

# Lifestyles and discomfort in a sample of young Romanian students

F. PETRELLI<sup>1</sup>, S. SCURI<sup>1</sup>, E. TANZI<sup>2</sup>, T.T.C. NGUYỄN<sup>3</sup>, I. GRAPPASONNI<sup>1</sup>

<sup>1</sup> School of Medicinal and Health Products Sciences, University of Camerino, Italy; <sup>2</sup> Department of Biomedical Sciences for Health, University of Milan, Italy; <sup>3</sup> Department of Pharmaceutical Administration and Economics, Hanoi University of Pharmacy, Hanoi city, Vietnam

## Keywords

Lifestyle • Romanian young people • Substance abuse

## Summary

**Introduction.** The 40.3% of the Romanian youth population is at risk of poverty or social exclusion, and, in addition, the abuse of substances increases. It was interesting to evaluate the attitudes shared by pupils as well as their knowledge of these substances with a view to analyzing causes and types of risky behaviour in young people.

**Methods.** This is an observational study on the harassment influence in the lifestyle of a sample of Craiova high-school students. The Fagerström Test was applied to evaluate the degree of nicotine dependence, and the data processed to assess the Odds Ratio.

**Results.** The sample was composed by 1,980 students with an average age of 17, of which 1,727 correctly responded to the questionnaire. The 37.4% of students admit to smoke, and the

67% to drink alcohol. The Fagerström test showed that the 68.2% of respondents are not highly addicted to smoke while the 31.8% was associated with a middle-to-high addiction level. A worrying weekly consumption of beer has been registered in the students. Regarding psychological distress caused by harassment a high Odds Ratio was recorded between the smokers and the drug users.

**Conclusions.** More than half of students did not know about the health consequences of smoking, and the same result was recorded about the consumption of alcohol. A special attention should be done to the understanding of harassment problem in the young people. In fact, almost all the respondents declared to have suffered abuse and admits to use drug and cigarettes.

## Introduction

The collapse of the Romanian dictatorship in December 1989 resulted in the adoption of a series of political and economic innovations necessary to reach the standards required for entry into Europe along with the adoption of a Constitution in 1991, subsequently modified in 1993, a process which allowed the country to become a Parliamentary Republic. Before 1989, Romania had a Semashko-type healthcare model, but after the 1999 revolution it was replaced by the Social Insurance Healthcare Model (ASS) [1-3].

In 2016, the percentage of Romanians at risk of poverty and social exclusion was equal to 38.8%, while the poverty rate for the European Union was equal to 23.5%. With regard to gender, 18.4% of females were at risk of social exclusion (the European average is equal to 10.8%), while the percentage for males stands at 16.1% (the European average is 9.5%) and, furthermore, taking relative poverty levels into account, the population group found to be most at risk is aged 18 to 24 (30.2%) [4]. In Romania, in fact, more than a third of the youth population (40.3%) is at risk of poverty and/or social exclusion compared to Europe's 24.3% and statistics show an increase in obesity, sedentary lifestyles and the use of alcohol and cigarettes as well as an increase of drug use [5-11]. In recent years, more than 40% of health expenditure in Romania can be attributed to health conse-

quences relating to behavioural risks, including drinking and smoking, a poor diet and lack of physical activity [12-14].

Preventive measures aiming to reduce social inequality and encourage the adoption of a healthy lifestyle is still the most efficient solution to discourage and combat these behaviours. In Romania, however, though measures have been undertaken to curb cigarette smoking, such as banning smoking in enclosed public places (2016) and the sale of tobacco-related products in all educational and health facilities, there is still no national strategy to curb alcohol consumption.

Alcohol prevention programs and educational campaigns run by NGOs (non-governmental organizations) include Alliance for Fighting Alcoholism and Addictions [15]. A report by the Romanian National Anti-Drug Agency shows that though their alcohol and cigarette consumption is higher, compared to young people in the rest of Europe Romanians are less involved in the use of illegal drugs [16, 17]. Drug use, however, has increased in recent years, though it is still lower than in other countries of the European Union. Cannabis consumption seems to have become common among young Romanians, as shown by the report by the European School Survey Project on Alcohol and Other Drugs [14]. The Agency points out that in Romania, the majority of drug addicts, mostly youths with no family or fixed abode, live in the slums of the capital city, Bucharest. In Romania, the

problem of child neglect was encouraged by a state law that until 2007 allowed the eradication of the child from the family of origin, if the parents did not guarantee the maintenance or care of the child [18].

In many cases, the psychological effects of the eradication causing by the traumatic event of the sexual and physical abuses (included beatings, suppression of meals, physical isolation, and submission to various humiliating jobs) by members of the staff and older children of the institutional care were exacerbated [19].

Considering the social-economic frailty of Romania's youth and the high percentage of psychological distress caused by harassments, it was interesting to evaluate the attitudes shared by pupils as well as their knowledge of abuse substances with a view to analysing causes and types of risky behaviour in young people [20].

## Methods

Research is an observational study performed following the Strobe-statement [21]. A questionnaire which was created with the aim of acquiring data and information on issues typically felt by young people, at 2016 to 2017. The only personal data it required was: gender, age, qualification and parental occupation. In order to be more easily understood, the questionnaire was written using colloquial terms which were closer to the mentality, habits and culture of respondents. Questions focused on the use of substances such as tobacco, drugs and alcoholic beverages, reasons for their consumption and knowledge of health consequences. The survey focused on a sample of Romanian high-school students in Craiova, a city in the region of Dolj in the South of Romania, with the aim of determining a group which was consistent with the diverse cultural, economic and social backgrounds in the territory. Part of the questionnaire focused on understanding bullying and harassment as experienced by young people, as this might increase the tendency to adopt risky lifestyles which are detrimental to health. The questionnaire, translated into the Romanian language, was initially validated on a sample of 100 high-school students to check whether questions were easily understood and easy to answer. The draft questionnaire, was given to a sample 100 high-school students, by trained professionals, to assess the face validity, and participants were asked to fill-in the questionnaire noting any questions unclear or ambiguous, and to provide any suggestions for improvement (ease of completion, legibility, time to fill-in etc.) [22, 23]. Subsequently, trained professionals distributed the questionnaire among six high-schools in Craiova. Criteria for selecting the high-schools were the presence in teaching staff of at least one teacher who was participating in a research project of Camerino University on harmful lifestyles in Italian and Romanian students, a problem that is deeply felt in Romania. Before compilation, each student was given the questionnaire in a closed, not glued envelope, which the student, after the compilation, sealed and placed in a box placed in a specific part of school. Compilation was

autonomous and anonymous. Before the questionnaire was handed out, the professionals informed students on the aim of the survey, stressing its importance and utility. The study was conducted in accordance with the latest version of the Declaration of Helsinki, with the consent of the Institute Council of each selected school formed by the representative of the teaching staff and parents.

Data was promptly archived and elaborated using Access and Microsoft Excel. Statistical analysis was performed with X-Lstat software [24].

Descriptive statistics were used to analyze the distribution of variables. Qualitative data were described using frequencies and percentages. The Chi-square analysis and the Odds Ratio to evaluate the differences between smoking, alcohol, drugs consumption and abuse has been applied. The level of statistical significance was set at  $p < 0.05$  with an confidence interval of 95%.

To assess the degree of nicotine dependence in current smokers, Fagerström Test for Nicotine Dependence (FTND) was used. Fagerström Test is composed of six items. In scoring the Fagerström Test for Nicotine Dependence, yes/no items are scored from 0 to 1 and multiple-choice items are scored from 0 to 3. The items are summed to yield a total score of 0-10. The global Fagerström score assesses the intensity of physical nicotine addiction: low dependence (0 to 2 scores), medium dependence (3 to 4 scores), high dependence (5 to 6 scores) and very high dependence (7 to 10 scores). A score of  $\geq 6$  has been used as cut-off to assess a high nicotine dependence [25].

## Results

Table I shows general characteristics in the sample of students who completed the questionnaire. A total of 1,980 students were contacted with an average age of 17, of which 1,727 correctly completed to the questionnaire (85.6%). The percentage of refusal adolescents was 14.6%.

Regarding the use of substances such as cigarettes, alcohol and drugs, the data shows 37.4% of students declare to smoking, starting when they were between 12 and 15 (41.3%) and in particular 42.5% are female. Regarding alcohol consumption, 67% make use of it and started drinking when they were 14 or 15 years old. On the contrary, 92% declare they do not use drugs.

A large part of participants were unable to answer the question on health risks regarding the use of amphetamine (49.8%), methadone (44.5%), LSD (43.1%), anabolic steroids (43.8%) and creatine (55.6%).

Answers show most students choose to abuse these substances mainly to "get high" (59.3%), in search of new sensations (25.2%), to feel good (19%) and to relax (18.8%).

The 18.2% of respondents reported that they use these substances to lose their inhibitions and of this sample, 8.9% to socialize more easily, 4.8% to show off and 4.5% to be accepted by their peers. It must be noted

Tab. I. General characteristics of the sample.

General characteristics of the sample	n	%
<b>Gender</b>		
males	498	28.8
females	1,202	69.6
no answer	27	1.6
Tot.	1,727	100
<b>Age</b>		
≤ 16	482	27.9
17-19	1,046	60.6
≥ 20	186	10.7
Tot.	1,727	100
<b>Family origins</b>		
Romanian:		
mother	1,619	93.7
father	1,621	93.8
Other:		
mother	6	0.3
father	900	0.5
No answer:	199	11.5
mother	102	5.9
father	97	5.6
<b>Parents' occupation</b>		
Employed:		
mother	1,351	78.2
father	1,645	95.2
Unemployed:		
mother	335	19.4
father	151	8.7
No answer:		
mother	41	2.4
father	82	4.7

that 20.9% of the general sample do it because they are bored.

In our evaluation of the extent of their reliance on these substances, two aspects deserve to be highlighted from the sample who smoke: 82.5% of respondents find it hard not to smoke in public places, though they are aware of passive smoking, with a difference between sexes (72.1% of females and 23.7% of males), only 0.6% of the total sample indicated cigarette smoke as being harmful to health.

Answers given to the Fagerström test (Tab. II) show that of respondents who smoke, 238 (equal to 68.2%) are not highly addicted to smoking, while 111 show middle-to-high addiction levels (31.8%). 40.4% of smokers do not believe they should stop smoking, though 77.1% of males declare their health is already suffering as a result. Regarding alcohol consumption, data has evidenced a worrying weekly consumption of beer (81.3% of males and 66.5% of females) and a less frequent consumption of wine. The percentage of respondents who consume spirits is lower but still relevant, above all in males (40.8%) in comparison to females (28.6%). This type of drink is usually consumed during parties (62.7%), with friends (37.5%), at the disco (25.2%) and during holidays (18.6%). The 11.3% of students declare they also consume alcohol during school trips and 9.1% drink when home alone, too.

Regarding their knowledge of the health consequences of these habits, and more specifically of the dangers as-

Tab. II. Fagerström Test for Nicotine Dependence (FTND) - scoring sheet.

How soon after you wake up do you smoke your first cigarette?	n	%
Within 5 minutes	23	6.6
6-30 minutes	46	13.2
31-60 minutes	48	13.7
After 60 minutes	155	44.4
<b>Do you find it difficult to refrain from smoking in places where it is forbidden (for example: in the movie theater, in the library, in church)?</b>		
Yes	288	85.5
No	43	12.3
<b>Which cigarette would you hate most to give up?</b>		
The first one in the morning	210	57.5
Any other	155	42.5
<b>How many cigarettes per day do you smoke?</b>		
10 or less	189	54.1
11-20	77	22.1
21-30	17	4.8
31 or more	5	1.4
<b>Do you smoke more frequently during the first hours after waking than during the rest of the day?</b>		
Yes	46	13.2
No	256	73.3
<b>Do you smoke if you are so ill that you are in bed most of the day?</b>		
Yes	92	24.5
No	283	75.5

sociated with cigarette smoke, 51.2% of all respondents did not answer, while 45% affirm they are conscious of the damage done by smoking, recognizing cancer as one of its principle consequences (24.7%), as well as lung cancer (16.8%) and other pathologies linked to the respiratory tract such as asthma, bronchitis and respiratory failure (13.4%). In addition, cardiovascular diseases (8.1%), TBC (5.5%), impotence and sterility (3.1%) were mentioned.

Regarding alcohol consumption, a high percentage of respondents (89.6%) are aware of the serious consequences of alcohol abuse, listing liver disease (38.6%), addiction (20.7%) and behavioural disorders, including violence and depression (10.3%). Other consequences are acute alcohol poisoning (6.2%), cardiovascular diseases (6.1%) and gastrointestinal disorders (5.9%). It also emerges that students are aware that alcohol may cause behavioural problems such as irritability, violent behaviour etc. (88.4%), cause car accidents (83.7%) as well as liver disease (79.6%). As regards their perception of the dangers of substance abuse, data shows that students consider drug abuse as the most dangerous activity (94.5%) while alcohol (64.7%) and smoking (64.3%) are considered less dangerous. In fact, when asked to indicate which substances are classed as drugs, only 33.7% selected alcohol and 24.2% smoking.

Regarding psychological distress caused by harassment, results showed that though only 12.8% declared they had been a victim, 35.1% did not answer the question and a further 2.6% answered only to rub out their answer. The remainder of the sample answered in the negative. The “special attention” received by respondents between the ages of 12 and 15 came mainly from friends or schoolmates (58.1%) but also from family members (7.2%), acquaintances (5.4%) and professors (2.7%). Answers to the question on whether this attention was perceived as having a sexual element showed that 36.5% did not think it was sexual, while 15.3% was explicit about its sexual nature, and 23.8% did not understand the real reason for this behaviour.

The students prefer not to describe their experiences in detail, and 10.4% declare either that they do not want to talk about it, do not remember what happened or that it was not important enough to tell (4.5%). 4.5% tell that they were touched in a sexual manner and 3.6% experienced verbal aggression.

An analysis of their reactions shows that they again prefer not to go into it (63.1% does not answer, 1.8% does not remember, 9.9% reacted with anger, 7.6% did not react and 5.8% tried to defend themselves). To the question “how did you feel about it?”, 42.8% wanted to talk about it while 5% felt uncomfortable and afraid. To the question “in your opinion, is it useful to discuss harassment at school?” 45.9% thinks it would be useful to tackle this subject at school, to inform students (24.5%), talk about it (23.5%) and be prepared to deal with these events (21.6%).

A higher incidence of harmful lifestyles is noticed among young people who have suffered some form of abuse. In particular, these students smoke, use alcohol and above all drugs far more than those who have not been victims of abuse (Tab. III).

## Discussion and Conclusions

The data show respondents are suffering from a latent condition of unease. This pushes many of them, even adolescents, to choose harmful lifestyles.

The random sampling has been impossible to do for the bureaucracy of the Romanian administrative system, and then was difficult to extend the survey to all secondary school age groups, highlighting a higher percentage of female respondents with a prevalent age 17-19 years. In addition, another limitation was the impossibility to

compare the sample interviewed with same young people Romanians not attending public schools.

Young people are considered the most exposed to risks from harmful behaviour stemming from alcohol, tobacco and substance abuse [26, 27]. Starting to drink before the age of 14 can affect health negatively and is associated with alcohol abuse and other forms of abuse in adult life [28, 29].

In the sample, alcohol consumption is also present among high-school students (the youngest respondents). Over 70% consume alcoholic beverages, mostly beer, in line with figures reported by the World Health Organization in its 2014 Global Status Report on Alcohol relating to Romania [30]. The percentage of those who drink when they are home alone is worrying, as this shows young people are not able to overcome their feelings of distress. Concerning smoking, (aged 15) 37% of students have smoked at least once in the past week, while 17% smoke every day [31, 32]. Research has shown that 50% of young people have tried smoking at least once and a significant number (equal to 37.4%) have continued smoking. Their low perception of risk, typical of adolescence [33], means that the majority of respondents does not understand that substances which are seemingly less dangerous (like alcohol, cigarettes and cannabis) can become addictive and encourage pathologies in adult life. An analysis of behavioural differences based on gender shows that male adolescents are more superficial and tend to adopt harmful habits more easily (e.g., drinking alcohol, violence, tobacco use, alcohol and other drug use) [34, 35]. It must be said that the majority of respondents (75%) think that drugs are illegal substances, forgetting the effects alcohol and tobacco can have on the user, leading them to use them carelessly. They believe, in fact, that drug use is extremely dangerous, alcohol is less dangerous, and smoking is less dangerous still. Proof of this can be found in a survey conducted on young people in the European Union regarding the dangers of substance abuse, which shows that alcohol is seen as less dangerous (13%), as is smoking (14%) and cannabis (24%); on the contrary, the same youths regard heroin as being extremely dangerous (89%), together with cocaine (76%) [36]. In line with the European Commission’s report, more than half of those who partook in the survey did not know about the health consequences of smoking, and did not see it as dangerous. In the same way, consuming alcoholic beverages seems to be seen in a similar manner, as safe [33]. Unsurprisingly, European youths classified as high-risk substances, if consumed regularly, cocaine (96%), followed by ecstasy (93%), cannabis (63%) and alcohol (53%); smoking was not mentioned [37]. On the contrary, regarding drug use, less than 5% of respondents takes illegal substances. This is confirmed by data from the surveillance project ESPAD in which the use of cannabis by Romanian students is equal to half of the ESPAD average (calculated with data obtained from 35 countries), with 2.7% of females and 4% of males. However, though Romanian adolescents use less cannabis, their consumption of new psychoactive substances (NPS) and other illegal substances is equal to, or slightly over, the average in other countries [16]. Even

Tab. III. Correlation between harmful lifestyles and abuse.

Variables	Yes	No abuse	P value	OR	95% CI
Drinker	118	380	0.027	1.40	1.09 to 1.70
Non drinker	97	438	0.033	1.40	1.09 to 1.70
Smoker	146	486	0.002	<b>1.63*</b>	1.32 to 1.94
Non smoker	72	377	0.0055	1.57	1.26 to 1.88
Drug user	12	12	0.0003	<b>4.00**</b>	<b>3.2 to 4.8</b>
No drugs	204	815	0.0003	0.25	0 to 1.06

\*: correlation significant of the P ( $\alpha < 0.05$ ).

though the number of those who declare to using illegal substances is low, their reasons for doing so are similar to the ones listed by young people in other countries: curiosity, seeking new sensations, to feel good, boredom, etc. [27, 38-41]. The questions on harassment deserve special attention, as this kind of abuse is surely more frequent than has been declared; answers which were rubbed out and the lack of answers can be seen as confirming that some form of abuse has been experienced [42]. Among those who answered in the affirmative, it is worrying to see that some do not want to speak about it or remember it, showing the traumatic experience has probably not been faced. Lastly, considering that almost all respondents declared they do not use drugs, the ones who have suffered abuse and use drugs is up to 4 times higher than those who use drugs but have not suffered abuse. This increase can be seen for alcohol and smoking, too, though at a lower level. It seems urgent to improve efforts to educate about harmful lifestyles, not only simply by providing information on the effects of substance abuse or the legislation regulating its prohibition, but in the form of a constructive dialogue between professors and their charges, increasing communication and shared experience, in order to let adolescents choose healthy, satisfying practices, as called for by the students themselves.

Although surveys on young people and lifestyles have long been conducted at European level as well as surveys on the prevalence of child abuse in Eastern European countries, our research shows that, once again, an epidemiological investigation contributes to point out public health problems that then presuppose preventive medicine interventions. In our case it was highlighted a possible correlation between young people, who have suffered psychophysical abuse, and the use of substances of abuse such as drugs, alcohol and tobacco smoke. From what has been said, the need arises to investigate the presence of this hypothesis in a second study, relating the realities of other European countries.

## Acknowledgements

Funding sources: this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Conflict of interest statement

None declared.

## Author's contributions

FP conceived and coordinated the study, wrote the manuscript. SS wrote the manuscript. ET critically revised the manuscript. TTCN contributed to the acquisition of epidemiological data and statistical analysis. IG contrib-

uted substantially to the conception, design and supervision of the study

## References

- [1] Siracusa M, Grappasonni I, Petrelli F. Pharmaceutical care and the rejected constitutional reform: what might have been and what is. *Acta Biomed* 2017;88(3):352-9. doi: 10.23750/abm.v88i3.6376.
- [2] Signorelli C, Odone A, Gozzini A, Petrelli F, Tirani M, Zangrandi A, Zoni R, Florindo N. The missed Constitutional Reform and its possible impact on the sustainability of the Italian National Health Service. *Acta Biomed* 2017;88(1):91-94. doi: 10.23750/abm.v88i1.6408.
- [3] Petrelli F, Contratti CM, Tanzi E, Grappasonni I. Vaccine hesitancy, a public health problem. *Ann Ig* 2018;30(2):86-103. doi: 10.7416/ai.2018.2200.
- [4] Ciucci M. People at risk of poverty or social exclusion. Economic Governance Support Unit. European Parliament. 2018. Available at: <http://www.europarl.europa.eu/committees/en/supporting-analyses-earch.html>.
- [5] Apolzan G, Briciu C, Marcovici O, Mitulescu S, Popa A, Tomus I. Unicef - national youth policy strategy 2015-2020. Available at: [https://www.unicef.org/romania/Strategia\\_pt\\_tineret\\_en.pdf](https://www.unicef.org/romania/Strategia_pt_tineret_en.pdf).
- [6] Petrelli F, Grappasonni I, Peroni A, Kracmarova L, Scuri S. Survey about the potential effects of an economic downturn on alcohol consumption, smoking and quality of life in a sample of the central Italian population. *Acta Biomed* 2018;89(1):93-8. doi: 10.23750/abm.v89i1.7059.
- [7] Grappasonni I, Scuri S, Tanzi E, Kracmarova L, Petrelli F. The economic crisis and lifestyle changes: a survey on frequency of use of medications and preventive and specialistic medical care in the Marche Region (Italy). *Acta Biomed* 2018 Mar 27;89(1):87-92. doi: 10.23750/abm.v89i1.7068.
- [8] Ricci G, Pirillo I, Tomassoni D, Sirignano A, Grappasonni I. Metabolic syndrome, hypertension, and nervous system injury: Epidemiological correlates. *Clin Exp Hypertens* 2017;39(1):8-16.
- [9] Kracmarová L, Klusonová H, Petrelli F, Grappasonni I. Tobacco, alcohol and illegal substances: experiences and attitudes among Italian university students. *Rev Assoc Med Bras* 2011;57(5):523-8.
- [10] Grappasonni I, Petrelli F, Amenta F. Deaths on board ships assisted by the Centro Internazionale Radio Medico in the last 25 years. *Travel Med Infect Dis* 2012;10(4):186-91. doi: 10.1016/j.tmaid.2012.06.006.
- [11] Spácilová L, Málková E, Hajska M, Klusonová H, Grappasonni I, Petrelli F, Visnovsky P. Epidemiology of addictive substances: comparison of Czech and Italian university students' experiences. *Chemicke Listy* 2007;101(14):147-50.
- [12] Global Health Data Exchange, Institute for Health Metrics and Evaluation. Available at: <http://www.healthdata.org>.
- [13] European Monitoring Centre for Drugs and Drug Addiction. European Drug Report 2017: trends and developments. Available at: <http://www.emcdda.europa.eu/system/files/publications/4541/TDAT17001ENN.pdf>.
- [14] ESPAD Group. ESPAD Report 2015: results from the European school survey project on alcohol and other drugs. Luxembourg: Publications Office of the European Union; 2016. doi: 10.2810/564360. Available at: [http://www.espad.org/sites/espad.org/files/ESPAD\\_report\\_2015.pdf](http://www.espad.org/sites/espad.org/files/ESPAD_report_2015.pdf).
- [15] OECD/European Observatory on Health Systems and Policies, Romania. Country Health Profile 2017, state of Health in the EU, OECD publishing. Available at: [https://ec.europa.eu/health/sites/health/files/state/docs/chp\\_romania\\_english.pdf](https://ec.europa.eu/health/sites/health/files/state/docs/chp_romania_english.pdf).
- [16] European Monitoring Centre for Drugs and Drug Addiction, Romania. Country Drug Report 2017. Available at: <http://>

- www.emcdda.europa.eu/system/files/publications/4507/TD0116919ENN.pdf.
- [17] Siracusa M, Petrelli F. Trade of food supplement: food or drug supplement? *Recenti Prog Med* 2016;107(9):465-71. doi: 10.1701/2354.25224.
- [18] Decret Nr. 770 din 1 octombrie 1966.
- [19] Stativa E. Survey on child abuse in residential care institutions in Romania (ABSUR). 2000. Available at: [http://www.crin.org/docs/resources/treaties/crc.40/GDD\\_2005\\_stativa1eng.pdf#search=%22Survey%20on%20Child%20Abuse%20in%20Residential%20Care%20Institutions%20in%20Romania%22](http://www.crin.org/docs/resources/treaties/crc.40/GDD_2005_stativa1eng.pdf#search=%22Survey%20on%20Child%20Abuse%20in%20Residential%20Care%20Institutions%20in%20Romania%22).
- [20] Unicef/HQ99-0638/Pirozzi G. Violence against children in care and justice institutions. 2006. Available at: <https://www.unicef.org/tdad/unvacstudychap5.pdf>.
- [21] Von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Lancet* 2007;370:1453-7.
- [22] Smith F. Survey research: survey instruments, reliability and validity. *Int J of Pharm Practi* 1997;5:216-26.
- [23] Grappasonni I, Marconi D, Mazzucchi F, Petrelli F, Scuri S, Amenta F. Survey on food hygiene knowledge on board ships. *Int Marit Health* 2013;64(3):160-7.
- [24] XLSTAT. Statistical software & data analysis add-on for Excel. Addinsoft; 2017.
- [25] Heatherton TF, Kozlowski LT, Frecker RC, Fagerstrom KO. The Fagerström test for nicotine dependence: a revision of the Fagerström Tolerance Questionnaire. *Br J Addict* 1991;86(9):1119-27.
- [26] Du Plooy JL, Macharia M, Verster C. Cigarette smoking, nicotine dependence, and motivation to quit smoking in South African male psychiatric inpatients. *BMC Psychiatry* 2016;16(1):403. doi:10.1186/s12888-016-1123-z.
- [27] Mäkelä K, Mustonen H. Relationships of drinking behaviour, gender and age with reported negative and positive experiences related to drinking. *Addiction* 2000;95(5):727-36.
- [28] Sartor CE, Lynskey MT, Heath AC, Jacob T, True W. The role of childhood risk factors in initiation of alcohol use and progression to alcohol dependence. *Addiction* 2007;102(2):216-25. doi:10.1111/j.1360-0443.2006.01661.x.
- [29] Zerhouni O, Bègue L, Brousse G, Carpentier F, Dematteis M, Pennel L, Swendsen J, Cherpitel C. Alcohol and violence in the emergency room: a review and perspectives from psychological and social sciences. *Int J Environ Res Public Health* 2013;10(10):4584-606. doi: 10.3390/ijerph10104584.
- [30] WHO. Global Status Report on Alcohol. 2014. Available at: [http://www.who.int/substance\\_abuse/publications/global\\_alcohol\\_report/en](http://www.who.int/substance_abuse/publications/global_alcohol_report/en).
- [31] WHO report on the global tobacco epidemic, 2017: monitoring tobacco use and prevention policies. Geneva: World Health Organization; 2017. Available at: [http://www.who.int/tobacco/global\\_report/en](http://www.who.int/tobacco/global_report/en).
- [32] WHO report on the global tobacco epidemic, 2017. Country Profile: Romania. Available at: [http://www.who.int/tobacco/surveillance/policy/country\\_profile/rou.pdf](http://www.who.int/tobacco/surveillance/policy/country_profile/rou.pdf).
- [33] Knoll LJ, Magis-Weinberg L, Speekenbrink M, Blakemore S-J. Social influence on risk perception during adolescence. *Psychol Sci* 2015;26(5):583-92. doi: 10.1177/0956797615569578.
- [34] US Department of Health and Human Services - Centers for Disease Control and Prevention. Morbidity and mortality weekly report. Youth risk behavior surveillance - United States, 2011. 2012. Vol. 61. Available at: <https://www.cdc.gov/mmwr/pdf/ss/ss6104.pdf>.
- [35] Scuri S, Petrelli F, Tesauro M, Carrozzo F, Kracmarova L, Grappasonni I. Energy drink consumption: a survey in high school students and associated psychological effects. *J Prev Med Hyg* 2018;59:E79-83.
- [36] European Commission. Flash Eurobarometer 158. Young people and drugs. Available at: [http://ec.europa.eu/commfrontoffice/publicopinion/flash/fl158\\_en.pdf](http://ec.europa.eu/commfrontoffice/publicopinion/flash/fl158_en.pdf).
- [37] European Commission. Flash Eurobarometer 401. Young people and drugs. [http://ec.europa.eu/commfrontoffice/publicopinion/flash/fl\\_401\\_en.pdf](http://ec.europa.eu/commfrontoffice/publicopinion/flash/fl_401_en.pdf).
- [38] Petrelli F, Grappasonni I, Evangelista D, Pompei P, Broglia G, Cioffi P, Kracmarova L, Scuri S. Mental and physical effects of energy drinks consumption in an Italian young people group: A pilot study. *J Prev Med Hyg* 2018;59(1):E80-7.
- [39] Spáčilová L, Klusonová H, Petrelli F, Signorelli C, Visnovsky P, Grappasonni I. Substance abuse and knowledge among Italian high school students. *Biomedical Papers* 2009;153(2):163-8. doi: 10.5507/bp.2009.028.
- [40] Grappasonni I, Petrelli F, Klusonová H, Kracmarová L. Level of understanding of medical terms among Italian students. *Ceska Slov Farm* 2016;65(6):216-20.
- [41] Boys A, Marsden J, Strang J. Understanding reasons for drug use amongst young people: a functional perspective. *Health Educ Res* 2001;16(4):457-69.
- [42] Unicef Romania. Violence, abuse and neglect. Available at: [https://www.unicef.org/romania/children\\_1601.html](https://www.unicef.org/romania/children_1601.html).

■ Received on June 13, 2018. Accepted on September 3, 2018.

■ Correspondence: Iolanda Grappasonni, School of Medicinal and Health Products Sciences, University of Camerino, Italy, via Madonna delle Carceri 9, 62032 Camerino (MC) - Tel. +39 0737 402411 - Fax +39 0737 402416 - E-mail: [iolanda.grappasonni@unicam.it](mailto:iolanda.grappasonni@unicam.it)