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# Popularity of marijuana among Polish students

Michał Pająk<sup>1</sup>, Rafał Mazur<sup>1</sup>, Sebastian Masternak<sup>1</sup>,  
Katarzyna Skórzyńska-Dziduszko<sup>2</sup>

<sup>1</sup> Students' Scientific Association at the Chair and Department of Human Physiology, Medical University of Lublin, Radziwiłłowska 11 str., 20-080 Lublin, Poland

<sup>2</sup> Chair and Department of Human Physiology, Medical University of Lublin, Radziwiłłowska 11 str., 20-080 Lublin, Poland

Address for correspondence: Katarzyna Skórzyńska-Dziduszko, M.D., Ph.D. Chair and Department of Human Physiology, Medical University of Lublin, ul. Radziwiłłowska 11, 20-080 Lublin, Poland, fax: 81 448 60 96, e-mail: [katarzyna.skorzynska-dziduszko@umlub.pl](mailto:katarzyna.skorzynska-dziduszko@umlub.pl)

Michał Pająk<sup>1</sup>: <http://orcid.org/0000-0001-5572-547X> , e-mail: [p.pajak@yahoo.pl](mailto:p.pajak@yahoo.pl)

Rafał Mazur<sup>1</sup>: <http://orcid.org/0000-0002-8486-5567>, e-mail: [rafall.mazur@gmail.com](mailto:rafall.mazur@gmail.com)

Sebastian Masternak<sup>1</sup>: <http://orcid.org/0000-0002-1217-816X>, e-mail: [s.m.masternak@gmail.com](mailto:s.m.masternak@gmail.com)

Katarzyna Skórzyńska-Dziduszko<sup>2</sup>, M.D., Ph.D.: <http://orcid.org/0000-0002-8718-1187>, e-mail: [katarzyna.skorzynska-dziduszko@umlub.pl](mailto:katarzyna.skorzynska-dziduszko@umlub.pl)

## **Abstract**

### **Introduction and the aim:**

Marijuana is the most commonly used drug in the world (excluding alcohol and tobacco). According to the literature about 16% of Poles at the age of 16 to 64 years old, at least once have used cannabis. The aim of study was to estimate the popularity of marijuana among students of Polish universities. We also asked questions about respondents' attitude towards marijuana and opinions about its validation.

### **Material and methods:**

The study was conducted in 2017 on 132 individuals – 60 men and 72 women. The results were analyzed in STATISTICA 10 at  $p < 0.05$ .

### **Results:**

Out of interviewees, 63.6% of them, at least once in their lives, have used marijuana. This is a percentage of up to four times greater than that one given in the literature for the general population. Even 80% of men and 50% of women have tried marijuana at least once in their lives. Students of Catholic University of Lublin reach for marijuana significantly more often than students of Medical University of Lublin. The majority of respondents (53%) treats marijuana as a "soft" drug, though up 67.4% believe that it has the addictive potential. More than a half of respondents (56.8%) stands for liberalization of rules relevant to marijuana in Poland. Vast majority (70%) of respondents believes that marijuana is easily available in Poland.

### **Conclusions:**

Marijuana is a drug popular among students. The criminalization of drug use in Poland is not effective for the prevention of its use, the majority of respondents believes that marijuana is easily available in Poland. Considering the negative health and social consequences of the current state, it is worth wondering about making changes in the education system and Polish drug law.

**Key words:** cannabis, marijuana smoking, drug addiction

## **Introduction**

In recent years, a significant growth in the number of drug users is observed. Definitely the most popular of them is marijuana [1]. Out of addictive substances, only tobacco and alcohol are more popular [2]. It is estimated that in 2014 183 million people used it (that number formed 2.5% of the population in the world) [1]. According to the European Drug Report 2016, even every fourth adult (15-64 years old) resident of the European Union, at least once in his life, has tried drugs and in the vast majority it was marijuana [3]. Young people often reach for preparations of cannabis, men more often than women [4,5]. In Poland, about 16% of population at the age of 15 to 64 years old, at least once in their lives, have used marijuana [3]. This percentage is much higher among school children (15-16 years old) and it is 23%. Only in 2014 about 10% of young Poles (15-34 years old) reached out for this drug [3].

With the popularity of cannabinoids may testify the fact that 57% of drug crimes in the EU in 2014 was related to marijuana [3]. The estimated value of marijuana market in the European Union amounts to more than 9 billion euro [6]. Within the whole year 139 tonnes of marijuana and 574 tonnes of cannabis were confiscated [7].

Addiction to this drug was the second reason why people in Europe started drug treatment (after opioids, excluding alcohol) [3].

## **Purpose of Work**

The aim of our work was to examine the attitude of Polish students towards marijuana in the context of recreational use. We asked questions to respondents about their experience with this drug and opinion about risks arising from its use.

## **Materials and Methods**

The study was conducted in 2017 by using standardized online survey on loan to students on different subjects on Polish universities. Participation in the study was voluntary and anonymous. Questionnaire was completed by 132 people including 60

males (M) and 72 females (F). The age of respondents was between 19 – 29 years old, the average was 22 years old (standard deviation = 2,18). In terms of habitual residence, the largest group of people were the public living in the city of 100 thousand to 500 thousand residents which formed 41% of all respondents. The largest groups of interviewees were law students (34.1%), medicine students (27.3%) and psychology students (13.6%). The most respondents study at the Catholic University of Lublin (47.7%) and Medical University in Lublin (32.6%).

The data were analyzed using Statistica 10.0 software (StatSoft, USA). The chi-squared test was used to determine whether there was a significant difference between the expected frequencies and the observed frequencies in categorical data categories; Spearman's rank correlation coefficient test was used to assess whether two parameters were correlated. A p-value of less than 0.05 was considered statistically significant.

## Results

Most of respondents (63.6%), at least once in their lives, have used marijuana. Males reach for this drug definitely more often than females (M: 80%, F: 50%) ( $\chi^2 = 24.59$ ;  $p = 0.00002$ ) (**Figure 1**). Interestingly, the percentage of respondents who admit to taking marijuana among students from the Catholic University of Lublin (61.9%) is higher than among students from Medical University of Lublin (48.8%) ( $\chi^2 = 14.98$ ;  $p = 0.02$ ) (**Figure 2**). Most of interviewees who confess to taking drugs, admit that they do this occasionally – only few times a year (53.8%). 16.7% of surveyed males and no women admit to use marijuana more than once a month.

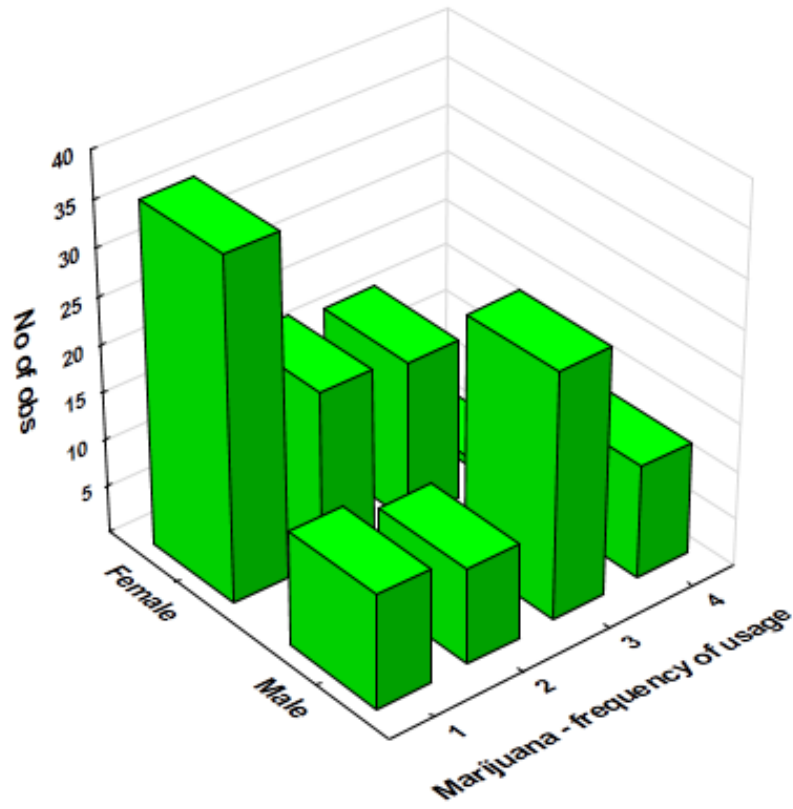
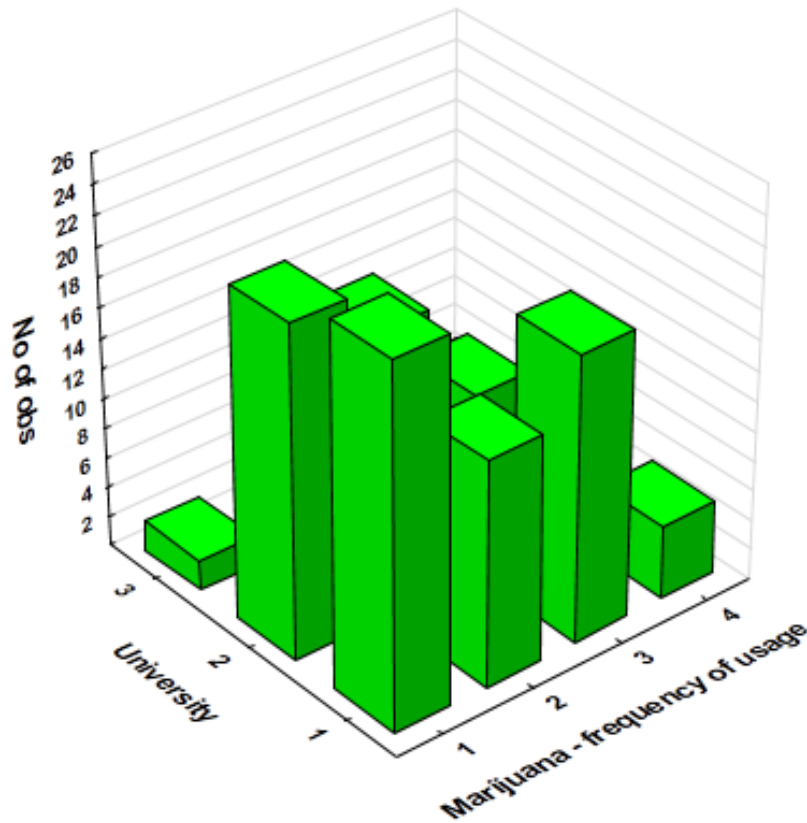


Figure 1 – dependence of frequency of marijuana’s indulging in regard of gender

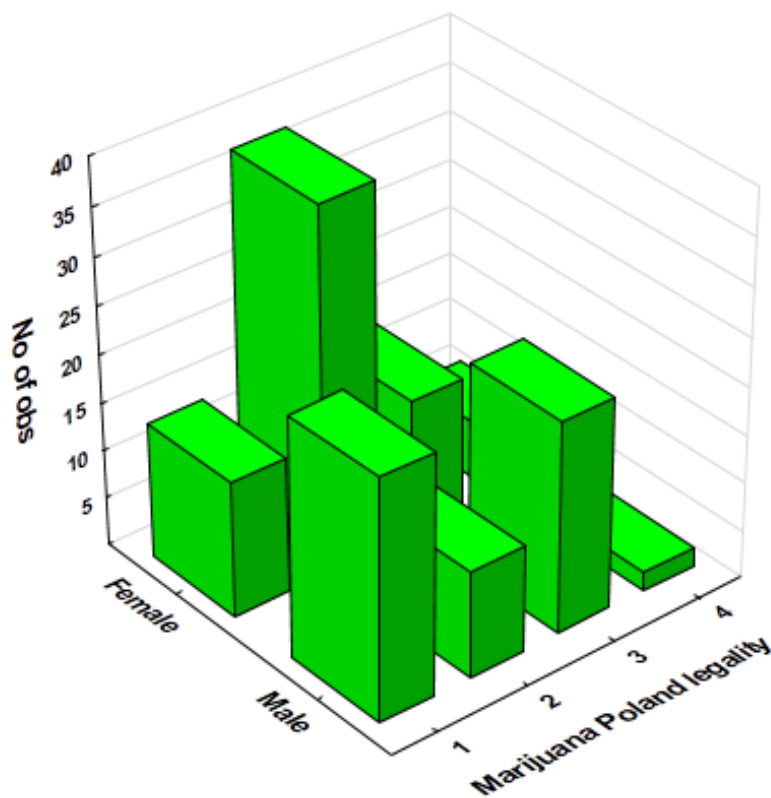


**Figure 2 – dependence of frequency of marijuana’s indulging in regard of university**

In the group of respondents who have used marijuana at least once in their lives, the most noted signs of drug activities were: elevated mood (75.9%), increased appetite (67.5%), the congestion of the conjunctiva (57.8%) and slow motion perception (47%). Expressly, negative symptoms such as anxiety or panic attack (22.9%), dizziness (14.5%) or vomiting (7.2%) occur much less frequently.

More than half of respondents (53%) consider marijuana as a “soft” drug, whereas 12.1% believe that it is not a drug. It seems that men have more liberal attitude towards cannabis; in the women’s group, 29.2% believe that it is as dangerous as “hard” drugs or lead to use them. In the men’s group this percentage is lower and totals only 15%. We have not observed statistically significant relationship between interviewee’s attitude towards marijuana and his parental university. The interviewee’s attitude towards marijuana is strongly expressed in the question: “Do

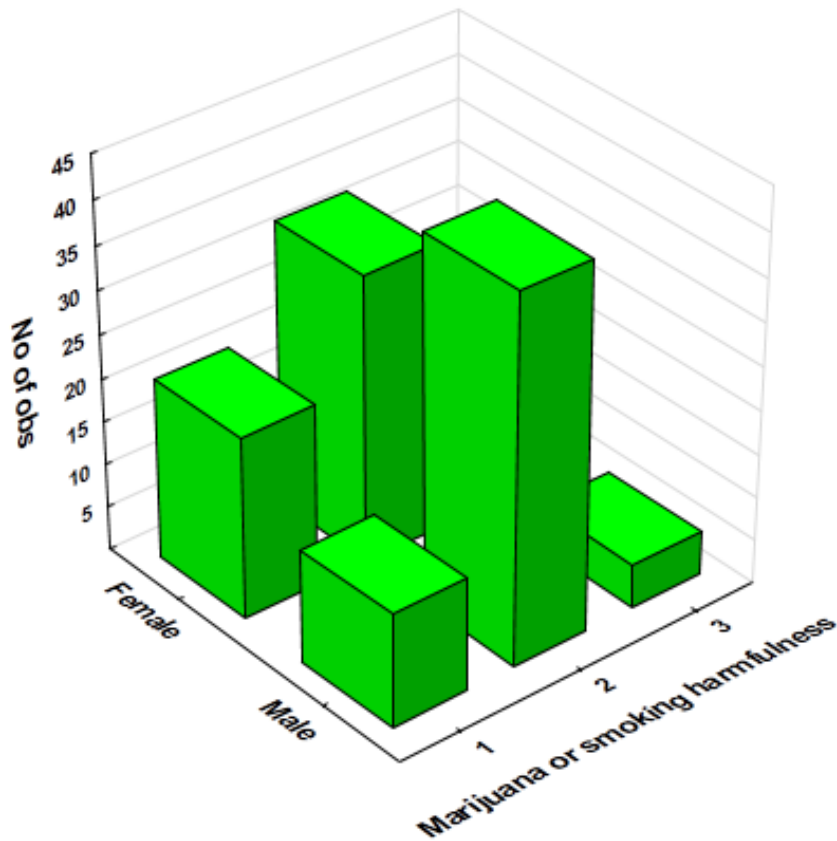
you think marijuana should be legal in Poland for all citizens?” 78.3% of men think that Polish drug law should be moderated, while the percentage of women who think as men is much lower and totals only 38.9% ( $\chi^2=20.84$ ;  $p=0.0001$ ) (**Figure 3**). In whole tested group, there are 56.8% interviewees who stand for liberalization of the drug law. 71.2% of interviewees think that marijuana is easily available in Poland.



**Figure 3 - a chart showing the attitude towards marijuana’s legitimacy in regard of gender**

Majority of respondents (67.4%) consider marijuana as addictive substance. We have not observed statistically significant correlation by reason of a parental university and subject’s gender.

A significant majority of male respondents (70%) do not perceive marijuana as more harmful than tobacco. Only 45.8% of females are on the same page. Among women, definitely more often came up the answer: “Not mind”. (F:25%, M:8.3%) ( $\chi^2=9.29$ ;  $p=0.01$ ). (**Figure 4**)



**Figure 4 – dependence of opinion about harmfulness in regard of gender**

Differences about respondents' attitude towards marijuana which were noticed by us from different years of study are not statistically significant.

## Discussion

Given anonymous and online nature of surveys, you can expect that the answers of respondents will be sincere [8]. Because of the profile of questions, very significant is the fact that respondents are not afraid of possible legal consequences. A large group of subjects admitted to use marijuana.

The most important conclusion from our work is that in the tested group of students, percentage of people who at least once use marijuana (63.6%) is almost four times higher than given in the European Drug Report 2016 value for the general population (16% of Poles in the age of 15 to 64 years old) [3].



Out of analysed variables, the greatest impact on the answers had respondents' sex. We saw statistically significant differences in frequency of taking drugs, in the way of seeing marijuana, in the opinion about its validation and in the result about its harmfulness in regard of tobacco. On the basis of obtained data, it can be concluded that men represent more liberal approach towards cannabis. Men who admit to use marijuana, do it more often than women from a similar group. Percentage of men who has never tried this drug is much smaller than among women. Men, more often than women, do not perceive cannabis more harmful than tobacco. Conservative approach of women is visibly seen in their attitude towards possible legalization of this drug, more than half of women absolutely opposed to liberalizing the rules. On the other hand, more than three quarters of men believe that the law relating to marijuana should be liberalized.

From the result of the survey we can find out that drug law is not respected in Poland – although possession and distributing of marijuana is a criminal offence, 71.2% of respondents think that marijuana is easily available in Poland. In this question, respondents from different groups asked similarly.

An interesting observation is that students from conservative Catholic University of Lublin use cannabis more often than students from Medical University of Lublin. It is worth noting the lack of significant differences in the approach of respondents from different universities to marijuana as a drug and in attitude towards legalization of cannabinoids.

## **Conclusions**

The results of our study suggest that the penalization of marijuana in Poland does not prevent young people from its use. It has been proven that the drug policy of country does not have such a big impact on the use of marijuana, as previously thought [9]. The current situation gives easy money to drug dealers (the amount of this drug impressed in the European Union can proclaim the scale of practice) and promotes the consumption of drugs of low quality – often contaminated with other harmful substances [10]. In addition, individual marijuana's species differ in biochemical composition, whereby intensity and nature of symptoms may differ

significantly between samples from different sources [11]. In current situation in Poland, the consumer does not have a big impact on what marijuana's quality he uses. It is also noted that marijuana roasted today contains up to 20 times more THC (the main psychoactive substance) than marijuana roasted in the 1970s [12]. Considering above, it is worth thinking about changing Polish law relevant to cannabinoids. Present provisions are not respected by citizens [13] and practically forbid access to substances with known composition and features to people who are determined to take marijuana.

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### **Conflict of interest statement**

The authors declare no conflict of interest.

### **Funding sources**

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### **References**

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1 Word Drug Report 2016, UNODC.

[http://unodc.org/doc/wdr2016/WORLD\\_DRUG\\_REPORT\\_2016\\_web.pdf](http://unodc.org/doc/wdr2016/WORLD_DRUG_REPORT_2016_web.pdf) [cited 19.05.2017]

2 Crocker CE, Tibbo PG. The interaction of gender and cannabis in early phase psychosis. *Schizophr Res.* 2017; pii: S0920-9964(17)30255-4. DOI: 10.1016/j.schres.2017.04.046

3 European Monitoring Centre for Drugs and Drug Addiction. *European Drug Report 2016: Trends and achievements.* Publications Office of the European Union, Luxembourg; 2016.

4 Perez-Reyes M, Owens SM, Di Guiseppi S. The clinical pharmacology and dynamics of marihuana cigarette smoking. *J Clin Pharmacol.* 1981;21(8-9 suppl):201S-207S.

5 Fattore L, Fratta W. How important are sex differences in cannabinoid action? *Br J Pharmacol.* 2010;160(3):544-548. DOI: 10.1111/j.14765381.2010.00776.x

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6 EMCDDA, Europol. 2016 EU Drug Markets Report: Strategic Overview. Lisbon; 2016.

7 Pinkas J, Jabłoński P, Kidawa M, Wierzba W: Use of marijuana for medical purposes. *Ann Agric Environ Med*. 2016;23(3):525-528. DOI: 10.5604/12321966.1219200

8 Eysenbach G, Wyatt J: Using the Internet for surveys and health research. *J Med Internet Res*. 2002;4(2):E13. DOI: 10.2196/jmir.4.2.e13

9 Reinerman C, Cohen PD, Kaal HL. The limited relevance of drug policy: cannabis in Amsterdam and in San Francisco. *Am J Public Health*. 2004;94(5):836-42.

10 Csete J, Kamarulzaman A, Kazatchkine M, Altice F, Balicki M, Buxton J, et al. Public health and international drug policy. *Lancet*. 2016;387:1427–1480. DOI: 10.1016/S0140-6736(16)00619-X

11 Morgan CJ, Gardener C, Schafer G, Swan S, Demarchi C, Freeman TP, et al.: Sub-chronic impact of cannabinoids in street cannabis on cognition, psychotic-like symptoms and psychological well-being. *Psychol Med*. 2012;42(2): 391-400.

12 Sevigny EL: Is today's marijuana more potent simply because it's fresher? *Drug Test Anal*. 2013;5(1):62-67.

13 Suwała M, Gerstenkorn A, Szewczyk A. Factors forming opinion on marijuana legalization in Poland among group of students from medical and technical college faculty. *Przegl Lek*. 2015;72(10):536-539.