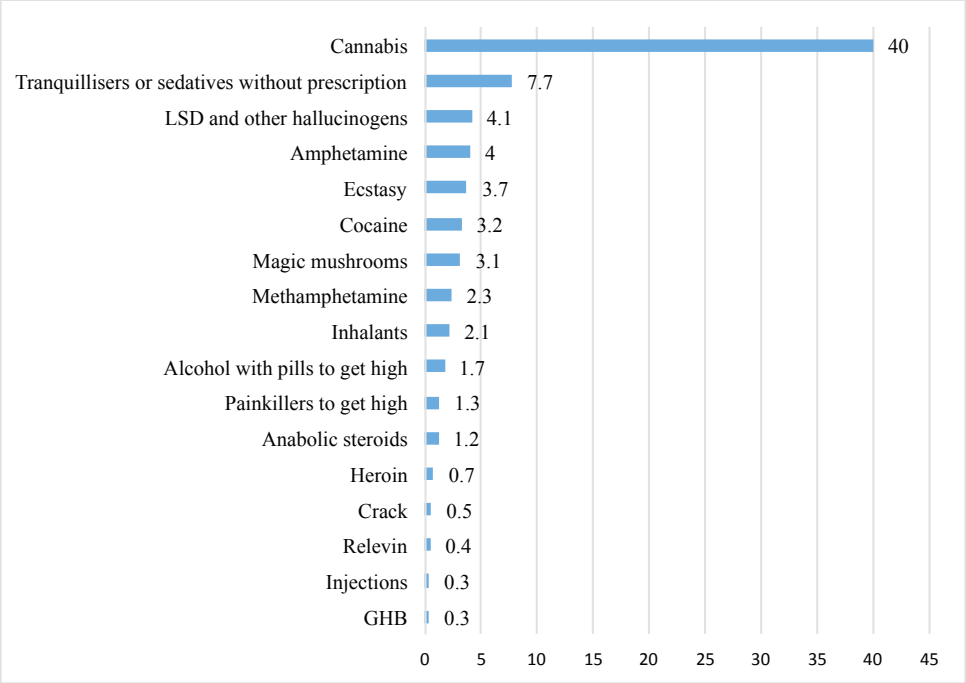

Fig. 1. The illicit drug use among students in Lithuania (%)

The first research question was *What is the difference in the university students' illicit drug use in the aspect of gender?* This research question raised a hypothesis: male students of the Lithuanian universities use illicit drugs in their lifetime more often than female students. Analysis of the illicit drug use in students' lifetime estimated statistically significant differences (Mann-Whitney U=121565.500, p=0.000): the mean rank of males (583.84) was higher than that of females (mean rank 519.51). Thus, males have used illicit drugs more often than females in their lifetime.

However, a more detailed analysis showed that the use of only some illicit drugs in lifetime differed statistically significantly to compare males and females: cannabis, methamphetamine, tranquilisers, sedatives, magic mushrooms, anabolic steroids, painkillers (Table 2). Male students of the Lithuanian universities used cannabis (mean rank of males was 588.11, females 513.62), methamphetamine (M - 548.92, F - 538.18), magic mushrooms (M - 551.36, F - 535.67) and anabolic steroids (M - 547.45, F - 532.31) in their lifetime more often than female students. Females used tranquilisers, sedatives without doctor's prescription more often than males in their lifetime (mean rank of females was 552.47, males 527.11) as well as painkillers to get high (F - 545.87, M - 536.85).

Table 2. Cases of illicit drug use in lifetime: gender-based differences (N=1,086)

Illicit drugs	Mean Rank		Mann-Whitney	
	Male	Female	U	p
Cannabis	588.11	513.62	118216.000	0.000
Ecstasy	543.05	542.18	137001.500	0.891
Amphetamine	548.92	540.28	135707.500	0.178
Methamphetamine	551.09	538.18	134424.500	0.010
Cocaine	546.35	540.21	135940.000	0.308
Crack	541.34	543.19	137026.500	0.421
Inhalants	543.60	542.64	137458.500	0.846
Tranquillisers or sedatives without prescription	527.11	552.47	131263.000	0.005
LSD and other hallucinogens	541.46	539.94	135476.500	0.821
Relevin	539.00	542.18	135675.000	0.123
Heroin	539.50	538.70	135878.500	0.770
Magic mushrooms	551.36	535.67	132716.000	0.008
GHB	539.84	540.10	136012.500	0.886
Anabolic steroids	547.45	532.31	131724.000	0.000
Injections	543.34	543.59	137838.500	0.888
Alcohol with pills to get high	535.15	538.91	134259.000	0.387
Painkillers to get high	536.85	545.87	135209.500	0.019

On the ground of the facts mentioned, it can be stated that the first hypothesis "Male students of the Lithuanian universities use illicit drugs in their lifetime more often than female students" has been proven. The research results suggest that males used illicit drugs in their lifetime more often than females.

The second research question was *What is the difference in the university students' illicit drug use in the aspect of age?* This research question was raised a hypothesis: 21–29-year-old university students used illicit drugs in their lifetime more often than 18–20-year-old students. Analysis of the illicit drug use in lifetime of students estimated statistically significant differences (Mann-Whitney U=113101.500, p=0.000): 21–29-year-old students' mean rank (551.25) was higher than that of 18–20-year-old students (mean rank 479.79). Thus, 21–29-year-old students used illicit drugs in their lifetime more often than 18–20-year-old students.

A more detailed analysis shows that there were statistically significant differences between 18–20-year-old and 21–29-year-old students only in the use of some illicit drugs in their lifetime: cannabis, ecstasy, amphetamine, methamphetamine, cocaine, heroin, magic mushrooms (Table 3). 21–29-year-old students of Lithuanian universities used the substances more often than 18–20-year-old students: cannabis (21–29-year-old students' mean rank was 554.79, 18–20-year-olds' mean rank 469.47), ecstasy (respectively 528.47 and 511.13), amphetamine (respectively 530.60 and 510.47), methamphetamine (528.91 and 511.75), cocaine (respectively 530.06 and 508.72), heroin (respectively 520.35 and 514.50) and magic mushrooms (respectively 528.71 and 508.29).

Table 3. Cases of illicit drug use in lifetime: age-based differences (N=1,086)

Illicit drugs	Mean Rank		Mann-Whitney	
	18-20 years	21-29 years	U	p
Cannabis	469.47	554.79	108667.000	0.000
Ecstasy	511.13	528.47	126175.500	0.005
Amphetamine	510.47	530.60	125985.500	0.001
Methamphetamine	511.75	528.91	126527.000	0.000
Cocaine	508.72	530.06	125076.000	0.000
Crack	519.50	522.85	129780.000	0.100
Inhalants	516.69	525.57	128502.000	0.067
Tranquillisers or sedatives without prescription	529.11	517.21	127843.000	0.172
LSD and other hallucinogens	515.32	522.28	127538.500	0.288
Relevin	518.00	521.35	128953.000	0.100
Heroin	514.50	520.35	127296.000	0.030
Magic mushrooms	508.29	528.71	124892.500	0.000
GHB	517.50	520.00	128544.000	0.156
Anabolic steroids	512.24	521.02	126261.000	0.016
Injection	521.00	523.51	130410.000	0.155
Alcohol with pills to get high	512.52	519.12	125880.000	0.125
Painkillers to get high	519.96	523.37	129973.500	0.368

On the ground of the facts mentioned, it can be stated that the second hypothesis "21–29-year-old university students used illicit drugs in their lifetime more often than 18–20-year-old students" has been proven. The research results suggest that 21–29-year-old students used illicit drugs in their lifetime more often than 18–20-year-old students.

The third problem question was *What is the relation between the university students' illicit drug use and their lifestyle?* This research question formulated a hypothesis: frequency of the illicit drug use by the Lithuanian students is related to students' lifestyle.

Very weak though statistically significant correlations between the frequency of illicit drug use in lifetime and some aspects of students' lifestyle have been estimated. A positive very weak correlation with the following lifestyle aspects was estimated: go out with friends in the evening (to a discotheque, café, parties etc.) (Spearman's rho=0.121, p=0.000) and play with gambling machines to win money (Spearman's rho=0.106, p=0.000). Thus, it can be stated that the more often students go out with friends in the evening or play with gambling machines the more often they use illicit drugs in their lifetime. A negative very weak correlation with one students' lifestyle aspect was estimated: reading of books for pleasure (not course-books) (Spearman's rho=-0.102, p=0.001). Thus, the more students read books (not course-books) for their pleasure the more seldom they use illicit drugs.

On the basis of the facts mentioned, we can state that the third hypothesis "frequency of the illicit drug use by the Lithuanian students is related to students' lifestyle" has been partly proven. The research results suggest that the more often university students go out with friends in the evening or play with gambling machines the more often they use illicit drugs in their lifetime. And the more students read books (not course-books) for their pleasure the more seldom they use illicit drugs.

Conclusions

1. The factors that influence involvement into the illicit drug use are a lack of activities; wish to relax; low self-esteem. The factors that help to avoid the illicit drug use are physical activity; development of a healthy lifestyle; fear to harm one's health; religion as a protective factor. Neutral factors, i.e. such factors which may both encourage involvement into the drug use and they can be referred to when involving young individuals into preventive activities, are curiosity, family life model, changed circumstances of studying.
2. The research results show that cannabis is the most popular illicit drug among the Lithuanian university students; it was used by 40% of the respondents. The use of other illicit drugs is unpopular among the respondents.
3. The first and the second hypotheses of the research have been proven. The research results suggest that males used illicit drugs in their lifetime more often than females. Senior age students (at the age of 21–29) used illicit drugs in their lifetime more often than younger (18–20 years) students. The third hypothesis of the research has been partly proven. Statistically significant correlations have been found between frequency of the illicit drug use and some aspects of Lithuanian students' lifestyle. Active social participation in the evening (attendance of discotheques, cafes, parties) and play with gambling machines to win money are linked to more frequent use if illicit drugs. Whereas individual activities bringing pleasure, such as reading of books for pleasure, are related to more rare use of illicit drugs.

Discussion

Some results of our research have proven conclusions of earlier research studies conducted in Lithuania:

Males used illicit drugs in their lifetime more often than girls, e.g. "percentage of students who tried to use other addiction-causing substances than alcohol and tobacco within one year period constituted on the average 35.9 per cent of males and 17.7 per cent of females" (cf. Goštautas et al., 2009, p. 528).

Cannabis (also called marihuana, hashish, "grass") is the most common narcotic substance. Similar research findings have been obtained in Lithuania by other researchers, too: "Marihuana is the most common narcotic substance; it was used by 10.7 per cent of students over the latter 30 days and 45.1 per cent in lifetime", cf. Narkauskaitė et al., p. 91. Also, other authors notice the increase of marihuana use by school students: "(...) the use of cannabis products (marihuana) and alcohol with marihuana at a time has statistically significantly increased almost twice over the latter 6 years", cf. Miniauskienė et al., 2013, p. 80.

The relation between the lifestyle and the use of narcotic substances was proven, e.g. Proškuvienė & Černiauskiene (2009) state that "(...) physical activity is among other factors making influence on health" (Proškuvienė & Černiauskienė, 2009, p. 67). On the ground of their research results, Bielskutė & Zaborskis (2003) put it that "it is important to develop the ability to cleverly and meaningfully organise own leisure time" (Bielskutė & Zaborskis, 2003, p. 13).

On the other hand, our research has emphasised new tendencies as well:

Females used tranquilisers, sedatives without doctor's prescription as well as painkillers to get high in their lifetime more often than males.

21–29-year-old students used illicit drugs in their lifetime more often than 18–20-year-old students.

Active social participation in the evening (attendance of discotheques, cafes, parties) and playing with gambling machines to win money are related to more frequent use of illicit drugs. Whereas individual activities bringing pleasure, such as reading books for own pleasure, are related to more rare use of illicit drugs.

The new tendencies that have been proven and highlighted are significant for preventive measures.

References

Andrejevas, V., & Jurgaitienė, D. (2011). Narkomanijos prevencija kaip visuomenės saugumo garantas [Drug prevention as a guarantor of public safety]. *Visuomenės saugumas ir viešoji tvarka, 5*, 28-35.

Aresi, G., Moore, S., & Marta, E. (2016). Drinking, Drug Use, and Related Consequences Among University Students Completing Study Abroad Experiences: A Systematic Review. *Substance Use and Misuse*, *51*(14), 1-16. Retrieved from http://dx.doi.org/10.1080/10826084.2016.120111

Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (1997). *Smoking, Drinking, and Drug Use in Young Adulthood: The Impacts of New Freedoms and New Responsibilities.* New Jersey: L. Erlbaum Associates.

Bielskutė, J., Zaborskis, A. (2003). Paauglių narkomanija ir jos veiksniai [Teenage addiction and its factors]. *Sveikatos mokslai*, *4* (27), 7-15.

Bradley, K. M. (2014). Supplementing society: a sociocultural analysis of recreational drug use and supplement consumption within the American collegiate environment. *Theses, Dissertations, Professional Papers*. Paper 4371. Retrieved from http://scholarworks.umt.edu/cgi/viewcontent.cgi?article=5398&context=etd

Brandt, S. A., Taverna, E. S., & Hallock, R. M. (2014). A survey of nonmedical use of tranquilizers, stimulants, and pain relievers among college students: Patterns of use among users and factors related to abstinence in non-user. *Drug and Alcohol Dependence, 143* (1), 272-276.

Bulotaitė, L., & Baltrušaitytė, R. (2010). Studentų alkoholio vartojimo lūkesčiai [Student's Alcohol Expectations]. *Visuomenės sveikata*, *1* (48), 83-89.

Dobrovolskij, V., & Stukas, R. (2014). Lietuvos aukštųjų mokyklų studentų psichoaktyviųjų medžiagų vartojimo ypatumai [Peculiarities of the use of psychoactive substances by Lithuanian students in higher education]. *Sveikatos mokslai, 24* (3), 16-22 doi:10.5200/sm-hs.2014.037.

Dudaitė, J., & Ustilaitė, S. (2014). Mykolo Romerio universiteto student patiriamo streso įveikos strategijos [Mykolas Romeris University's student coping with stress strategies]. *Socialinių mokslų studijos, 6* (3), 633-647. doi:10.13165/SMS-14-6-3-1.

Gomes, F. C., Guerra de Andrade, A., Izbicki, R., Almeida, A. M., & Garcia de Oliveira, L. (2013). Religion as a Protective Factor against Drug Use among Brazilian University Students: A National Survey. *Revista Brasileira de Psiquiatria, 35* (1), 29-37. Retrieved from https://doi.org/10.1016/j.rbp.2012.05.010Get rights and content

Goštautas, A., Povilaitis R., Pilkauskienė, I., Jakušovaitė, I., & Statkevičienė, S. (2009). Psichoaktyviųjų medžiagų vartojimo paplitimas tarp studentų 2005–2006 m. [The prevalence of use of psychoactive substances among students in 2005-2006]. *Visuomenės sveikata*, *45* (7), 522-529.

Jurgaitienė, D., Andrejevas, V., & Grubliauskienė, J. (2011). Narkomanijos prevencijos mokykloje lyginamieji aspektai [Comparative aspects of Drug Prevention at School]. *Sveikatos mokslai, 21* (2), 48-51.

Kavitha, A. S. (2016). A Study to assess the impact of health education programme on knowledge of students towards drug abuse among college students in selected college at Indore (M.P). *International Education and Research Journal, 2* (10), 38.

Kwann, M., Bobko, S., Faulkner, G., Donnelly, P., & Cairney, J. (2014). Sport participation and alcohol and illicit drug use in adolescents and young adults: A systematic review of longitudinal studies. *Addictive Behavior, 39* (3), 497-506.

Miniauskienė, D., & Jurgaitienė, D. (2013). Kai kurie Šiaulių apskrities vyresniųjų klasių moksleivių psichoaktyviųjų medžiagų vartojimo 2006 ir 2012 m. rodikliai [Some of the use of psychoactive substances in upper secondary school students in Šiauliai county in 2006 and 2012. Indicators]. *Visuomenės sveikata, 4* (63), 80-86.

Narkauskaitė, L., Juozulynas, A., Jurgelėnas, A., & Venalis, A. (2011). Psichiką veikiančių medžiagų vartojimo paplitimas tarp Lietuvos aukštųjų mokyklų studentų [The prevalence of use of psychoactive substances among Lithuanian high school students]. *Visuomenės sveikata*, *1* (52), 91–97.

Pakalniškienė, V. (2012). *Tyrimo ir įvertinimo priemonių patikimumo ir validumo nustatymas. Metodinė priemonė* [Determining the reliability and validity of research and evaluation tools]. Vilnius: VU leidykla.

Pilatti, A., Caneto, F., Garimaldi, J. A., Vera, B. V., & Pautassi, R. M. (2014). Contribution of Time of Drinking Onset and Family History of Alcohol Problems in Alcohol and Drug Use Behaviors in Argentinean College Students. *Alcohol and Alcoholism, 49*(2), 128-137. doi: 10.1093/alcalc/agt176.

Proškuvienė, R., & Černiauskienė, M. (2009). Būsimų kūno kultūros specialistų sveikata ir gyvensena [The health and lifestyle of future physicians]. *Visuomenės sveikata*, *2*(45), 67-72.

Pukinskaitė, R., & Bandzevičienė, R. (2016). Skirtingų studijų krypčių studentų miego kokybės sąsajos su emociniais ir elgesio sunkumais [The relationship between sleep quality and emotional and behavioral difficulties of students in different study areas]. *Tiltai, 2*, 77-95.

Stock, C., Vallentin-Holbech, L., & Rasmussen, B. M. (2016). *The GOOD life*: Study protocol for a social norms intervention to reduce alcohol and other drug use among Danish adolescents. *BMC Public Health*, *15*. doi: 10.1186/s12889-016-3333-1.

ILLICIT DRUG USE AMONG UNIVERSITY STUDENTS IN LITHUANIA: AGE, GENDER DIFFERENCES AND CORRELATION WITH LIFESTYLE

Summary

Liudmila Rupšienė, Regina Saveljeva, Ingrida Baranauskienė, Aleksandra Batuchina
Klaipėda University, Lithuania

The article presents the research aiming at answering a question *What is the illegal drug use among university students in Lithuania and what is its correlation with the age, gender and lifestyle*? When forming a research sample it was aimed to make it representative. The research data has been collected from 18 Lithuanian universities which gave consent to take part in the research. The questionnaire was filled in by 1087 students: 37% males and 63% females. The average age of the respondents was 21 years, the minimal age was 18, the maximum age was 29. The ESPAD questionnaire (http://www.espad.org/) *was adapted for the research.* When assessing reliability of the scale to measure the illicit drug use in lifetime it was found out that *Cronbach's alpha* was 0.714. Moreover, there were no variables whose resolution r/itt was lesser than 0.2. To test normality of distributions we applied Kolmogorov-Smirnov criterion. Variables of the scale were not distributed according to the normal law (K-S $Z=0.321$, $p<0.05$); therefore, differences have been estimated by applying Mann-Whitney criterion. To explore the correlation between the illicit drug use and lifestyle variables, Spearman's rank correlation coefficient was applied. The research study highlighted the factors that influenced the involvement into the illicit drug use (lack of activities; wish to relax; low self-esteem). The factors that help to avoid the illicit drug use are physical activity; development of a healthy lifestyle; fear to harm one's health; religion as a protective factor. Neutral factors, i.e. such factors which may encourage involvement into the drug use and they can be referred to when involving young individuals into preventive activities, are curiosity, family life model, changed circumstances of studying. The research results show that

cannabis is the most popular illicit drug among the Lithuanian university students; it was used by 40% of the respondents. The use of other illicit drugs is unpopular among the respondents. The first and the second hypotheses of the research have been proven. The research results suggest that males used illicit drugs in their lifetime more often than females. Male students of Lithuanian universities used cannabis, methamphetamine, magic mushrooms and anabolic steroids in their lifetime more often than female students. Females used tranquilisers, sedatives without doctor's prescription more often than males in their lifetime as well as painkillers to get high. Senior age students (at the age of 21–29) used illicit drugs in their lifetime more often than younger (18–20 years) students. The third hypothesis of the research has been partly proven. Statistically significant correlations have been found between frequency of the illicit drug use and some aspects of the Lithuanian students' lifestyle. Active social participation in the evening (attendance of discotheques, cafes, parties) and playing with gambling machines to win money are linked to more frequent use of illicit drugs. Whereas individual activities bringing pleasure, such as reading of books for pleasure, are related to more rare use of illicit drugs.

Corresponding author email: regina.saveljeva@gmail.com